

(12) STANDARD PATENT
(19) AUSTRALIAN PATENT OFFICE

(11) Application No. **AU 2013240184 B2**

(54) Title
Nutritive fragments, proteins and methods

(51) International Patent Classification(s)
C07K 14/435 (2006.01) **C12N 1/21** (2006.01)
A23J 3/04 (2006.01) **C12N 15/63** (2006.01)

(21) Application No: **2013240184** (22) Date of Filing: **2013.03.15**

(87) WIPO No: **WO13/148330**

(30) Priority Data

(31) Number	(32) Date	(33) Country
61/615,819	2012.03.26	US

(43) Publication Date: **2013.10.03**

(44) Accepted Journal Date: **2017.05.25**

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(56) Related Art
UniProtKB accession O64837, 1 August 1998
UniProtKB accession O22287, 1 January 1998
US 5,866,338 A
US 2006/0150283 A1



(51) International Patent Classification:

C07K 14/435 (2006.01) *C12N 15/63* (2006.01)
A23J 3/04 (2006.01) *C12N 1/21* (2006.01)
A23L 1/305 (2006.01)

(21) International Application Number:

PCT/US2013/032218

(22) International Filing Date:

15 March 2013 (15.03.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/615,819 26 March 2012 (26.03.2012) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- with amended claims and statement (Art. 19(1))
- with sequence listing part of description (Rule 5.2(a))

(54) Title: NUTRITIVE FRAGMENTS, PROTEINS AND METHODS

(57) Abstract: Nutritive proteins are provided. In some embodiments the nutritive proteins comprise a first polypeptide sequence comprising a fragment of a naturally-occurring nutritive protein. In some embodiments the fragment comprises at least one of a) an enhanced ratio of branch chain amino acid residues to total amino acid residues present in the nutritive protein; b) an enhanced ratio of leucine residues to total amino acid residues present in the nutritive protein; and c) an enhanced ratio of essential amino acid residues to total amino acid residues present in the nutritive protein. In some embodiments, the fragment comprises at least one of a) a ratio of branch chain amino acid residues to total amino acid residues present in the nutritive protein; b) a ratio of leucine residues to total amino acid residues present in the nutritive protein; and c) a ratio of essential amino acid residues to total amino acid residues present in the nutritive protein, that is equal to or greater than the corresponding ratio present in a benchmark protein such as whey, egg or soy protein. Also provided are nucleic acids encoding the proteins, recombinant microorganisms that make the proteins, methods of making the proteins using recombinant microorganisms, compositions that comprise the proteins, and methods of using the proteins, among other things.



NUTRITIVE FRAGMENTS, PROTEINS AND METHODS

REFERENCE TO RELATED APPLICATION:

[0001] This application claims priority to U.S. Provisional Patent Application No. 61/615,819, filed March 26, 2012, which is hereby incorporated herein by reference in its entirety.

SEQUENCE LISTING:

[0002] The instant application contains a Sequence Listing which has been submitted in ASCII format via EFS-Web and is hereby incorporated by reference in its entirety. Said ASCII copy, created on March 12, 2013, is named 1005.005-PCT_SL.txt and is 3,234,600 bytes in size.

INTRODUCTION:

[0003] Dietary protein is an essential nutrient for human health and growth. The World Health Organization recommends that dietary protein should contribute approximately 10 to 15% of energy intake when in energy balance and weight stable. Average daily protein intakes in various countries indicate that these recommendations are consistent with the amount of protein being consumed worldwide. Meals with an average of 20 to 30% of energy from protein are representative of high-protein diets when consumed in energy balance.

[0004] The body cannot synthesize certain amino acids that are necessary for health and growth, and instead must obtain them from food. These amino acids, called “essential amino acids”, are Histidine (H), Isoleucine (I), Leucine (L), Lysine (K), Methionine (M), Phenylalanine (F), Threonine (T), Tryptophan (W), and Valine (V). Dietary proteins that provide all the essential amino acids are referred to as “high quality” proteins. Animal foods such as meat, fish, poultry, eggs, and dairy products are generally regarded as high quality protein sources that provide a good balance of essential amino acids. Casein (a protein commonly found in mammalian milk, making up 80% of the proteins in cow milk) and whey (the protein in the liquid that remains after milk has been curdled and strained) are major sources of high quality dietary protein. Foods that do not provide a good balance of essential amino acids are referred to as “low quality” proteins. Most fruits and vegetables are poor sources of protein. Some plants foods including beans, peas, lentils, nuts and grains (such as

wheat) are better sources of protein. Soy, a vegetable protein manufactured from soybeans, is considered by some to be a high quality protein.

[0005] Studies of the acute effects of consuming high amounts of protein in humans have shown that inclusion and in some cases increasing protein content in the diet can have beneficial effects. For example, studies have shown that ingestion of protein can induce postprandial satiety (including by suppressing hunger), induce thermogenesis and reduce glycemic response in human subjects.

[0006] Studies of high protein diets for weight loss have shown that protein positively affects energy expenditure and lean body mass. Further studies have shown that overeating produces significantly less weight gain in diets containing at least 5% of energy from protein, and that a high-protein diet decreases energy intake.

[0007] Clinical studies provide evidence that protein prevents muscle loss due to aging or bed rest. In particular, studies have shown that protein supplementation increases muscle fractional synthetic rate (FSR) during prolonged bed rest, maintains leg mass and strength during prolonged bed rest increases lean body mass, improves functional measures of gait and balance, and may serve as a viable intervention for individuals at risk of sarcopenia due to immobility or prolonged bed rest.

[0008] Studies on increasing muscle protein anabolism in athletes have shown that protein provided following exercise promotes muscle hypertrophy to a greater extent than that achieved by exercise alone. It has also been shown that protein provided following exercise supports protein synthesis without any increase in protein breakdown, resulting in a net positive protein balance and muscle mass accretion. While muscle protein synthesis appears to respond in a dose-response fashion to essential amino acid supplementation, not all proteins are equal in building muscle. For example, milk proteins appear to be superior to soy in supporting muscle mass accretion with resistance training, while both are superior to carbohydrate alone. The amino acid leucine is an important factor in stimulating muscle protein synthesis.

[0009] Whole proteins commonly found in foods do not necessarily provide an amino acid composition that meets the amino acid requirements of a mammal, such as a human, in an efficient manner. The result is that, in order to attain the minimal requirements of each essential amino acid, a larger amount of total protein must be consumed in the diet than

would be required if the quality of the dietary protein were higher. By increasing the quality of the protein in the diet it is possible to reduce the total amount of protein that must be consumed compared to diets that include lower quality proteins.

[0010] In general, proteins that have higher protein quality are considered more beneficial in a mammalian diet than other proteins that do not. Such proteins are useful, for example, as components of a mammalian diet. Under certain circumstances such proteins promote maintenance of muscle mass, a healthy body mass index, and glycemic balance, among other things. Accordingly, there is a need for sources of proteins that have high protein quality.

[0011] Traditionally, desirable mixtures of amino acids, such as mixtures comprising essential amino acids, have been provided by hydrolyzing a protein with relatively high levels of essential amino acids, such as whey protein, and/or by combining free amino acids in a mixture that optionally also includes a hydrolyzed protein such as whey. Mixtures of this type may have a bitter taste and may be deemed unsuitable or undesirable for certain uses.

As a result, such mixtures sometimes include flavoring agents to mask the taste of the free amino acids and/or hydrolyzed protein. In some cases compositions in which a proportion of the amino acid content is provided by polypeptides or proteins are found to have a better taste than compositions with a high proportion of total amino acids provided as free amino acids and/or certain hydrolyzed proteins. The availability of such compositions has been limited, however, because nutritional formulations have traditionally been made from protein isolated from natural food products, such as whey isolated from milk, or soy protein isolated from soy. The amino acid profiles of those proteins do not necessarily meet the amino acid requirements for a mammal. In addition, commodity proteins typically consist of mixtures of proteins and/or protein hydrolysates which can vary in their protein composition, thus leading to unpredictability regarding their nutritional value. Moreover, the limited number of sources of such high quality proteins has meant that only certain combinations of amino acids are available on a large scale for ingestion in protein form.

[0012] The agricultural methods required to supply high quality animal protein sources such as casein and whey, eggs, and meat, as well as plant proteins such as soy, also require significant energy inputs and have potentially deleterious environmental impacts. Accordingly, it would be useful in certain situations to have alternative sources and methods of supplying proteins for mammalian consumption.

[0013] In theory, synthetic polypeptide sequences comprising a desired mixture of amino acids could be designed and produced in a laboratory setting. This approach may raise various concerns, however, and is therefore not always applicable. First, skilled artisans are aware that obtaining high levels of production of such synthetic sequences may be very challenging. Second, even if such a synthetic protein were synthesized, its suitability for use in a nutritive product would be uncertain. For example, such a non-naturally occurring polypeptide could be an allergen or a toxin. Accordingly, in some embodiments this disclosure provides natural protein or polypeptide sequences, or variants thereof.

[0014] In this disclosure the inventors provide nutritive proteins comprising a first polypeptide sequence that is homologous to a fragment of a naturally-occurring protein. The nutritive proteins and the fragments of which they are composed are made up of useful combinations of amino acids. The proteins can be produced by methods that do not rely solely on traditional agriculture for production. For example, the inventors have discovered and this disclosure provides nutritive proteins comprising a fragment of a naturally-occurring protein and composed of combinations of amino acids that contain a useful level of at least one of a ratio of branch chain amino acids to total amino acids, a ratio of the amino acid leucine to total amino acids, and a ratio essential amino acids to total amino acids. In some embodiments the nutritive proteins comprise at least one of a level of a) a ratio of branch chain amino acid residues to total amino acid residues present in the nutritive protein equal to or greater than the ratio of branch chain amino acid residues to total amino acid residues present in whey protein; b) a ratio of leucine residues to total amino acid residues present in the nutritive protein equal to or greater than the ratio of leucine residues to total amino acid residues present in whey protein; and c) a ratio of essential amino acid residues to total amino acid residues present in the nutritive protein equal to or greater than the ratio of essential amino acid residues to total amino acid residues present in whey protein.

[0015] This disclosure also provides nucleic acids encoding the proteins, recombinant microorganisms that make the proteins, methods of making the proteins using recombinant microorganisms, compositions that comprise the proteins, and methods of using the proteins, among other things.

SUMMARY:

[0016] In a first aspect this disclosure provides isolated nutritive proteins comprising a first polypeptide sequence that is homologous to a fragment of a naturally-occurring

protein, wherein the first polypeptide sequence comprises at least one of: a. a ratio of branch chain amino acid residues to total amino acid residues of at least 24%; b. a ratio of Leu residues to total amino acid residues of at least 11%; and c. a ratio of essential amino acid residues to total amino acid residues of at least 49%. In some embodiments the first polypeptide sequence further comprises at least one of each essential amino acid. In some embodiments the first polypeptide sequence comprises at least 70% homology to the fragment of a naturally-occurring protein. In some embodiments the first polypeptide sequence comprises at least 95% homology to the fragment of a naturally-occurring protein. In some embodiments the fragment of a naturally-occurring protein comprises at least 25 amino acid residues. In some embodiments the fragment of a naturally-occurring protein comprises at least 50 amino acid residues. In some embodiments the first polypeptide sequence comprises: a. a ratio of branch chain amino acid residues to total amino acid residues of at least 24%; b. a ratio of Leu residues to total amino acid residues of at least 11%; and c. a ratio of essential amino acid residues to total amino acid residues of at least 49%. In some embodiments the first polypeptide sequence comprises a fragment of a naturally-occurring nutritive protein. In some embodiments the first polypeptide sequence consists of a fragment of a naturally-occurring nutritive protein.

[0017] In some embodiments the first polypeptide sequence is not an allergen. In some embodiments the first polypeptide sequence has less than 50% global homology to a known allergen.

[0018] In some embodiments the first polypeptide sequence is not a toxin. In some embodiments the first polypeptide sequence has less than 50% global homology to a known toxin.

[0019] In some embodiments the first polypeptide sequence has a simulated gastric digestion half-life of less than 60 minutes. In some embodiments the first polypeptide sequence has a simulated gastric digestion half-life of less than 30 minutes. In some embodiments the first polypeptide sequence has a simulated gastric digestion half-life of less than 10 minutes. In some embodiments the first polypeptide sequence is completely digested in simulated gastric fluid. In some embodiments the first polypeptide sequence comprises at least one protease recognition site selected from a pepsin recognition site, a trypsin recognition site, and a chymotrypsin recognition site. In some embodiments the first polypeptide sequence comprises no cysteine residues. In some embodiments the first

polypeptide sequence comprises no disulfide bonds. In some embodiments the first polypeptide sequence does not comprise N-linked glycosylation. In some embodiments the first polypeptide sequence does not comprise O-linked glycosylation.

[0020] In some embodiments the first polypeptide sequence is resistant to aggregation. In some embodiments the first polypeptide sequence is anionic at pH 7. In some embodiments the first polypeptide sequence has an aqueous solubility at pH 7 of at least 12.5 g/L. In some embodiments the first polypeptide sequence has a calculated solvation score of -20 or less. In some embodiments the first polypeptide sequence has a calculated aggregation score of 0.75 or less. In some embodiments the first polypeptide sequence has a calculated aggregation score of 0.5 or less.

[0021] In some embodiments the first polypeptide sequence comprises an amino acid sequence selected from: i. an amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**; ii. a modified derivative of an amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**; and iii. a mutein of an amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**. In some embodiments the first polypeptide sequence consists of an amino acid sequence selected from: i. an amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**; ii. a modified derivative of an amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**; and iii. a mutein of an amino acid sequence selected from v. In some embodiments the first polypeptide sequence is at least 40%, 45%, 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 86%, 87%, 88%, 89%, 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99%, or 99.5% homologous to at least one amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**.

[0022] In some embodiments the first polypeptide sequence is a fragment of at least 25 amino acids of the naturally-occurring nutritive protein. In some embodiments the first polypeptide sequence is a fragment of at least 50 amino acids of the naturally-occurring nutritive protein. In some embodiments the isolated nutritive protein consists of the first polypeptide sequence. In some embodiments the isolated nutritive protein further comprises a polypeptide tag for affinity purification. In some embodiments the tag for affinity purification is a polyhistidine-tag.

[0023] In another aspect this disclosure provides isolated nutritive proteins comprising a first polypeptide sequence that is homologous to a fragment of a naturally-

occurring protein, wherein the isolated nutritive protein comprises at least one of: a. a ratio of branch chain amino acid residues to total amino acid residues of at least 24%; b. a ratio of Leu residues to total amino acid residues of at least 11%; and c. a ratio of essential amino acid residues to total amino acid residues of at least 49%. In some embodiments the isolated nutritive protein further comprises at least one of each essential amino acid. In some embodiments the isolated nutritive protein comprises at least 70% homology to the fragment of a naturally-occurring protein. In some embodiments the isolated nutritive protein comprises at least 95% homology to the fragment of a naturally-occurring protein. In some embodiments the fragment of a naturally-occurring protein comprises at least 25 amino acid residues. In some embodiments the fragment of a naturally-occurring protein comprises at least 50 amino acid residues. In some embodiments the isolated nutritive protein comprises: a. a ratio of branch chain amino acid residues to total amino acid residues of at least 24%; b. a ratio of Leu residues to total amino acid residues of at least 11%; and c. a ratio of essential amino acid residues to total amino acid residues of at least 49%. In some embodiments the isolated nutritive protein comprises a fragment of a naturally occurring nutritive protein. In some embodiments the isolated nutritive protein consists of a fragment of a naturally occurring nutritive protein.

[0024] In some embodiments the isolated nutritive protein is not an allergen. In some embodiments the isolated nutritive protein has less than 50% global homology to a known allergen.

[0025] In some embodiments the isolated nutritive protein is not a toxin. In some embodiments the isolated nutritive protein has less than 50% global homology to a known toxin.

[0026] In some embodiments the isolated nutritive protein has a simulated gastric digestion half-life of less than 60 minutes. In some embodiments the isolated nutritive protein has a simulated gastric digestion half-life of less than 30 minutes. In some embodiments the isolated nutritive protein has a simulated gastric digestion half-life of less than 10 minutes. In some embodiments the isolated nutritive protein is completely digested in simulated gastric fluid. In some embodiments the isolated nutritive protein comprises at least one protease recognition site selected from a pepsin recognition site, a trypsin recognition site, and a chymotrypsin recognition site. In some embodiments the isolated nutritive protein comprises no cysteine residues. In some embodiments the isolated nutritive

protein comprises no disulfide bonds. In some embodiments the isolated nutritive protein does not comprise N-linked glycosylation. In some embodiments the isolated nutritive protein does not comprise O-linked glycosylation.

[0027] In some embodiments the isolated nutritive protein is resistant to aggregation.

5 In some embodiments the isolated nutritive protein is anionic at pH 7. In some embodiments the isolated nutritive protein has an aqueous solubility at pH 7 of at least 12.5 g/L. In some embodiments the isolated nutritive protein has a calculated solvation score of -20 or less. In some embodiments the isolated nutritive protein has a calculated aggregation score of 0.75 or less. In some embodiments the isolated nutritive protein has a calculated aggregation score
10 of 0.5 or less.

[0028] In some embodiments the isolated nutritive protein comprises an amino acid sequence selected from: i. an amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**; ii. a modified derivative of an amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**; and iii. a mutein of an amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**. In some embodiments the isolated nutritive protein consists of
15 an amino acid sequence selected from: i. an amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**; ii. a modified derivative of an amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**; and iii. a mutein of an amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**. In some embodiments the isolated nutritive
20 protein is at least 40%, 45%, 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 86%, 87%, 88%, 89%, 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99%, or 99.5% homologous to at least one amino acid sequence selected from **SEQ ID NO: 1 to SEQ ID NO: 2609**. In some embodiments the isolated nutritive protein further comprises a polypeptide tag for affinity purification. In some embodiments the tag for affinity purification is a polyhistidine-tag.

25 [0029] In another aspect this disclosure provides isolated nucleic acids comprising a nucleic acid sequence that encodes a nutritive protein according to this disclosure. In some embodiments the isolated nucleic acid is selected from genomic DNA, cDNA, sense RNA and antisense RNA. In some embodiments the isolated nucleic acid is genomic DNA. In some embodiments the isolated nucleic acid is cDNA. In some embodiments the isolated
30 nucleic acid further comprises an expression control sequence operatively linked to the nucleic acid sequence that encodes the nutritive protein. In some embodiments the nucleic acid sequence that encodes a nutritive protein according to this disclosure is present in a

vector. In some embodiments the vector further comprises an expression control sequence operatively linked to the nucleic acid sequence that encodes the nutritive protein.

[0030] In another aspect this disclosure provides recombinant microorganisms comprising at least one of a nucleic acid and a vector according to this disclosure. In some
5 embodiments the recombinant microorganism is a prokaryote. In some embodiments the prokaryote is heterotrophic. In some embodiments the prokaryote is autotrophic. In some embodiments the prokaryote is a bacteria.

[0031] In another aspect this disclosure provides methods of making a nutritive protein according to this disclosure, the method comprising culturing a recombinant
10 microorganism according to this disclosure under conditions sufficient for production of the nutritive protein by the recombinant microorganism. In some embodiments the method further comprises isolating the nutritive protein from the culture.

[0032] In another aspect this disclosure nutritive compositions comprising a nutritive protein of of this disclosure and at least one second component. In some embodiments the at
15 least one second component is selected from a protein, a polypeptide, a peptide, a free amino acid, a carbohydrate, a fat, a mineral or mineral source, a vitamin, a supplement, an organism, a pharmaceutical, and an excipient. In some embodiments the at least one second component is a protein. In some embodiments the at least one second component is a nutritive protein. In some embodiments the at least one second component is a free amino acid selected from
20 essential amino acids, non-essential amino acids, branch chain amino acids, non-standard amino acids and modified amino acids. In some embodiments the at least one second component is a free amino acid selected from essential amino acids. In some embodiments the at least one second component is a free amino acid selected from branch chain amino acids. In some embodiments the at least one second component is Leu. In some
25 embodiments the at least one second component is a lipid. In some embodiments the lipid is selected from a fat, oil, triglyceride, cholesterol, phospholipid, and fatty acid. In some embodiments the at least one second component is selected from a mineral and a vitamin. In some embodiments the at least one second component is a supplement. In some embodiments the at least one second component is an organism. In some embodiments the at
30 least one second component is a pharmaceutical. In some embodiments the at least one second component is an excipient. In some embodiments the at least one excipient is selected from a buffering agent, a preservative, a stabilizer, a binder, a compaction agent, a

lubricant, a dispersion enhancer, a disintegration agent, a flavoring agent, a sweetener, a coloring agent. In some embodiments the nutritive composition is formulated as a liquid solution, slurry, suspension, gel, paste, powder, or solid.

5 [0033] In another aspect this disclosure provides methods of making a nutritive composition of this disclosure, comprising providing a nutritive protein according to this disclosure and combining the nutritive protein with the at least one second component.

10 [0034] In another aspect this disclosure provides methods of maintaining or increasing at least one of muscle mass, muscle strength, and functional performance in a subject, the method comprising providing to the subject a sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure. In some embodiments the subject is at least one of elderly, critically-medically ill, and suffering from protein-energy malnutrition. In some embodiments the nutritive protein of this disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the
15 subject in coordination with performance of exercise. In some embodiments the nutritive protein of this disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject by an oral, enteral, or parenteral route.

20 [0035] In another aspect this disclosure provides methods of maintaining or achieving a desirable body mass index in a subject, the method comprising providing to the subject a sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure. In some embodiments the subject is at least one of elderly, critically-medically ill, and suffering from protein-energy malnutrition. In some embodiments the nutritive protein of this disclosure,
25 nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject in coordination with performance of exercise. In some embodiments the nutritive protein of this disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject by an oral, enteral, or parenteral route.

30 [0036] In another aspect this disclosure provides methods of providing protein to a subject with protein-energy malnutrition, the method comprising providing to the subject a

sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure. In some embodiments the subject is obese. In some embodiments the nutritive protein of this disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject in coordination with performance of exercise. In some embodiments the nutritive protein of this disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject by an oral, enteral, or parenteral route.

[0037] In another aspect this disclosure provides methods of increasing thermogenesis in a subject, the method comprising providing to the subject a sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure. In some embodiments the subject is obese. In some embodiments the nutritive protein of this disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject in coordination with performance of exercise. In some embodiments the nutritive protein of this disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject by an oral, enteral, or parenteral route.

[0038] In another aspect this disclosure provides methods of inducing at least one of a satiation response and a satiety response in a subject, the method comprising providing to the subject a sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure. In some embodiments the subject is obese. In some embodiments the nutritive protein of this disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject in coordination with performance of exercise. In some embodiments the nutritive protein of this disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject by an oral, enteral, or parenteral route.

[0039] In another aspect this disclosure provides methods of treating at least one of cachexia, sarcopenia and frailty in a subject, the method comprising providing to the subject a sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure. In some

embodiments the nutritive protein of this disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject by an oral, enteral, or parenteral route.

[0039A] In another aspect of the invention there is also provided a method of maintaining or increasing at least one of muscle mass, muscle strength, and muscle functional performance in a subject, the method comprising providing to the subject a sufficient amount of a nutritive composition comprising an isolated nutritive protein fragment comprising a polypeptide sequence that is at least about 80% homologous to a fragment of a naturally-occurring protein sequence over the total length of the isolated nutritive protein fragment, wherein the isolated nutritive protein fragment is at least 25 amino acids in length, wherein the isolated nutritive protein fragment is less than or equal to 150 amino acids in length, wherein the polypeptide sequence comprises a ratio of essential amino acid residues to total amino acid residues of at least 40%, a ratio of branch chain amino acid residues to total amino acid residues of at least 18% and a ratio of Leu residues to total amino acid residues of at least 8%, wherein the isolated nutritive protein fragment has an aqueous solubility at pH 7 of at least 50 g/L, and wherein the isolated nutritive protein fragment is present in the composition in an amount of at least about 1 gram.

[0039B] In a further aspect of the invention there is also provided a method of treating at least one of cachexia, sarcopenia and frailty in a subject, the method comprising providing to the subject a sufficient amount of a nutritive composition comprising an isolated nutritive protein fragment comprising a polypeptide sequence that is at least about 80% homologous to a fragment of a naturally-occurring protein sequence over the total length of the isolated nutritive protein fragment, wherein the polypeptide sequence is at least 25 amino acids in length, wherein the isolated nutritive protein fragment is less than or equal to 150 amino acids in length, wherein the polypeptide sequence comprises a ratio of essential amino acid residues to total amino acid residues of at least 40% and at least one of: a ratio of branch chain amino acid residues to total amino acid residues of at least 18% and a ratio of Leu residues to total amino acid residues of at least 8%, wherein the isolated nutritive protein fragment has an aqueous solubility at pH 7 of at least 50 g/L, and wherein the

isolated nutritive protein fragment is present in the composition in an amount of at least about 1 gram.

[0039C] Throughout this specification the word "comprise", or variations such as "comprises" or "comprising", will be understood to imply the inclusion of a stated element, integer or step, or group of elements, integers or steps, but not the exclusion of any other element, integer or step, or group of elements, integers or steps.

[0039D] Any discussion of documents, acts, materials, devices, articles or the like which has been included in the present specification is not to be taken as an admission that any or all of these matters form part of the prior art base or were common general knowledge in the field relevant to the present disclosure as it existed before the priority date of each claim of this application.**BRIEF DESCRIPTION OF THE DRAWINGS:**

[0040] **Figure 1** shows a two dimensional histogram indicating the relative likelihood (on a log scale) of a protein being expressed in an E. coli expression screen as a function of solvation score (y-axis) and aggregation score (x-axis).

[0041] **Figure 2** shows a two dimensional histogram indicating the relative likelihood (on a log scale) of a protein being solubly expressed in an E. coli expression screen as a function of solvation score (y-axis) and aggregation score (x-axis)NN

DETAILED DESCRIPTION:

[0042] Unless otherwise defined herein, scientific and technical terms used in connection with the present disclosure shall have the meanings that are commonly understood by those of ordinary skill in the art. Further, unless otherwise required by context, singular terms shall include the plural and plural terms shall include the singular. Generally, nomenclatures used in connection with, and techniques of, biochemistry, enzymology, molecular and cellular biology, microbiology, genetics and protein and nucleic acid chemistry and hybridization described herein are those well-known and commonly used in the art. Certain references and other documents cited herein are expressly incorporated herein by reference. Additionally, all UniProt/SwissProt records cited herein are hereby incorporated herein by reference. In case of conflict, the present

specification, including definitions, will control. The materials, methods, and examples are illustrative only and not intended to be limiting.

[0043] The methods and techniques of the present disclosure are generally performed according to conventional methods well known in the art and as described in various general and more specific references that are cited and discussed throughout the present specification unless otherwise indicated. See, e.g., Sambrook et al, *Molecular Cloning: A Laboratory Manual*, 3d ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y. (2001); Ausubel et al, *Current Protocols in Molecular Biology*, Greene Publishing Associates (1992, and Supplements to 2002); Taylor and Drickamer, *Introduction to Glycobiology*, Oxford Univ. Press (2003); Worthington Enzyme Manual, Worthington Biochemical Corp.,

Freehold, N.J.; Handbook of Biochemistry: Section A Proteins, Vol I, CRC Press (1976); Handbook of Biochemistry: Section A Proteins, Vol II, CRC Press (1976); Essentials of Glycobiology, Cold Spring Harbor Laboratory Press (1999). Many molecular biology and genetic techniques applicable to cyanobacteria are described in Heidorn et al., “Synthetic
5 Biology in Cyanobacteria: Engineering and Analyzing Novel Functions,” Methods in Enzymology, Vol. 497, Ch. 24 (2011), which is hereby incorporated herein by reference.

[0044] This disclosure refers to sequence database entries (e.g., UniProt/SwissProt) for certain protein and gene sequences that are published on the internet, as well as other information on the internet. The skilled artisan understands that information on the internet,
10 including sequence database entries, is updated from time to time and that, for example, the reference number used to refer to a particular sequence can change. Where reference is made to a public database of sequence information or other information on the internet, it is understood that such changes can occur and particular embodiments of information on the internet can come and go. Because the skilled artisan can find equivalent information by
15 searching on the internet, a reference to an internet web page address or a sequence database entry evidences the availability and public dissemination of the information in question.

[0045] Before the present proteins, compositions, methods, and other embodiments are disclosed and described, it is to be understood that the terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting. It must
20 be noted that, as used in the specification and the appended claims, the singular forms “a,” “an” and “the” include plural referents unless the context clearly dictates otherwise.

[0046] The term “comprising” as used herein is synonymous with “including” or “containing”, and is inclusive or open-ended and does not exclude additional, unrecited members, elements or method steps.

[0047] This disclosure makes reference to amino acids. The full name of the amino acids is used interchangeably with the standard three letter and one letter abbreviations for each. For the avoidance of doubt, those are: Alanine (Ala, A), Arginine (Arg, R), Asparagine (Asn, N), Aspartic acid (Asp, D), Cysteine (Cys, C), Glutamic Acid (Glu, E), Glutamine (Gln, Q), Glycine (Gly, G), Histidine (His, H), Isoleucine (Ile, I), Leucine (Leu, L),
25 Lysine (Lys, K), Methionine (Met, M), Phenylalanine (Phe, F), Proline (Pro, P), Serine (Ser, S), Threonine (Thr, T), Tryptophan (Trp, W), Tyrosine (Tyr, Y), Valine (Val, V).

[0048] As used herein, the term “in vitro” refers to events that occur in an artificial environment, e.g., in a test tube or reaction vessel, in cell culture, in a Petri dish, etc., rather than within an organism (e.g., animal, plant, or microbe).

5 [0049] As used herein, the term “in vivo” refers to events that occur within an organism (e.g., animal, plant, or microbe).

[0050] As used herein, the term “isolated” refers to a substance or entity that has been (1) separated from at least some of the components with which it was associated when initially produced (whether in nature or in an experimental setting), and/or (2) produced, prepared, and/or manufactured by the hand of man. Isolated substances and/or entities may
10 be separated from at least about 10%, about 20%, about 30%, about 40%, about 50%, about 60%, about 70%, about 80%, about 90%, or more of the other components with which they were initially associated. In some embodiments, isolated agents are more than about 80%, about 85%, about 90%, about 91%, about 92%, about 93%, about 94%, about 95%, about 96%, about 97%, about 98%, about 99%, or more than about 99% pure. As used herein, a
15 substance is “pure” if it is substantially free of other components.

[0051] As used herein, a “branch chain amino acid” is an amino acid selected from Leucine, Isoleucine, and Valine.

[0052] As used herein, an “essential amino acid” is an amino acid selected from Histidine, Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Threonine, Tryptophan,
20 and Valine.

[0053] The term “peptide” as used herein refers to a short polypeptide, e.g., one that typically contains less than about 50 amino acids and more typically less than about 30 amino acids. The term as used herein encompasses analogs and mimetics that mimic structural and thus biological function.

25 [0054] The term “polypeptide” encompasses both naturally-occurring and non-naturally occurring proteins, and fragments, mutants, derivatives and analogs thereof. A polypeptide may be monomeric or polymeric. Further, a polypeptide may comprise a number of different domains each of which has one or more distinct activities. For the avoidance of doubt, a “polypeptide” may be any length greater two amino acids.

[0055] The term “isolated protein” or “isolated polypeptide” is a protein or polypeptide that by virtue of its origin or source of derivation (1) is not associated with naturally associated components that accompany it in its native state, (2) exists in a purity not found in nature, where purity can be adjudged with respect to the presence of other cellular material (e.g., is free of other proteins from the same species) (3) is expressed by a cell from a different species, or (4) does not occur in nature (e.g., it is a fragment of a polypeptide found in nature or it includes amino acid analogs or derivatives not found in nature or linkages other than standard peptide bonds). Thus, a polypeptide that is chemically synthesized or synthesized in a cellular system different from the cell from which it naturally originates will be “isolated” from its naturally associated components. A polypeptide or protein may also be rendered substantially free of naturally associated components by isolation, using protein purification techniques well known in the art. As thus defined, “isolated” does not necessarily require that the protein, polypeptide, peptide or oligopeptide so described has been physically removed from a cell in which it was synthesized.

[0056] The term “polypeptide fragment” as used herein refers to a polypeptide that has a deletion, e.g., an amino-terminal and/or carboxy-terminal deletion compared to a full-length polypeptide, such as a naturally occurring protein. In an embodiment, the polypeptide fragment is a contiguous sequence in which the amino acid sequence of the fragment is identical to the corresponding positions in the naturally-occurring sequence. Fragments typically are at least 5, 6, 7, 8, 9 or 10 amino acids long, or at least 12, 14, 16 or 18 amino acids long, or at least 20 amino acids long, or at least 25, 30, 35, 40 or 45, amino acids, or at least 50 or 60 amino acids long, or at least 70 amino acids long.

[0057] The term “fusion protein” refers to a polypeptide comprising a polypeptide or fragment coupled to heterologous amino acid sequences. Fusion proteins are useful because they can be constructed to contain two or more desired functional elements that can be from two or more different proteins. A fusion protein comprises at least 10 contiguous amino acids from a polypeptide of interest, or at least 20 or 30 amino acids, or at least 40, 50 or 60 amino acids, or at least 75, 100 or 125 amino acids. The heterologous polypeptide included within the fusion protein is usually at least 6 amino acids in length, or at least 8 amino acids in length, or at least 15, 20, or 25 amino acids in length. Fusions that include larger polypeptides, such as an IgG Fc region, and even entire proteins, such as the green fluorescent protein (“GFP”) chromophore-containing proteins, have particular utility. Fusion

proteins can be produced recombinantly by constructing a nucleic acid sequence which encodes the polypeptide or a fragment thereof in frame with a nucleic acid sequence encoding a different protein or peptide and then expressing the fusion protein. Alternatively, a fusion protein can be produced chemically by crosslinking the polypeptide or a fragment thereof to another protein.

[0058] As used herein, a protein has “homology” or is “homologous” to a second protein if the nucleic acid sequence that encodes the protein has a similar sequence to the nucleic acid sequence that encodes the second protein. Alternatively, a protein has homology to a second protein if the two proteins have similar amino acid sequences. (Thus, the term “homologous proteins” is defined to mean that the two proteins have similar amino acid sequences.) As used herein, homology between two regions of amino acid sequence (especially with respect to predicted structural similarities) is interpreted as implying similarity in function.

[0059] When “homologous” is used in reference to proteins or peptides, it is recognized that residue positions that are not identical often differ by conservative amino acid substitutions. A “conservative amino acid substitution” is one in which an amino acid residue is substituted by another amino acid residue having a side chain (R group) with similar chemical properties (e.g., charge or hydrophobicity). In general, a conservative amino acid substitution will not substantially change the functional properties of a protein. In cases where two or more amino acid sequences differ from each other by conservative substitutions, the percent sequence identity or degree of homology may be adjusted upwards to correct for the conservative nature of the substitution. Means for making this adjustment are well known to those of skill in the art. See, e.g., Pearson, 1994, *Methods Mol. Biol.* 24:307-31 and 25:365-89.

[0060] The following six groups each contain amino acids that are conservative substitutions for one another: 1) Serine, Threonine; 2) Aspartic Acid, Glutamic Acid; 3) Asparagine, Glutamine; 4) Arginine, Lysine; 5) Isoleucine, Leucine, Methionine, Alanine, Valine, and 6) Phenylalanine, Tyrosine, Tryptophan.

[0061] Sequence homology for polypeptides, which is also referred to as percent sequence identity, is typically measured using sequence analysis software. See, e.g., the Sequence Analysis Software Package of the Genetics Computer Group (GCG), University of

Wisconsin Biotechnology Center, 910 University Avenue, Madison, Wis. 53705. Protein analysis software matches similar sequences using a measure of homology assigned to various substitutions, deletions and other modifications, including conservative amino acid substitutions. For instance, GCG contains programs such as “Gap” and “Bestfit” which can be used with default parameters to determine sequence homology or sequence identity between closely related polypeptides, such as homologous polypeptides from different species of organisms or between a wild-type protein and a mutein thereof. See, e.g., GCG Version 6.1.

[0062] An exemplary algorithm when comparing a particular polypeptide sequence to a database containing a large number of sequences from different organisms is the computer program BLAST (Altschul et al., J. Mol. Biol. 215:403-410 (1990); Gish and States, Nature Genet. 3:266-272 (1993); Madden et al., Meth. Enzymol. 266:131-141 (1996); Altschul et al., Nucleic Acids Res. 25:3389-3402 (1997); Zhang and Madden, Genome Res. 7:649-656 (1997)), especially blastp or tblastn (Altschul et al., Nucleic Acids Res. 25:3389-3402 (1997)).

[0063] Exemplary parameters for BLASTp are: Expectation value: 10 (default); Filter: seg (default); Cost to open a gap: 11 (default); Cost to extend a gap: 1 (default); Max. alignments: 100 (default); Word size: 11 (default); No. of descriptions: 100 (default); Penalty Matrix: BLOSUM62. The length of polypeptide sequences compared for homology will generally be at least about 16 amino acid residues, or at least about 20 residues, or at least about 24 residues, or at least about 28 residues, or more than about 35 residues. When searching a database containing sequences from a large number of different organisms, it may be useful to compare amino acid sequences. Database searching using amino acid sequences can be measured by algorithms other than blastp known in the art. For instance, polypeptide sequences can be compared using FASTA, a program in GCG Version 6.1. FASTA provides alignments and percent sequence identity of the regions of the best overlap between the query and search sequences. Pearson, Methods Enzymol. 183:63-98 (1990). For example, percent sequence identity between amino acid sequences can be determined using FASTA with its default parameters (a word size of 2 and the PAM250 scoring matrix), as provided in GCG Version 6.1, herein incorporated by reference.

[0064] In some embodiments, polymeric molecules (e.g., a polypeptide sequence or nucleic acid sequence) are considered to be “homologous” to one another if their sequences

are at least 25%, at least 30%, at least 35%, at least 40%, at least 45%, at least 50%, at least 55%, at least 60%, at least 65%, at least 70%, at least 75%, at least 80%, at least 85%, at least 90%, at least 95%, or at least 99% identical. In some embodiments, polymeric molecules are considered to be “homologous” to one another if their sequences are at least 25%, at least 30%, at least 35%, at least 40%, at least 45%, at least 50%, at least 55%, at least 60%, at least 65%, at least 70%, at least 75%, at least 80%, at least 85%, at least 90%, at least 95%, or at least 99% similar. The term “homologous” necessarily refers to a comparison between at least two sequences (nucleotide sequences or amino acid sequences). In some embodiments, two nucleotide sequences are considered to be homologous if the polypeptides they encode are at least about 50% identical, at least about 60% identical, at least about 70% identical, at least about 80% identical, or at least about 90% identical for at least one stretch of at least about 20 amino acids. In some embodiments, homologous nucleotide sequences are characterized by the ability to encode a stretch of at least 4-5 uniquely specified amino acids. Both the identity and the approximate spacing of these amino acids relative to one another must be considered for nucleotide sequences to be considered homologous. In some embodiments of nucleotide sequences less than 60 nucleotides in length, homology is determined by the ability to encode a stretch of at least 4-5 uniquely specified amino acids. In some embodiments, two protein sequences are considered to be homologous if the proteins are at least about 50% identical, at least about 60% identical, at least about 70% identical, at least about 80% identical, or at least about 90% identical for at least one stretch of at least about 20 amino acids.

[0065] As used herein, a “modified derivative” refers to polypeptides or fragments thereof that are substantially homologous in primary structural sequence to a reference polypeptide sequence but which include, e.g., in vivo or in vitro chemical and biochemical modifications or which incorporate amino acids that are not found in the reference polypeptide. Such modifications include, for example, acetylation, carboxylation, phosphorylation, glycosylation, ubiquitination, labeling, e.g., with radionuclides, and various enzymatic modifications, as will be readily appreciated by those skilled in the art. A variety of methods for labeling polypeptides and of substituents or labels useful for such purposes are well known in the art, and include radioactive isotopes such as ^{125}I , ^{32}P , ^{35}S , and ^3H , ligands that bind to labeled antiligands (e.g., antibodies), fluorophores, chemiluminescent agents, enzymes, and antiligands that can serve as specific binding pair members for a labeled ligand. The choice of label depends on the sensitivity required, ease of conjugation with the

primer, stability requirements, and available instrumentation. Methods for labeling polypeptides are well known in the art. See, e.g., Ausubel et al., Current Protocols in Molecular Biology, Greene Publishing Associates (1992, and Supplements to 2002).

[0066] As used herein, “polypeptide mutant” or “mutein” refers to a polypeptide whose sequence contains an insertion, duplication, deletion, rearrangement or substitution of one or more amino acids compared to the amino acid sequence of a reference protein or polypeptide, such as a native or wild-type protein. A mutein may have one or more amino acid point substitutions, in which a single amino acid at a position has been changed to another amino acid, one or more insertions and/or deletions, in which one or more amino acids are inserted or deleted, respectively, in the sequence of the reference protein, and/or truncations of the amino acid sequence at either or both the amino or carboxy termini. A mutein may have the same or a different biological activity compared to the reference protein.

[0067] In some embodiments, a mutein has, for example, at least 85% overall sequence homology to its counterpart reference protein. In some embodiments, a mutein has at least 90% overall sequence homology to the wild-type protein. In other embodiments, a mutein exhibits at least 95% sequence identity, or 98%, or 99%, or 99.5% or 99.9% overall sequence identity.

[0068] As used herein, a “polypeptide tag for affinity purification” is any polypeptide that has a binding partner that can be used to isolate or purify a second protein or polypeptide sequence of interest fused to the first “tag” polypeptide. Several examples are well known in the art and include a His-6 tag, a FLAG epitope, a c-myc epitope, a Strep-TAGII, a biotin tag, a glutathione 5-transferase (GST), a chitin binding protein (CBP), a maltose binding protein (MBP), or a metal affinity tag.

[0069] As used herein, “recombinant” refers to a biomolecule, e.g., a gene or protein, that (1) has been removed from its naturally occurring environment, (2) is not associated with all or a portion of a polynucleotide in which the gene is found in nature, (3) is operatively linked to a polynucleotide which it is not linked to in nature, or (4) does not occur in nature. The term “recombinant” can be used in reference to cloned DNA isolates, chemically synthesized polynucleotide analogs, or polynucleotide analogs that are biologically synthesized by heterologous systems, as well as proteins and/or mRNAs encoded by such

nucleic acids. Thus, for example, a protein synthesized by a microorganism is recombinant, for example, if it is synthesized from an mRNA synthesized from a recombinant gene present in the cell.

[0070] The term “polynucleotide”, “nucleic acid molecule”, “nucleic acid”, or
5 “nucleic acid sequence” refers to a polymeric form of nucleotides of at least 10 bases in length. The term includes DNA molecules (e.g., cDNA or genomic or synthetic DNA) and RNA molecules (e.g., mRNA or synthetic RNA), as well as analogs of DNA or RNA containing non-natural nucleotide analogs, non-native internucleoside bonds, or both. The nucleic acid can be in any topological conformation. For instance, the nucleic acid can be
10 single-stranded, double-stranded, triple-stranded, quadruplexed, partially double-stranded, branched, hairpinned, circular, or in a padlocked conformation.

[0071] A “synthetic” RNA, DNA or a mixed polymer is one created outside of a cell, for example one synthesized chemically.

[0072] The term “nucleic acid fragment” as used herein refers to a nucleic acid
15 sequence that has a deletion, e.g., a 5’-terminal or 3’-terminal deletion compared to a full-length reference nucleotide sequence. In an embodiment, the nucleic acid fragment is a contiguous sequence in which the nucleotide sequence of the fragment is identical to the corresponding positions in the naturally-occurring sequence. In some embodiments fragments are at least 10, 15, 20, or 25 nucleotides long, or at least 20, 30, 40, 50, 60, 70, 80,
20 90, 100, 110, 120, 130, 140, or 150 nucleotides long. In some embodiments a fragment of a nucleic acid sequence is a fragment of an open reading frame sequence. In some embodiments such a fragment encodes a polypeptide fragment (as defined herein) of the protein encoded by the open reading frame nucleotide sequence.

[0073] As used herein, an endogenous nucleic acid sequence in the genome of an
25 organism (or the encoded protein product of that sequence) is deemed “recombinant” herein if a heterologous sequence is placed adjacent to the endogenous nucleic acid sequence, such that the expression of this endogenous nucleic acid sequence is altered. In this context, a heterologous sequence is a sequence that is not naturally adjacent to the endogenous nucleic acid sequence, whether or not the heterologous sequence is itself endogenous (originating
30 from the same host cell or progeny thereof) or exogenous (originating from a different host cell or progeny thereof). By way of example, a promoter sequence can be substituted (e.g., by

homologous recombination) for the native promoter of a gene in the genome of a host cell, such that this gene has an altered expression pattern. This gene would now become “recombinant” because it is separated from at least some of the sequences that naturally flank it.

5 [0074] A nucleic acid is also considered “recombinant” if it contains any modifications that do not naturally occur to the corresponding nucleic acid in a genome. For instance, an endogenous coding sequence is considered “recombinant” if it contains an insertion, deletion or a point mutation introduced artificially, e.g., by human intervention. A “recombinant nucleic acid” also includes a nucleic acid integrated into a host cell
10 chromosome at a heterologous site and a nucleic acid construct present as an episome.

[0075] As used herein, the phrase “degenerate variant” of a reference nucleic acid sequence encompasses nucleic acid sequences that can be translated, according to the standard genetic code, to provide an amino acid sequence identical to that translated from the reference nucleic acid sequence. The term “degenerate oligonucleotide” or “degenerate
15 primer” is used to signify an oligonucleotide capable of hybridizing with target nucleic acid sequences that are not necessarily identical in sequence but that are homologous to one another within one or more particular segments.

[0076] The term “percent sequence identity” or “identical” in the context of nucleic acid sequences refers to the residues in the two sequences which are the same when aligned
20 for maximum correspondence. The length of sequence identity comparison may be over a stretch of at least about nine nucleotides, usually at least about 20 nucleotides, more usually at least about 24 nucleotides, typically at least about 28 nucleotides, more typically at least about 32, and even more typically at least about 36 or more nucleotides. There are a number of different algorithms known in the art which can be used to measure nucleotide sequence
25 identity. For instance, polynucleotide sequences can be compared using FASTA, Gap or Bestfit, which are programs in Wisconsin Package Version 10.0, Genetics Computer Group (GCG), Madison, Wis. FASTA provides alignments and percent sequence identity of the regions of the best overlap between the query and search sequences. Pearson, Methods Enzymol. 183:63-98 (1990). For instance, percent sequence identity between nucleic acid
30 sequences can be determined using FASTA with its default parameters (a word size of 6 and the NOPAM factor for the scoring matrix) or using Gap with its default parameters as provided in GCG Version 6.1, herein incorporated by reference. Alternatively, sequences can

be compared using the computer program, BLAST (Altschul et al., J. Mol. Biol. 215:403-410 (1990); Gish and States, Nature Genet. 3:266-272 (1993); Madden et al., Meth. Enzymol. 266:131-141 (1996); Altschul et al., Nucleic Acids Res. 25:3389-3402 (1997); Zhang and Madden, Genome Res. 7:649-656 (1997)), especially blastp or tblastn (Altschul et al.,

5 Nucleic Acids Res. 25:3389-3402 (1997)).

[0077] The term “substantial homology” or “substantial similarity,” when referring to a nucleic acid or fragment thereof, indicates that, when optimally aligned with appropriate nucleotide insertions or deletions with another nucleic acid (or its complementary strand), there is nucleotide sequence identity in at least about 76%, 80%, 85%, or at least about 90%,
10 or at least about 95%, 96%, 97%, 98% or 99% of the nucleotide bases, as measured by any well-known algorithm of sequence identity, such as FASTA, BLAST or Gap, as discussed above.

[0078] Alternatively, substantial homology or similarity exists when a nucleic acid or fragment thereof hybridizes to another nucleic acid, to a strand of another nucleic acid, or to
15 the complementary strand thereof, under stringent hybridization conditions. “Stringent hybridization conditions” and “stringent wash conditions” in the context of nucleic acid hybridization experiments depend upon a number of different physical parameters. Nucleic acid hybridization will be affected by such conditions as salt concentration, temperature, solvents, the base composition of the hybridizing species, length of the complementary
20 regions, and the number of nucleotide base mismatches between the hybridizing nucleic acids, as will be readily appreciated by those skilled in the art. One having ordinary skill in the art knows how to vary these parameters to achieve a particular stringency of hybridization.

[0079] In general, “stringent hybridization” is performed at about 25°C below the
25 thermal melting point (T_m) for the specific DNA hybrid under a particular set of conditions. “Stringent washing” is performed at temperatures about 5°C lower than the T_m for the specific DNA hybrid under a particular set of conditions. The T_m is the temperature at which 50% of the target sequence hybridizes to a perfectly matched probe. See Sambrook et al., Molecular Cloning: A Laboratory Manual, 2d ed., Cold Spring Harbor Laboratory Press,
30 Cold Spring Harbor, N.Y. (1989), page 9.51, hereby incorporated by reference. For purposes herein, “stringent conditions” are defined for solution phase hybridization as aqueous hybridization (i.e., free of formamide) in 6xSSC (where 20xSSC contains 3.0 M NaCl and

0.3 M sodium citrate), 1% SDS at 65°C for 8-12 hours, followed by two washes in 0.2xSSC, 0.1% SDS at 65°C for 20 minutes. It will be appreciated by the skilled worker that hybridization at 65°C will occur at different rates depending on a number of factors including the length and percent identity of the sequences which are hybridizing.

5 [0080] As used herein, an “expression control sequence” refers to polynucleotide sequences which are necessary to affect the expression of coding sequences to which they are operatively linked. Expression control sequences are sequences which control the transcription, post-transcriptional events and translation of nucleic acid sequences. Expression control sequences include appropriate transcription initiation, termination,
10 promoter and enhancer sequences; efficient RNA processing signals such as splicing and polyadenylation signals; sequences that stabilize cytoplasmic mRNA; sequences that enhance translation efficiency (e.g., ribosome binding sites); sequences that enhance protein stability; and when desired, sequences that enhance protein secretion. The nature of such control sequences differs depending upon the host organism; in prokaryotes, such control sequences
15 generally include promoter, ribosomal binding site, and transcription termination sequence. The term “control sequences” is intended to encompass, at a minimum, any component whose presence is essential for expression, and can also encompass an additional component whose presence is advantageous, for example, leader sequences and fusion partner sequences.

[0081] As used herein, “operatively linked” or “operably linked” expression control
20 sequences refers to a linkage in which the expression control sequence is contiguous with the gene of interest to control the gene of interest, as well as expression control sequences that act in trans or at a distance to control the gene of interest.

[0082] As used herein, a “vector” is intended to refer to a nucleic acid molecule capable of transporting another nucleic acid to which it has been linked. One type of vector
25 is a “plasmid,” which generally refers to a circular double stranded DNA loop into which additional DNA segments may be ligated, but also includes linear double-stranded molecules such as those resulting from amplification by the polymerase chain reaction (PCR) or from treatment of a circular plasmid with a restriction enzyme. Other vectors include cosmids, bacterial artificial chromosomes (BAC) and yeast artificial chromosomes (YAC). Another
30 type of vector is a viral vector, wherein additional DNA segments may be ligated into the viral genome (discussed in more detail below). Certain vectors are capable of autonomous replication in a host cell into which they are introduced (e.g., vectors having an origin of

replication which functions in the host cell). Other vectors can be integrated into the genome of a host cell upon introduction into the host cell, and are thereby replicated along with the host genome. Moreover, certain vectors are capable of directing the expression of genes to which they are operatively linked. Such vectors are referred to herein as “recombinant expression vectors” (or simply “expression vectors”).

[0083] The term “recombinant host cell” (or simply “recombinant cell” or “host cell”), as used herein, is intended to refer to a cell into which a recombinant nucleic acid such as a recombinant vector has been introduced. In some instances the word “cell” is replaced by a name specifying a type of cell. For example, a “recombinant microorganism” is a recombinant host cell that is a microorganism host cell and a “recombinant cyanobacteria” is a recombinant host cell that is a cyanobacteria host cell. It should be understood that such terms are intended to refer not only to the particular subject cell but to the progeny of such a cell. Because certain modifications may occur in succeeding generations due to either mutation or environmental influences, such progeny may not, in fact, be identical to the parent cell, but are still included within the scope of the term “recombinant host cell,” “recombinant cell,” and “host cell”, as used herein. A recombinant host cell may be an isolated cell or cell line grown in culture or may be a cell which resides in a living tissue or organism.

[0084] As used herein, the term “heterotrophic” refers to an organism that cannot fix carbon and uses organic carbon for growth.

[0085] As used herein, the term “autotrophic” refers to an organism that produces complex organic compounds (such as carbohydrates, fats, and proteins) from simple inorganic molecules using energy from light (by photosynthesis) or inorganic chemical reactions (chemosynthesis).

[0086] As used herein, “muscle mass” refers to the weight of muscle in a subject’s body. Muscle mass includes the skeletal muscles, smooth muscles (such as cardiac and digestive muscles) and the water contained in these muscles. Muscle mass of specific muscles can be determined using dual energy x-ray absorptiometry (DEXA) (Padden-Jones et al., 2004). Total lean body mass (minus the fat), total body mass, and bone mineral content can be measured by DEXA as well. In some embodiments a change in the muscle mass of a specific muscle of a subject is determined, for example by DEXA, and the change is used as a

proxy for the total change in muscle mass of the subject. Thus, for example, if a subject consumes a nutritive protein as disclosed herein and experiences an increase over a period of time in muscle mass in a particular muscle or muscle group, it can be concluded that the subject has experienced an increase in muscle mass.

5 [0001] As used herein, a “muscle strength” refers to the amount of force a muscle can produce with a single maximal effort. There are two types of muscle strength, static strength and dynamic strength. Static strength refers to isometric contraction of a muscle, where a muscle generates force while the muscle length remains constant and/or when there is no movement in a joint. Examples include holding or carrying an object, or pushing against a wall. Dynamic strength refers to a muscle generating force that results in movement. Dynamic strength can be isotonic contraction, where the muscle shortens under a constant load or isokinetic contraction, where the muscle contracts and shortens at a constant speed. Dynamic strength can also include isoinertial strength.

15 [0002] Unless specified, “muscle strength” refers to maximum dynamic muscle strength. Maximum strength is referred to as “one repetition maximum” (1RM). This is a measurement of the greatest load (in kilograms) that can be fully moved (lifted, pushed or pulled) once without failure or injury. This value can be measured directly, but doing so requires that the weight is increased until the subject fails to carry out the activity to completion. Alternatively, 1RM is estimated by counting the maximum number of exercise repetitions a subject can make using a load that is less than the maximum amount the subject can move. Leg extension and leg flexion are often measured in clinical trials (Borsheim et al., “Effect of amino acid supplementation on muscle mass, strength and physical function in elderly,” Clin Nutr 2008;27:189-195; Paddon-Jones, et al., “Essential amino acid and carbohydrate supplementation ameliorates muscle protein loss in humans during 28 days bed rest,” J Clin Endocrinol Metab 2004;89:4351-4358).

25 [0003] As used herein, “functional performance” refers to a functional test that simulates daily activities. “Functional performance” is measured by any suitable accepted test, including timed-step test (step up and down from a 4 inch bench as fast as possible 5 times), timed floor transfer test (go from a standing position to a supine position on the floor and thereafter up to a standing position again as fast as possible for one repetition), and physical performance battery test (static balance test, chair test, and a walking test) (Borsheim et al., “Effect of amino acid supplementation on muscle mass, strength and physical function in elderly,” Clin Nutr 2008;27:189-195).

[0004] As used herein, a “body mass index” or “BMI” or “Quetelet index” is a subject’s weight in kilograms divided by the square of the subject’s height in meters (kg/m^2).

[0087] For adults, a frequent use of the BMI is to assess how much an individual's body weight departs from what is normal or desirable for a person of his or her height. The weight excess or deficiency may, in part, be accounted for by body fat, although other factors such as muscularity also affect BMI significantly. The World Health Organization regards a BMI of less than 18.5 as underweight and may indicate malnutrition, an eating disorder, or other health problems, while a BMI greater than 25 is considered overweight and above 30 is considered obese. (World Health Organization. BMI classification. Accessed March 19, 2012 http://apps.who.int/bmi/index.jsp?introPage=intro_3.html.) As used herein a “desirable body mass index” is a body mass index of from about 18.5 to about 25. Thus, if a subject has a BMI below about 18.5, then an increase in the subject’s BMI is an increase in the desirability of the subject’s BMI. If instead a subject has a BMI above about 25, then a decrease in the subject’s BMI is an increase in the desirability of the subject’s BMI.

[0088] As used herein, an “elderly” mammal is one who experiences age related changes in at least one of body mass index and muscle mass (e.g., age related sarcopenia). In some embodiments an “elderly” human is at least 50 years old, at least 60 years old, at least 65 years old, at least 70 years old, at least 75 years old, at least 80 years old, at least 85 years old, at least 90 years old, at least 95 years old, or at least 100 years old. In some embodiments and an elderly animal, mammal, or human is a human who has experienced a loss of muscle mass from peak lifetime muscle mass of at least 5%, at least 10%, at least 15%, at least 20%, at least 25%, at least 30%, at least 35%, at least 40%, at least 45%, at least 50%, at least 55%, or at least 60%. Because age related changes to at least one of body mass index and muscle mass are known to correlate with increasing age, in some embodiments an elderly mammal is identified or defined simply on the basis of age. Thus, in some embodiments an “elderly” human is identified or defined simply by the fact that their age is at least 60 years old, at least 65 years old, at least 70 years old, at least 75 years old, at least 80 years old, at least 85 years old, at least 90 years old, at least 95 years old, or at least 100 years old, and without recourse to a measurement of at least one of body mass index and muscle mass.

[0005] As used herein, a patient is “critically-medically ill” if the patient, because of medical illness, experiences changes in at least one of body mass index and muscle mass

(e.g., sarcopenia). In some embodiments the patient is confined to bed for at least 25%, at least 50%, at least 60%, at least 70%, at least 80%, at least 90%, at least 95%, or 100% of their waking time. In some embodiments the patient is unconscious. In some embodiments the patient has been confined to bed as described in this paragraph for at least 1 day, 2 days, 3 days, 4 days, 5 days, 10 days, 2 weeks, 3 weeks, 4 weeks, 5 weeks, 10 weeks or longer.

[0006] As used herein, “protein-energy malnutrition” refers to a form of malnutrition where there is inadequate protein intake. Types include Kwashiorkor (protein malnutrition predominant), Marasmus (deficiency in both calorie and protein nutrition), and Marasmic Kwashiorkor (marked protein deficiency and marked calorie insufficiency signs present, sometimes referred to as the most severe form of malnutrition).

[0007] As used herein, “cachexia” refers to a multifaceted clinical syndrome that results in wasting and weight loss. It is a complex condition where protein catabolism exceeds protein anabolism, which makes muscle wasting a primary feature of the condition. In addition to the metabolic derangements in protein metabolism, it is also characterized by anorexia and inflammation. These derangements plus impaired protein metabolism are responsive to nutrition therapy to varying degrees.

[0008] As used herein, “thermogenesis” is the process of heat production in a mammal. Thermogenesis is accompanied by an increase in energy expenditure. Thermogenesis is specifically the energy burned following the metabolism of a food component (such as protein). This may also be referred to as the thermic effect of food. Total energy expenditure by an individual equals the sum of resting energy expenditure (energy consumed at rest in a fasting state to support basal metabolism), the thermic effect of food, and energy expenditure related to physical activity. Resting energy expenditure accounts for about 65-75% of total energy expenditure in humans. The amount and activity of muscle mass is one influencer of resting energy expenditure. Adequate protein consumption to support muscle also influences resting energy expenditure. The ingestion of protein tends to increase energy expenditure following a meal; this is the thermic effect of food. The thermic effect of food accounts for about 10% of total energy expenditure in humans. While this is a small proportion of total energy expenditure, small increases in this value can impact body weight. Protein has a higher thermic effect than fat or carbohydrate; this effect along with other metabolic influences of protein make it a useful substrate for weight control, diabetes management and other conditions.

[0009] As used herein, “satiation” is the act of becoming full while eating or a reduced desire to eat. This halts or diminishes eating.

[0010] As used herein, “satiety” is the act of remaining full after a meal which manifests as the period of no eating follow the meal.

5 [0011] As used herein, “exercise” is, most broadly, any bodily activity that enhances or maintains physical fitness and overall health and wellness. Exercise is performed for various reasons including strengthening muscles and the cardiovascular system, honing athletic skills, weight loss or maintenance, as well as for the purpose of enjoyment.

[0012] As used herein, a “sufficient amount” is an amount of a protein or polypeptide
10 disclosed herein that is sufficient to cause a desired effect. For example, if an increase in muscle mass is desired, a sufficient amount is an amount that causes an increase in muscle mass in a subject over a period of time. A sufficient amount of a protein or polypeptide fragment can be provided directly, i.e., by administering the protein or polypeptide fragment to a subject, or it can be provided as part of a composition comprising the protein or
15 polypeptide fragment. Modes of administration are discussed elsewhere herein.

[0089] As used herein, the term “mammal” refers to any member of the taxonomic class mammalia, including placental mammals and marsupial mammals. Thus, “mammal” includes humans, primates, livestock, and laboratory mammals. Exemplary mammals include a rodent, a mouse, a rat, a rabbit, a dog, a cat, a sheep, a horse, a goat, a llama, cattle,
20 a primate, a pig, and any other mammal. In some embodiments, the mammal is at least one of a transgenic mammal, a genetically-engineered mammal, and a cloned mammal.

A. Nutritive Proteins

[0090] For the purposes of this disclosure, a “nutritive protein” is a protein that contains a desirable amount of essential amino acids. In some embodiments, the nutritive
25 protein comprises at least 30% essential amino acids by weight. In some embodiments, the nutritive protein comprises at least 40% essential amino acids by weight. In some embodiments, the nutritive protein comprises at least 50% essential amino acids by weight. In some embodiments the nutritive protein comprises or consists of a protein or fragment of a protein that naturally occurs in an edible species. In its broadest sense, an “edible species”
30 encompasses any species known to be eaten without deleterious effect by at least one type of mammal. A deleterious effect includes a poisonous effect and a toxic effect. In some

embodiments an edible species is a species known to be eaten by humans without deleterious effect. Some edible species are an infrequent but known component of the diet of only a small group of a type of mammal in a limited geographic location while others are a dietary staple throughout much of the world. In other embodiments an edible species is one not

5 known to be previously eaten by any mammal, but that is demonstrated to be edible upon testing. Edible species include but are not limited to *Gossypium turneri*, *Pleurotus cornucopiae*, *Glycine max*, *Oryza sativa*, *Thunnus obesus*, *Abies bracteata*, *Acomys ignitus*, *Lathyrus aphaca*, *Bos gaurus*, *Raphicerus melanotis*, *Phoca groenlandica*, *Acipenser sinensis*, *Viverra zibetha*, *Pleurotus sajor-caju*, *Fagopyrum tataricum*, *Pinus strobus*,

10 *Ipomoea nil*, *Taxus cuspidata*, *Ipomoea wrightii*, *Mya arenaria*, *Actinidia deliciosa*, *Gazella granti*, *Populus tremula*, *Prunus domestica*, *Larus argentatus*, *Vicia villosa*, *Sargocentron punctatissimum*, *Silene latifolia*, *Lagenodelphis hosei*, *Spisula solidissima*, *Crossarchus obscurus*, *Phaseolus angularis*, *Lathyrus vestitus*, *Oncorhynchus gorboscha*, *Alligator mississippiensis*, *Pinus halepensis*, *Larus canus*, *Brassica napus*, *Silene cucubalus*, *Phoca*

15 *fasciata*, *Gazella bennettii*, *Pinus taeda*, *Taxus canadensis*, *Zamia furfuracea*, *Pinus yunnanensis*, *Pinus wallichiana*, *Asparagus officinalis*, *Capsicum baccatum*, *Pinus longaeva*, *Taxus baccata*, *Pinus sibirica*, *Citrus sinensis*, *Sargocentron xantherythrum*, *Bison bison*, *Gazella thomsonii*, *Vicia sativa*, *Branta canadensis*, *Apium graveolens*, *Acer campestre*, *Coriandrum sativum*, *Silene conica*, *Lactuca sativa*, *Capsicum chinense*, *Abies veitchii*,

20 *Capra hircus*, *Gazella spekei*, *Oncorhynchus keta*, *Ipomoea obscura*, *Cucumis melo* var. *conomon*, *Phoca hispida*, *Vulpes vulpes*, *Ipomoea quamoclit*, *Solanum habrochaites*, *Populus* sp., *Pinus rigida*, *Quercus lyrata*, *Phaseolus coccineus*, *Larus ridibundus*, *Sargocentron spiniferum*, *Thunnus thynnus*, *Vulpes lagopus*, *Bos gaurus frontalis*, *Acer opalus*, *Acer palmatum*, *Quercus ilex*, *Pinus mugo*, *Grus antigone*, *Pinus uncinata*, *Prunus mume*,

25 *Oncorhynchus tshawytscha*, *Gazella subgutturosa*, *Vulpes zerda*, *Pinus coulteri*, *Gossypium barbadense*, *Acer pseudoplatanus*, *Oncorhynchus nerka*, *Sus barbatus*, *Fagopyrum esculentum* subsp. *Ancestrale*, *Cynara cardunculus*, *Phaseolus aureus*, *Populus nigra*, *Gossypium schwendimanii*, *Solanum chacoense*, *Quercus rubra*, *Cucumis sativus*, *Equus burchelli*, *Oncorhynchus kisutch*, *Pinus radiata*, *Phoca vitulina richardsi*, *Grus nigricollis*,

30 *Abies grandis*, *Oncorhynchus masou*, *Spinacia oleracea*, *Solanum chilense*, *Addax nasomaculatus*, *Ipomoea batatas*, *Equus grevyi*, *Abies sachalinensis*, *Pinus pinea*, *Hipposideros commersoni*, *Crocus nudiflorus*, *Citrus maxima*, *Acipenser transmontanus*, *Gossypium gossypoides*, *Viverra zibetha*, *Quercus cerris*, *Anser indicus*, *Pinus balfouriana*, *Silene otites*, *Oncorhynchus* sp., *Viverra megaspila*, *Bos mutus grunniens*, *Pinus elliottii*,

- Equus hemionus kulan, Capra ibex ibex, Allium sativum, Raphanus sativus, Pinus echinata, Prunus serotina, Sargocentron diadema, Silene gallica, Brassica oleracea, Daucus carota, Oncorhynchus mykiss, Brassica oleracea var. alboglabra, Gossypium hirsutum, Abies alba, Citrus reticulata, Cichorium intybus, Bos sauveli, Lama glama, Zea mays, Acorus gramineus,*
- 5 *Vulpes macrotis, Ovis ammon darwini, Raphicerus sharpei, Pinus contorta, Bos indicus, Capra sibirica, Pinus ponderosa, Prunus dulcis, Solanum sogarandinum, Ipomoea aquatica, Lagenorhynchus albirostris, Ovis canadensis, Prunus avium, Gazella dama, Thunnus alalunga, Silene pratensis, Pinus cembra, Crocus sativus, Citrullus lanatus, Gazella rufifrons, Brassica tournefortii, Capra falconeri, Bubalus mindorensis, Pinus palustris,*
- 10 *Prunus laurocerasus, Grus vipio, Ipomoea purpurea, Pinus leiophylla, Lagenorhynchus obscurus, Raphicerus campestris, Brassica rapa subsp. Pekinensis, Acmella radicans, Ipomoea triloba, Pinus patula, Cucumis melo, Pinus virginiana, Solanum lycopersicum, Pinus densiflora, Pinus engelmannii, Quercus robur, Ipomoea setosa, Pleurotus djamor, Hipposideros diadema, Ovis aries, Sargocentron microstoma, Brassica oleracea var. italica,*
- 15 *Capra cylindricornis, Populus kitakamiensis, Allium textile, Vicia faba, Fagopyrum esculentum, Bison priscus, Quercus suber, Lagophylla ramosissima, Acrantophis madagascariensis, Acipenser baerii, Capsicum annum, Triticum aestivum, Xenopus laevis, Phoca sibirica, Acipenser naccarii, Actinidia chinensis, Ovis dalli, Solanum tuberosum, Bubalus carabanensis, Citrus jambhiri, Bison bonasus, Equus asinus, Bubalus*
- 20 *depressicornis, Pleurotus eryngii, Solanum demissum, Ovis vignei, Zea mays subsp. Parviglumis, Lathyrus tingitanus, Welwitschia mirabilis, Grus rubicunda, Ipomoea coccinea, Allium cepa, Gazella soemmerringii, Brassica rapa, Lama vicugna, Solanum peruvianum, Xenopus borealis, Capra caucasica, Thunnus albacares, Equus zebra, Gallus gallus, Solanum bulbocastanum, Hipposideros terasensis, Lagenorhynchus acutus, Hippopotamus*
- 25 *amphibius, Pinus koraiensis, Acer monspessulanum, Populus deltoides, Populus trichocarpa, Acipenser guldenstadti, Pinus thunbergii, Brassica oleracea var. capitata, Abyssocottus korotneffi, Gazella cuvieri, Abies homolepis, Abies holophylla, Gazella gazella, Pinus parviflora, Brassica oleracea var. acephala, Cucurbita pepo, Pinus armandii, Abies mariesii, Thunnus thynnus orientalis, Citrus unshiu, Solanum cheesmanii, Lagenorhynchus*
- 30 *obliquidens, Acer platanoides, Citrus limon, Acrantophis dumerili, Solanum commersonii, Gossypium arboreum, Prunus persica, Pleurotus ostreatus, Abies firma, Gazella leptoceros, Salmo salar, Homarus americanus, Abies magnifica, Bos javanicus, Phoca largha, Sus cebifrons, Solanum melongena, Phoca vitulina, Pinus sylvestris, Zamia floridana, Vulpes corsac, Allium porrum, Phoca caspica, Vulpes chama, Taxus chinensis, Brassica oleracea*

var. botrytis, *Anser anser anser*, *Phaseolus lunatus*, *Brassica campestris*, *Acer saccharum*,
Pinus pumila, *Solanum pennellii*, *Pinus edulis*, *Ipomoea cordatotriloba*, *Populus alba*,
Oncorhynchus clarki, *Quercus petraea*, *Sus verrucosus*, *Equus caballus przewalskii*, *Populus*
euphratica, *Xenopus tropicalis*, *Taxus brevifolia*, *Lama guanicoe*, *Pinus banksiana*, *Solanum*
 5 *nigrum*, *Sus celebensis*, *Brassica juncea*, *Lagenorhynchus cruciger*, *Populus tremuloides*,
Pinus pungens, *Bubalus quarlesi*, *Quercus gamelliflora*, *Ovis orientalis musimon*, *Bubalus*
bubalis, *Pinus luchuensis*, *Sus philippensis*, *Phaseolus vulgaris*, *Salmo trutta*, *Acipenser*
persicus, *Solanum brevidens*, *Pinus resinosa*, *Hippotragus niger*, *Capra nubiana*, *Asparagus*
scaber, *Ipomoea platensis*, *Sus scrofa*, *Capra aegagrus*, *Lathyrus sativus*, *Sargocentron tiere*,
 10 *Hippoglossus hippoglossus*, *Acorus americanus*, *Equus caballus*, *Bos taurus*, *Barbarea*
vulgaris, *Lama guanicoe pacos*, *Pinus pinaster*, *Octopus vulgaris*, *Solanum crispum*,
Hippotragus equinus, *Equus burchellii antiquorum*, *Crossarchus alexandri*, *Ipomoea alba*,
Triticum monococcum, *Populus jackii*, *Lagenorhynchus australis*, *Gazella dorcas*, *Quercus*
coccifera, *Anser caerulescens*, *Acorus calamus*, *Pinus roxburghii*, *Pinus tabuliformis*, *Zamia*
 15 *fischeri*, *Grus carunculatus*, *Acomys cahirinus*, *Cucumis melo* var. *reticulatus*, *Gallus*
lafayettei, *Pisum sativum*, *Pinus attenuata*, *Pinus clausa*, *Gazella saudiya*, *Capra ibex*,
Ipomoea trifida, *Zea luxurians*, *Pinus krempfii*, *Acomys wilsoni*, *Petroselinum crispum*,
Quercus palustris, *Triticum timopheevi*, *Meleagris gallopavo*, *Brassica oleracea*, *Brassica*
oleracea, *Beta vulgaris*, *Solanum lycopersicum*, *Phaseolus vulgaris*, *Xiphias gladius*, *Morone*
 20 *saxatilis*, *Micropterus salmoides*, *Placopecten magellanicus*, *Sprattus sprattus*, *Clupea*
harengus, *Engraulis encrasicolus*, *Cucurbita maxima*, *Agaricus bisporus*, *Musa acuminata* x
balbisiana, *Malus domestica*, *Cicer arietinum*, *Anas platyrhynchos*, *Vaccinium*
macrocarpum, *Rubus idaeus* x *strigosus*, *Vaccinium angustifolium*, *Fragaria ananassa*,
Rubus fruticosus, *Cucumis melo*, *Ananas comosus*, *Cucurbita pepo*, *Cucurbita moschata*, *Sus*
 25 *scrofa domesticus*, *Ocimum basilicum*, *Rosmarinus officinalis*, *Foeniculum vulgare*, *Rheum*
rhabarbarum, *Carica papaya*, *Mangifera indica*, *Actinidia deliciosa*, *Prunus armeniaca*,
Prunus avium, *Cocos nucifera*, *Olea europaea*, *Pyrus communis*, *Ficus carica*, *Passiflora*
edulis, *Oryza sativa* subsp. *Japonica*, *Oryza sativa* subsp. *Indica*, *Coturnix coturnix*,
Saccharomyces cerevisiae.

30 [0013] In some embodiments the nutritive protein comprises or consists of a
 derivative or mutein of a protein or fragment of a protein that naturally occurs in an edible
 species. Such a nutritive protein may be referred to as an “engineered nutritive protein.” In
 such embodiments the natural protein or fragment thereof is a “reference” protein or
 polypeptide and the engineered nutritive protein or a first polypeptide sequence thereof

comprises at least one sequence modification relative to the amino acid sequence of the reference protein or polypeptide. For example, in some embodiments the engineered nutritive protein or first polypeptide sequence thereof is at least 40%, 45%, 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 86%, 87%, 88%, 89%, 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99%, or 99.5% homologous to at least one reference nutritive protein amino acid sequence. Typically the ratio of at least one of branch chain amino acid residues to total amino acid residues, essential amino acid residues to total amino acid residues, and leucine residues to total amino acid residues, present in the engineered nutritive protein or a first polypeptide sequence thereof is greater than the corresponding ratio of at least one of branch chain amino acid residues to total amino acid residues, essential amino acid residues to total amino acid residues, and leucine residues to total amino acid residues present in the reference nutritive protein or polypeptide sequence.

[0091] In some embodiments the nutritive protein is an abundant protein in food or a derivative or mutein thereof, or is a fragment of an abundant protein in food or a derivative or mutein thereof. An abundant protein is a protein that is present in a higher concentration in a food relative to other proteins present in the food. The food can be a known component of the diet of only a small group of a type of mammal in a limited geographic location, or a dietary staple throughout much of the world. In some embodiments the abundant protein in food is selected from chicken egg proteins such as ovalbumin, ovotransferrin, and ovomucoid; meat proteins such as myosin, actin, tropomyosin, collagen, and troponin; cereal proteins such as casein, alpha1 casein, alpha2 casein, beta casein, kappa casein, beta-lactoglobulin, alpha-lactalbumin, glycinin, beta-conglycinin, glutelin, prolamine, gliadin, glutenin, albumin, globulin; chicken muscle proteins such as albumin, enolase, creatine kinase, phosphoglycerate mutase, triosephosphate isomerase, apolipoprotein, ovotransferrin, phosphoglucomutase, phosphoglycerate kinase, glycerol-3-phosphate dehydrogenase, glyceraldehyde 3-phosphate dehydrogenase, hemoglobin, cofilin, glycogen phosphorylase, fructose-1,6-bisphosphatase, actin, myosin, tropomyosin a-chain, casein kinase, glycogen phosphorylase, fructose-1,6-bisphosphatase, aldolase, tubulin, vimentin, endoplasmic reticulum chaperone, lactate dehydrogenase, desmin, transthyretin, fructose biphosphate aldolase, carbonic anhydrase, aldehyde dehydrogenase, annexin, adenosyl homocysteinase; pork muscle proteins such as actin, myosin, enolase, titin, cofilin, phosphoglycerate kinase, enolase, pyruvate dehydrogenase, glycogen phosphorylase, triosephosphate isomerase, myokinase; and fish

proteins such as parvalbumin, pyruvate dehydrogenase, desmin, and triosephosphate isomerase.

[0092] Three natural sources of protein generally regarded as good sources of high quality amino acids are whey protein, egg protein, and soy protein. Each source comprises multiple proteins. Table 1 presents the weight proportional representation of each amino acid in the protein source (g AA / g protein) expressed as a percentage.

Table 1

Amino Acid	Whey	Egg	Soy
Isoleucine	6.5%	5.5%	5.0%
Leucine	11.0%	8.6%	8.0%
Lysine	9.1%	7.2%	6.3%
Methionine	2.1%	3.1%	1.3%
Phenylalanine	3.4%	5.3%	1.2%
Threonine	7.0%	4.8%	3.7%
Tryptophan	1.7%	1.2%	1.3%
Valine	6.2%	6.1%	4.9%
Histidine	2.0%	2.4%	2.7%
<i>Other</i>	51.7%	49.5%	60.4%

[0093] Table 2 presents the weight proportion of each protein source that is essential amino acids, branched chain amino acids (L, I, and V), and leucine (L) (alone).

Table 2

Protein Source	Essential Amino Acids	Branch Chain Amino Acids	Leucine
Whey	49.0%	23.7%	11.0%
Egg	50.5%	20.1%	8.6%
Soy	39.6%	17.9%	8.0%

[0094] The sources relied on to determine the amino acid content of Whey are: Belitz HD., Grosch W., and Schieberle P. Food Chemistry (4th Ed). Springer-Verlag, Berlin Heidelberg 2009; <http://www.gnc.com/product/index.jsp?productId=2986027>;

- 5 http://www.nutrabio.com/Products/whey_protein_concentrate.htm; and http://www.nutrabio.com/Products/whey_protein_isolate.htm. The amino acid content values from those sources were averaged to give the numbers presented in Tables 1 and 2. The source for soy protein is Egg, National Nutrient Database for Standard Reference, Release 24 (<http://ndb.nal.usda.gov/ndb/foods/list>). The source for soy protein is Self Nutrition Data
- 10 (<http://nutritiondata.self.com/facts/legumes-and-legume-products/4389/2>).

[0014] As used herein, “whey protein” or “whey” means a protein mixture comprising an amino acid composition according to Tables 1 and 2. As used herein, whey protein comprises 49% essential amino acids, 24% branch chain amino acids, and 11% leucine, by weight.

- 15 [0015] As used herein, “egg protein” or “egg” means a protein mixture comprising an amino acid composition according to Tables 1 and 2. As used herein, egg protein comprises 51% essential amino acids, 20% branch chain amino acids, and 9% leucine, by weight.

- [0095] As used herein, “soy protein” or “soy” means a protein mixture comprising an amino acid composition according to Tables 1 and 2. As used herein, soy protein comprises
- 20 40% essential amino acids, 18% branch chain amino acids, and 8% leucine, by weight.

[0096] In some instances herein the portion of amino acid(s) of a particular type within a polypeptide, protein or a composition is quantified based on the weight ratio of the type of amino acid(s) to the total weight of amino acids present in the polypeptide, protein or composition in question. This value is calculated by dividing the weight of the particular

amino acid(s) in the polypeptide, protein or a composition by the weight of all amino acids present in the polypeptide, protein or a composition.

[0097] In other instances the ratio of a particular type of amino acid(s) residues present in a polypeptide or protein to the total number of amino acids present in the polypeptide or protein in question is used. This value is calculated by dividing the number of the amino acid(s) in question that is present in each molecule of the polypeptide or protein by the total number of amino acid residues present in each molecule of the polypeptide or protein. A skilled artisan appreciates that these two methods are interchangeable and that the weight proportion of a type of amino acid(s) present in a polypeptide or protein can be converted to a ratio of the particular type of amino acid residue(s), and vice versa.

[0098] In certain embodiments herein the weight proportion of branched chain amino acids, leucine, and/or essential amino acids in whey, egg, or soy is used as a benchmark to measure the amino acid composition of a polypeptide, a protein, or a composition comprising at least one of a polypeptide and a protein. In those embodiments it is understood that the two measures are not completely equivalent, but it is also understood that the measures result in measurements that are similar enough to use for this purpose. For example, when a protein of interest is characterized as comprising a ratio of branch chain amino acid residues to total amino acid residues that is equal to or greater than 24% (the weight proportion of branch chain amino acid residues present in whey), that is a precise description of the branch chain amino acid content of the protein. At the same time, the weight proportion of branch chain amino acid residues present in that protein is not necessarily exactly equal to 24%. Even so, the skilled artisan understands that this is a useful comparison. If provided with the total number of amino acid residues present in the protein of interest the skilled artisan can also determine the weight proportion of branch chain amino acid residues in the protein of interest.

[0099] In some embodiments herein a fragment of a naturally-occurring nutritive protein is selected and optionally isolated. In some embodiments the fragment comprises at least 25 amino acids. In some embodiments the fragment comprises at least 50 amino acids. In some embodiments the fragment consists of at least 25 amino acids. In some embodiments the fragment consists of at least 50 amino acids. In some embodiments an isolated recombinant nutritive protein is provided. In some embodiments the nutritive protein comprises a first polypeptide sequence, and the first polypeptide sequence comprises a fragment

of at least 25 or at least 50 amino acids of a naturally-occurring nutritive protein. In some embodiments the nutritive proteins is isolated. In some embodiments the nutritive proteins are recombinant. In some embodiments the nutritive proteins comprise a first polypeptide sequence comprising a fragment of at least 50 amino acids of a naturally-occurring nutritive protein. In some embodiments the nutritive proteins are isolated recombinant nutritive proteins. In some embodiments the isolated recombinant nutritive proteins disclosed herein are provided in a non-isolated and/or non-recombinant form

[00100] In some embodiments a nutritive protein according to this disclosure comprises a first polypeptide sequence comprising a fragment of a naturally-occurring nutritive protein. In some embodiments of the nutritive protein, the nutritive protein consists of the first polypeptide sequence. In some embodiments of the nutritive protein, the nutritive protein consists of the fragment of a naturally-occurring nutritive protein.

[00101] In some embodiments a nutritive protein according to this disclosure comprises a first polypeptide sequence that comprises ratio of branch chain amino acid residues to total amino acid residues that is equal to or greater than the ratio of branch chain amino acid residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein. Thus, in such embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of branch chain amino acid residues to total amino acid residues that is equal to or greater than a ratio selected from 24%, 20%, and 18%.

[00102] In some embodiments a nutritive protein according to this disclosure comprises a first polypeptide sequence that comprises a ratio of L residues to total amino acid residues that is equal to or greater than the ratio of L residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein. Thus, in such embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of L residues to total amino acid residues that is equal to or greater than a ratio selected from 11%, 9%, and 8%.

[00103] In some embodiments a nutritive protein according to this disclosure comprises a first polypeptide sequence that comprises a ratio of essential amino acid residues to total amino acid residues that is equal to or greater than the ratio of essential amino acid residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein. Thus, in such embodiments the nutritive protein comprises a first polypeptide

sequence that comprises a ratio of essential amino acid residues to total amino acid residues that is equal to or greater than a ratio selected from 49%, 51%, and 40%.

[00104] In some embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of branch chain amino acid residues to total amino acid residues that is equal to or greater than the ratio of branch chain amino acid residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein; and comprises a first polypeptide sequence that comprises a ratio of L residues to total amino acid residues that is equal to or greater than the ratio of L residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein. In some such embodiments the nutritive protein further comprises a first polypeptide sequence that comprises a ratio of essential amino acid residues to total amino acid residues that is equal to or greater than the ratio of essential amino acid residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein.

[00105] In some embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of branch chain amino acid residues to total amino acid residues equal to or greater than 24% and a ratio of L residues to total amino acid residues that is equal to or greater than 11%. In some such embodiments the nutritive protein further comprises a first polypeptide sequence that comprises a ratio of essential amino acid residues to total amino acid residues equal to or greater than 49%.

[00106] In some embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of branch chain amino acid residues to total amino acid residues equal to or greater than 20% and a ratio of L residues to total amino acid residues that is equal to or greater than 9%. In some such embodiments the nutritive protein further comprises a first polypeptide sequence that comprises a ratio of essential amino acid residues to total amino acid residues equal to or greater than 51%.

[00107] In some embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of branch chain amino acid residues to total amino acid residues equal to or greater than 18% and a ratio of L residues to total amino acid residues that is equal to or greater than 8%. In some such embodiments the nutritive protein further comprises a first polypeptide sequence that comprises a ratio of essential amino acid residues to total amino acid residues equal to or greater than 40%.

[00108] In some embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of branch chain amino acid residues to total amino acid residues that is equal to or greater than the ratio of branch chain amino acid residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein; and
5 comprises a first polypeptide sequence that comprises a ratio of essential amino acid residues to total amino acid residues that is equal to or greater than the ratio of essential amino acid residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein. In some embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of branch chain amino acid residues to total amino acid
10 residues equal to or greater than 24% and a ratio of essential amino acid residues to total amino acid residues that is equal to or greater than 49%. In some embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of branch chain amino acid residues to total amino acid residues equal to or greater than 20% and a ratio of essential amino acid residues to total amino acid residues that is equal to or greater than 51%. In some
15 embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of branch chain amino acid residues to total amino acid residues equal to or greater than 18% and a ratio of essential amino acid residues to total amino acid residues that is equal to or greater than 40%.

[00109] In some embodiments the nutritive protein comprises a first polypeptide
20 sequence that comprises a ratio of L residues to total amino acid residues that is equal to or greater than the ratio of L residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein; and comprises a first polypeptide sequence that comprises a ratio of essential amino acid residues to total amino acid residues that is equal to or greater than the ratio of essential amino acid residues to total amino acid residues present
25 in at least one of whey protein, egg protein, and soy protein. In some embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of L residues to total amino acid residues equal to or greater than 11% and a ratio of essential amino acid residues to total amino acid residues that is equal to or greater than 49%. In some
30 embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of L amino acid residues to total amino acid residues equal to or greater than 9% and a ratio of essential amino acid residues to total amino acid residues that is equal to or greater than 51%. In some embodiments the nutritive protein comprises a first polypeptide sequence that comprises a ratio of L amino acid residues to total amino acid residues equal to or greater

than 8% and a ratio of essential amino acid residues to total amino acid residues that is equal to or greater than 40%.

[00110] In some embodiments of the nutritive protein, the first polypeptide sequence comprises a first polypeptide sequence comprising a ratio of branch chain amino acid
 5 residues to total amino acid residues equal to or greater than 24%, a ratio of L residues to total amino acid residues that is equal to or greater than 11%, a ratio of essential amino acid residues to total amino acid residues equal to or greater than 49%, and comprises at least one of every essential amino acid, and the first polypeptide sequence is selected from **SEQ ID NO: 1 to SEQ ID NO: 1000**. In some embodiments the first polypeptide sequence is
 10 selected from a modified derivative of **SEQ ID NO: 1 to SEQ ID NO: 1000**. In some embodiments the first polypeptide sequence is selected from a mutein of **SEQ ID NO: 1 to SEQ ID NO: 1000**.

[00111] In some embodiments of the nutritive protein, the first polypeptide sequence comprises a first polypeptide sequence comprising a ratio of branch chain amino acid
 15 residues to total amino acid residues equal to or greater than 24%, a ratio of L residues to total amino acid residues that is equal to or greater than 11%, and a ratio of essential amino acid residues to total amino acid residues equal to or greater than 49%, and the first polypeptide sequence is selected from **SEQ ID NO: 1001 to SEQ ID NO: 1414**. In some embodiments the first polypeptide sequence is selected from a modified derivative of **SEQ**
 20 **ID NO: 1001 to SEQ ID NO: 1414**. In some embodiments the first polypeptide sequence is selected from a mutein of **SEQ ID NO: 1001 to SEQ ID NO: 1414**.

[00112] In some embodiments of the nutritive protein, the first polypeptide sequence comprises a first polypeptide sequence comprising a ratio of branch chain amino acid
 25 residues to total amino acid residues equal to or greater than 24%, a ratio of essential amino acid residues to total amino acid residues equal to or greater than 49%, and comprises at least one of every essential amino acid, and the first polypeptide sequence is selected from **SEQ ID NO: 1415 to SEQ ID NO: 1899**. In some embodiments the first polypeptide sequence is selected from a modified derivative of **SEQ ID NO: 1415 to SEQ ID NO: 1899**. In some embodiments the first polypeptide sequence is selected from a mutein of **SEQ ID NO: 1415**
 30 **to SEQ ID NO: 1899**.

[00113] In some embodiments of the nutritive protein, the first polypeptide sequence comprises a first polypeptide sequence comprising a ratio of essential amino acid residues to total amino acid residues equal to or greater than 49% and a ratio of L residues to total amino acid residues that is equal to or greater than 11%, and comprises at least one of every essential amino acid, and the first polypeptide sequence is selected from **SEQ ID NO: 1900 to SEQ ID NO: 2102**. In some embodiments the first polypeptide sequence is selected from a modified derivative of **SEQ ID NO: 1900 to SEQ ID NO: 2102**. In some embodiments the first polypeptide sequence is selected from a mutein of **SEQ ID NO: 1900 to SEQ ID NO: 2102**.

[00114] In some embodiments of the nutritive protein, the first polypeptide sequence comprises a first polypeptide sequence comprising a ratio of branch chain amino acid residues to total amino acid residues equal to or greater than 24% and a ratio of L residues to total amino acid residues that is equal to or greater than 11%, and comprises at least one of every essential amino acid, and the first polypeptide sequence is selected from **SEQ ID NO: 2103 to SEQ ID NO: 2518**. In some embodiments the first polypeptide sequence is selected from a modified derivative of **SEQ ID NO: 2103 to SEQ ID NO: 2518**. In some embodiments the first polypeptide sequence is selected from a mutein of **SEQ ID NO: 2103 to SEQ ID NO: 2518**.

[00115] In some embodiments of the nutritive protein, the first polypeptide sequence comprises a first polypeptide sequence comprising a ratio of branch chain amino acid residues to total amino acid residues equal to or greater than 24%, a ratio of L residues to total amino acid residues that is equal to or greater than 11%, and comprises at least one of every essential amino acid.

[00116] In some embodiments of the nutritive protein, the first polypeptide sequence comprises a first polypeptide sequence comprising a ratio of branch chain amino acid residues to total amino acid residues equal to or greater than 24% and a ratio of essential amino acid residues to total amino acid residues equal to or greater than 49%.

[00117] In some embodiments of the nutritive protein, the first polypeptide sequence comprises a first polypeptide sequence comprising a ratio of L residues to total amino acid residues that is equal to or greater than 11% and a ratio of essential amino acid residues to total amino acid residues equal to or greater than 49%.

[00118] In some embodiments of the nutritive protein, the first polypeptide sequence comprises a first polypeptide sequence comprising a ratio of essential amino acid residues to total amino acid residues equal to or greater than 49% and comprises at least one of every essential amino acid.

5 [00119] In some embodiments of the nutritive protein, the first polypeptide sequence comprises a first polypeptide sequence comprising a ratio of branch chain amino acid residues to total amino acid residues equal to or greater than 24% and comprises at least one of every essential amino acid.

10 [00120] In some embodiments of the nutritive protein, the first polypeptide sequence comprises a first polypeptide sequence comprising a ratio of L residues to total amino acid residues that is equal to or greater than 11% and comprises at least one of every essential amino acid.

15 [00121] In some embodiments of the nutritive protein, the first polypeptide sequence comprises a first polypeptide sequence comprising a ratio of L residues to total amino acid residues that is equal to or greater than 11%.

[00122] In some embodiments of the nutritive protein, the nutritive protein further comprises a second polypeptide sequence. In some embodiments the second polypeptide sequence consists of from 3 to 10, 5 to 20, 10 to 30, 20 to 50, 25 to 75, 50 to 100 or 100 to 200 amino acids. In some embodiments the second polypeptide sequence is not derived from
20 a naturally-occurring nutritive protein. In some embodiments the second polypeptide sequence is selected from a tag for affinity purification, a protein domain linker, and a protease recognition site. In some embodiments the tag for affinity purification is a polyhistidine-tag. In some embodiments the protein domain linker comprises at least one copy of the sequence GGSG. In some embodiments the protease is selected from pepsin,
25 trypsin, and chymotrypsin.

[00123] In some embodiments the recombinant nutritive protein consists of the first polypeptide sequence and the second polypeptide sequence.

[00124] In some embodiments the nutritive protein further comprises a third polypeptide sequence comprising a fragment of at least 25 or at least 50 amino acids of a
30 naturally-occurring nutritive protein. In some embodiments the first and third polypeptide

sequences are the same. In some embodiments the first and third polypeptide sequences are different. In some embodiments the first and third polypeptide sequences are derived from the same naturally-occurring nutritive protein. In some embodiments the order of the first and third polypeptide sequences in the isolated recombinant nutritive protein is the same as the order of the first and third polypeptide sequences in the naturally-occurring nutritive protein. In some embodiments the order of the first and third polypeptide sequences in the nutritive protein is different than the order of the first and third polypeptide sequences in the naturally-occurring nutritive protein. In some embodiments the first and third polypeptide sequences are derived from different naturally-occurring nutritive proteins. In some embodiments the second polypeptide sequence is flanked by the first and third polypeptide sequences.

[00125] In some embodiments of the nutritive protein, the first and/or third polypeptide sequence comprises a fragment of a naturally-occurring nutritive protein and the ratio of branch chain amino acid residues to total amino acid residues present in the first and/or third polypeptide sequence is equal to or greater than the ratio of branch chain amino acid residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein.

[00126] In some embodiments of the nutritive protein, the first and/or third polypeptide sequence comprises a first and/or third polypeptide sequence comprising a fragment of a naturally-occurring nutritive protein and the ratio of L residues to total amino acid residues present in the first and/or third polypeptide sequence is equal to or greater than the ratio of L residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein.

[00127] In some embodiments of the nutritive protein, the first and/or third polypeptide sequence comprises a first and/or third polypeptide sequence comprising a fragment of a naturally-occurring nutritive protein and the ratio of essential amino acid residues to total amino acid residues present in the first and/or third polypeptide sequence is equal to or greater than the ratio of essential amino acid residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein.

[00128] In some embodiments of the nutritive protein, the first and/or third polypeptide sequence comprises a first and/or third polypeptide sequence comprising a

fragment of a naturally-occurring nutritive protein and the ratio of branch chain amino acid residues to total amino acid residues present in the first and/or third polypeptide sequence is equal to or greater than the ratio of branch chain amino acid residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein; and the first and/or third polypeptide sequence comprises a ratio of L residues to total amino acid residues that is equal to or greater than the ratio of L residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein. In some such embodiments the first and/or third polypeptide sequence further comprises a ratio of essential amino acid residues to total amino acid residues that is equal to or greater than the ratio of essential amino acid residues to total amino acid residues present in at least one of whey protein, egg protein, and soy protein.

[00129] In some embodiments of the nutritive protein, the first and/or third polypeptide sequence comprises a first and/or third polypeptide sequence comprising a ratio of branch chain amino acid residues to total amino acid residues equal to or greater than 24% and a ratio of L residues to total amino acid residues that is equal to or greater than 11%. In some such embodiments the first and/or third polypeptide sequence further comprises a ratio of essential amino acid residues to total amino acid residues equal to or greater than 49%.

[00130] In some embodiments the naturally-occurring nutritive protein from which a fragment is derived is a nutritive protein other than at least one nutritive protein selected from egg proteins such as ovalbumin, ovotransferrin, and ovomucoid; meat proteins such as myosin, actin, tropomyosin, collagen, and troponin; milk proteins such as whey and casein; cereal proteins such as casein, alpha1 casein, alpha2 casein, beta casein, kappa casein, beta-lactoglobulin, alpha-lactalbumin, glycinin, beta-conglycinin, glutelin, prolamine, gliadin, glutenin, albumin, globulin; chicken muscle proteins such as albumin, enolase, creatine kinase, phosphoglycerate mutase, triosephosphate isomerase, apolipoprotein, ovotransferrin, phosphoglucomutase, phosphoglycerate kinase, glycerol-3-phosphate dehydrogenase, glyceraldehyde 3-phosphate dehydrogenase, hemoglobin, cofilin, glycogen phosphorylase, fructose-1,6-bisphosphatase, actin, myosin, tropomyosin a-chain, casein kinase, glycogen phosphorylase, fructose-1,6-bisphosphatase, aldolase, tubulin, vimentin, endoplasmic reticulum chaperone, lactate dehydrogenase, destrin, transthyretin, fructose biphosphate aldolase, carbonic anhydrase, aldehyde dehydrogenase, annexin, adenosyl homocysteinease; pork muscle proteins such as actin, myosin, enolase, titin, cofilin, phosphoglycerate kinase, enolase, pyruvate

dehydrogenase, glycogen phosphorylase, triosephosphate isomerase, myokinase; and fish proteins such as parvalbumin, pyruvate dehydrogenase, desmin, and triosephosphate isomerase.

[00131] Phenylketonuria (PKU) is an autosomal recessive metabolic genetic disorder characterized by a mutation in the gene for the hepatic enzyme phenylalanine hydroxylase (PAH), rendering it nonfunctional. This enzyme is necessary to metabolize phenylalanine to tyrosine. When PAH activity is reduced, phenylalanine accumulates and is converted into phenylpyruvate (also known as phenylketone), which is detected in the urine. Untreated children are normal at birth, but fail to attain early developmental milestones, develop microcephaly, and demonstrate progressive impairment of cerebral function. Hyperactivity, EEG abnormalities and seizures, and severe learning disabilities are major clinical problems later in life. A characteristic odor of skin, hair, sweat and urine (due to phenylacetate accumulation); and a tendency to hypopigmentation and eczema are also observed. All PKU patients must adhere to a special diet low in Phe. Accordingly, nutritive proteins comprising a low number or no Phe residues are desirable for PKU patients. Such proteins can be obtained by selecting nutritive proteins provided herein that have few or no Phe residues. Accordingly, in some embodiments the nutritive protein comprises a ratio of Phe residues to total amino acid residues equal to or lower than 5%, 4%, 3%, 2%, or 1%. In some embodiments the nutritive protein comprises 10 or fewer Phe residues, 9 or fewer Phe residues, 8 or fewer Phe residues, 7 or fewer Phe residues, 6 or fewer Phe residues, 5 or fewer Phe residues, 4 or fewer Phe residues, 3 or fewer Phe residues, 2 or fewer Phe residues, 1 Phe residue, or no Phe residues. In some embodiments, the nutritive protein comprises no Phe residues.

[00132] Arginine is a conditionally nonessential amino acid, meaning most of the time it can be manufactured by the human body, and does not need to be obtained directly through the diet. Individuals who have poor nutrition, the elderly, or people with certain physical conditions (e.g., sepsis) may not produce sufficient amounts of arginine and therefore need to increase their intake of foods containing arginine. Arginine is believed to have beneficial health properties, including reducing healing time of injuries (particularly bone), and decreasing blood pressure, particularly high blood pressure during high risk pregnancies (pre-eclampsia). In addition, studies have shown that dietary supplementation with L-arginine is beneficial for enhancing the reproductive performance of pigs with naturally occurring in-

trauterine growth retardation, enhancing protein deposition and postnatal growth of milk-fed piglets, normalizing plasma glucose levels in streptozotocin-induced diabetic rats, reducing fat mass in obese Zucker diabetic fatty (ZDF) rats, and improving vascular function in diabetic rats. In order to combine these benefits with at least one utility of the nutritive

- 5 proteins disclosed herein, in some embodiments of the nutritive proteins disclosed herein the nutritive protein comprises a ration of Arginine residues to total amino acid residues in the nutritive protein of equal to or greater than 3%, equal to or greater than 4%, equal to or greater than 5%, equal to or greater than 6%, equal to or greater than 7%, equal to or greater than 8%, equal to or greater than 9%, equal to or greater than 10%, equal to or greater than 11%, or equal to or greater than 12%.

- [00133] Digestibility is a parameter relevant to the nutritive benefits and utility of nutritive proteins. Information relating to the relative completeness of digestion can serve as a predictor of peptide bioavailability (Daniel, H., 2003. Molecular and Integrative Physiology of Intestinal Peptide Transport. Annual Review of Physiology, Volume 66, pp. 361-384). In
- 15 some embodiments nutritive proteins disclosed herein are screened to assess their digestibility. Digestibility of nutritive proteins can be assessed by any suitable method known in the art. In some embodiments digestibility is assessed by a physiologically relevant in vitro digestion reaction that includes one or both phases of protein digestion, simulated gastric digestion and simulated intestinal digestion (see, e.g., Moreno, et al., 2005.
- 20 Stability of the major allergen Brazil nut 2S albumin (Ber e 1) to physiologically relevant in vitro gastrointestinal digestion. FEBS Journal, pp. 341-352; Martos, G., Contreras, P., Molina, E. & Lopez-Fandino, R., 2010. Egg White Ovalbumin Digestion Mimicking Physiological Conditions. Journal of Agricultural and food chemistry, pp. 5640-5648; Moreno, F. J., Mackie, A. R. & Clare Mills, E. N., 2005. Phospholipid interactions protect the
- 25 milk allergen α -Lactalbumin from proteolysis during in vitro digestion. Journal of agricultural and food chemistry, pp. 9810-9816). Briefly, test proteins are sequentially exposed to a simulated gastric fluid (SGF) for 120 minutes (the length of time it takes 90% of a liquid meal to pass from the stomach to the small intestine; see Kong, F. & Singh, R. P., 2008. Disintegration of Solid Foods in Human Stomach. Journal of Food Science, pp. 67-80) and
- 30 then transferred to a simulated duodenal fluid (SDF) to digest for an additional 120 minutes. Samples at different stages of the digestion (e.g., 2, 5, 15, 30, 60 and 120 min) are analyzed by electrophoresis (e.g., chip electrophoresis or SDS-PAGE) to monitor the size and amount of intact protein as well as any large digestion fragments (e.g., larger than 4 kDa). The

disappearance of protein over time indicates the rate at which the protein is digested in the assay. By monitoring the amount of intact protein observed over time, the half-life ($\tau_{1/2}$) of digestion is calculated for SGF and, if intact protein is detected after treatment with SGF, the $\tau_{1/2}$ of digestion is calculated for SIF. This assay can be used to assess comparative

- 5 digestibility (i.e., against a benchmark protein such as whey) or to assess absolute digestibility. In some embodiments the digestibility of the nutritive protein is higher (i.e., the SGF $\tau_{1/2}$ and/or SIF $\tau_{1/2}$ is shorter) than whey protein. In some embodiments the nutritive protein has a SGF $\tau_{1/2}$ of 30 minutes or less, 20 minutes or less, 15 minutes or less, 10 minutes or less, 5 minutes or less, 4 minutes or less, 3 minutes or less, 2 minutes or less or 1
- 10 minute or less. In some embodiments the nutritive protein has a SIF $\tau_{1/2}$ of 30 minutes or less, 20 minutes or less, 15 minutes or less, 10 minutes or less, 5 minutes or less, 4 minutes or less, 3 minutes or less, 2 minutes or less or 1 minute or less. In some embodiments the nutritive protein is not detectable in one or both of the SGF and SIF assays by 2 minutes, 5 minutes, 15 minutes, 30 minutes, 60 minutes, or 120 minutes. In some embodiments the
- 15 nutritive protein is digested at a constant rate and/or at a controlled rate in one or both of SGF and SIF. In such embodiments the rate of digestion of the nutritive protein may not be optimized for the highest possible rate of digestion. In such embodiments the rate of absorption of the protein following ingestion by a mammal may be slower and the total time period over which absorption occurs following ingestion may be longer than for nutritive
- 20 proteins of similar amino acid composition that are digested at a faster initial rate in one or both of SGF and SIF. In some embodiments the nutritive protein is completely or substantially completely digested in SGF. In some embodiments the nutritive protein is substantially not digested or not digested by SGF; in most such embodiments the protein is digested in SIF.

- 25 [00134] Assessing protein digestibility can also provide insight into a protein's potential allergenicity, as proteins or large fragments of proteins that are resistant to digestive proteases can have a higher risk of causing an allergenic reaction (Goodman, R. E. et al., 2008. Allergenicity assessment of genetically modified crops - what makes sense? Nature Biotechnology, pp. 73-81). To detect and identify peptides too small for chip electrophoresis
- 30 analysis, liquid chromatography and mass spectrometry can be used. In SGF samples, peptides can be directly detected and identified by LC/MS. SIF protein digestions may require purification to remove bile acids before detection and identification by LC/MS.

[00135] In some embodiments digestibility of a nutritive protein is assessed by identification and quantification of digestive protease recognition sites in the protein amino acid sequence. In some embodiments the nutritive protein comprises at least one protease recognition site selected from a pepsin recognition site, a trypsin recognition site, and a chymotrypsin recognition site.

[00136] As used herein, a “pepsin recognition site” is any site in a polypeptide sequence that is experimentally shown to be cleaved by pepsin. In some embodiments it is a peptide bond after (i.e., downstream of) an amino acid residue selected from Phe, Trp, Tyr, Leu, Ala, Glu, and Gln, provided that the following residue is not an amino acid residue selected from Ala, Gly, and Val.

[00137] As used herein, a “trypsin recognition site” is any site in a polypeptide sequence that is experimentally shown to be cleaved by trypsin. In some embodiments it is a peptide bond after an amino acid residue selected from Lys or Arg, provided that the following residue is not a proline.

[00138] As used herein, a “chymotrypsin recognition site” is any site in a polypeptide sequence that is experimentally shown to be cleaved by chymotrypsin. In some embodiments it is a peptide bond after an amino acid residue selected from Phe, Trp, Tyr, and Leu.

[00139] Disulfide bonded cysteine residues in a protein tend to reduce the rate of digestion of the protein compared to what it would be in the absence of the disulfide bond.

For example, it has been shown that the rate of digestion of the protein b-lactoglobulin is increased when its disulfide bridges are cleaved (I. M. Reddy, N. K. D. Kella, and J. E. Kinsella. “Structural and Conformational Basis of the Resistance of B-Lactoglobulin to Peptic and Chymotryptic Digestion”. J. Agric. Food Chem. 1988, 36, 737-741).

Accordingly, digestibility of a nutritive protein with fewer disulfide bonds tends to be higher than for a comparable nutritive protein with a greater number of disulfide bonds. In some embodiments the nutritive proteins disclosed herein are screened to identify the number of cysteine residues present in each and in particular to allow selection of a nutritive protein comprising a relatively low number of cysteine residues. For example, naturally occurring nutritive proteins or fragments may be identified that comprise a no Cys residues or that comprise a relatively low number of Cys residues, such as 10 or fewer Cys residues, 9 or fewer Cys residues, 8 or fewer Cys residues, 7 or fewer Cys residues, 6 or fewer Cys

residues, 5 or fewer Cys residues, 4 or fewer Cys residues, 3 or fewer Cys residues, 2 or fewer Cys residues, 1 Cys residue, or no Cys residues. In some embodiments one or more Cys residues in a naturally occurring nutritive protein or fragment thereof is removed by deletion and/or by substitution with another amino acid. In some embodiments 1 Cys residue is deleted or replaced, 1 or more Cys residues are deleted or replaced, 2 or more Cys residues are deleted or replaced, 3 or more Cys residues are deleted or replaced, 4 or more Cys residues are deleted or replaced, 5 or more Cys residues are deleted or replaced, 6 or more Cys residues are deleted or replaced, 7 or more Cys residues are deleted or replaced, 8 or more Cys residues are deleted or replaced, 9 or more Cys residues are deleted or replaced, or 10 or more Cys residues are deleted or replaced. In some embodiments the nutritive protein of this disclosure comprises a ratio of Cys residues to total amino acid residues equal to or lower than 5%, 4%, 3%, 2%, or 1%. In some embodiments the nutritive protein comprises 10 or fewer Cys residues, 9 or fewer Cys residues, 8 or fewer Cys residues, 7 or fewer Cys residues, 6 or fewer Cys residues, 5 or fewer Cys residues, 4 or fewer Cys residues, 3 or fewer Cys residues, 2 or fewer Cys residues, 1 Cys residue, or no Cys residues. In some embodiments, the nutritive protein comprises 1 or fewer Cys residues. In some embodiments, the nutritive protein comprises no Cys residues.

[00140] Alternatively or in addition, disulfide bonds that are or may be present in a nutritive protein may be removed. Disulfides can be removed using chemical methods by reducing the disulfide to two thiol groups with reducing agents such as beta-mercaptoethanol, dithiothreitol (DTT), or tris(2-carboxyethyl)phosphine (TCEP). The thiols can then be covalently modified or “capped” with reagents such as iodoacetamide, N-ethylmaleimide, or sodium sulfite (see, e.g., Crankshaw, M. W. and Grant, G. A. 2001. Modification of Cysteine. Current Protocols in Protein Science. 15.1.1–15.1.18).

[00141] Eukaryotic proteins are often glycosylated, and the carbohydrate chains that are attached to proteins serve various functions. N-linked and O-linked glycosylation are the two most common forms of glycosylation occurring in proteins. N-linked glycosylation is the attachment of a sugar molecule to a nitrogen atom in an amino acid residue in a protein. N-linked glycosylation occurs at Asparagine and Arginine residues. O-linked glycosylation is the attachment of a sugar molecule to an oxygen atom in an amino acid residue in a protein. O-linked glycosylation occurs at Threonine and Serine residues.

[00142] Glycosylated proteins are often more soluble than their un-glycosylated forms. In terms of protein drugs, proper glycosylation usually confers high activity, proper antigen binding, better stability in the blood, etc. However, glycosylation necessarily means that a protein “carries with it” sugar moieties. Such sugar moieties may reduce the usefulness of the nutritive proteins of this disclosure including recombinant nutritive proteins. For example, as demonstrated in the examples, a comparison of digestion of glycosylated and non-glycosylated forms of the same proteins shows that the non-glycosylated forms are digested more quickly than the glycosylated forms. For these reasons, in some embodiments the nutritive proteins according to the disclosure comprise low or no glycosylation. For example, in some embodiments the nutritive proteins comprise a ratio of non-glycosylated to total amino acid residues of at least 80%, at least 85%, at least 90%, at least 95%, at least 96%, at least 97%, at least 98%, or at least 99%. In some embodiments the nutritive proteins do not comprise any glycosylation.

[00143] In some embodiments, the nutritive protein according to the disclosure is deglycosylated after it is produced or after it is isolated. Nutritive proteins of low or no glycosylation may be made by any method known in the art. For example, enzymatic and/or chemical methods may be used (Biochem. J. (2003) 376, p339-350.). Enzymes are produced commercially at research scales for the removal of N-linked and O-linked oligosaccharides. Chemical methods include use of trifluoromethanesulfonic acid to selectively break N-linked and O-linked peptide-saccharide bonds. This method often results in a more complete deglycosylation than does the use of enzymatic methods.

[00144] In other embodiments, the nutritive protein according to the disclosure is produced with low or no glycosylation by a host organism. Most bacteria and other prokaryotes have very limited capabilities to glycosylate proteins, especially heterologous proteins. Accordingly, in some embodiments of this disclosure a nutritive protein is made recombinantly in a microorganism such that the level of glycosylation of the recombinant protein is low or no glycosylation. In some embodiments the level of glycosylation of the recombinant nutritive protein is lower than the level of glycosylation of the protein as it occurs in the organism from which it is derived.

[00145] In some embodiments a nutritive protein or polypeptide according to the disclosure comprises a ratio of amino acids selected from Asn, Arg, Ser, and Thr to total amino acids of 20% or less, 19% or less, 18 % or less, 17% or less, 16% or less, 15% or less,

14% or less, 13% or less, 12% or less, 11% or less, 10% or less, 9% or less, 8% or less, 7% or less, 6% or less, 5% or less, 4% or less, 3% or less, 2% or less, 1% or less. In some embodiments, a nutritive protein or polypeptide according to the disclosure comprises no amino acids selected from Asn, Arg, Ser, and Thr. In some embodiments a nutritive protein or polypeptide according to the disclosure comprises fewer than 20, fewer than 19, fewer than 18, fewer than 17, fewer than 16, fewer than 15, fewer than 14, fewer than 13, fewer than 12, fewer than 11, fewer than 10, fewer than 9, fewer than 8, fewer than 7, fewer than 6, fewer than 5, fewer than 4, fewer than 3, fewer than 2, fewer than 1, or no amino acids selected from Asn, Arg, Ser, and Thr.

10 [00146] In some embodiments of the nutritive proteins disclosed herein the nutritive protein is soluble. Solubility can be measured by any method known in the art. In some embodiments solubility is examined by centrifuge concentration followed by protein concentration assays. Samples of nutritive proteins in 20 mM HEPES pH 7.5 are tested for protein concentration according to protocols using two methods, Coomassie Plus (Bradford) Protein Assay (Thermo Scientific) and Bicinchoninic Acid (BCA) Protein Assay (Sigma-Aldrich). Based on these measurements 10 mg of protein is added to an Amicon Ultra 3 kDa centrifugal filter (Millipore). Samples are concentrated by centrifugation at 10,000 Xg for 30 minutes. The final, now concentrated, samples are examined for precipitated protein and then tested for protein concentration as above using two methods, Bradford and BCA.

20 [00147] In some embodiments the nutritive proteins have a final solubility limit of at least 5 g/L, 10 g/L, 20 g/L, 30 g/L, 40 g/L, 50 g/L, or 100 g/L at physiological pH. In some embodiments the nutritive proteins are greater than 50%, greater than 60%, greater than 70%, greater than 80%, greater than 90%, greater than 95%, greater than 96%, greater than 97%, greater than 98%, greater than 99%, or greater than 99.5% soluble with no precipitated protein observed at a concentration of greater than 5 g/L, or 10 g/L, or 20 g/L, or 30 g/L, or 40 g/L, or 50 g/L, or 100 g/L at physiological pH. In some embodiments, the solubility of the nutritive protein is higher than those typically reported in studies examining the solubility limits of whey (12.5 g/L; Pelegrine et al., Lebensm.-Wiss. U.-Technol. 38 (2005) 77-80) and soy (10 g/L; Lee et al., JAOCS 80(1) (2003) 85-90).

30 [00148] As used herein, a “stable” protein is one that resists changes (e.g., unfolding, oxidation, aggregation, hydrolysis, etc.) that alter the biophysical (e.g., solubility), biological

(e.g., digestibility), or compositional (e.g. proportion of Leucine amino acids) traits of the protein of interest.

[00149] Protein stability can be measured using various assays known in the art and nutritive proteins disclosed herein and having stability above a threshold can be selected. In some embodiments a protein is selected that displays thermal stability that is comparable to or better than that of whey protein. Thermal stability is a property that can help predict the shelf life of a nutritive protein. In some embodiments of the assay stability of nutritive protein samples is determined by monitoring aggregation formation using size exclusion chromatography (SEC) after exposure to extreme temperatures. Aqueous samples of the protein to be tested are placed in a heating block at 90°C and samples are taken after 0, 1, 5, 10, 30 and 60 min for SEC analysis. Protein is detected by monitoring absorbance at 214nm, and aggregates are characterized as peaks eluting faster than the protein of interest. No overall change in peak area indicates no precipitation of protein during the heat treatment. Whey protein has been shown to rapidly form ~ 80% aggregates when exposed to 90°C in such an assay.

[00150] In some embodiments the thermal stability of a nutritive protein is determined by heating a sample slowly from 25°C to 95°C in presence of a hydrophobic dye (e.g., ProteoStat® Thermal shift stability assay kit, Enzo Life Sciences) that binds to aggregated proteins that are formed as the protein denatures with increasing temperature (Niesen, F. H., Berglund, H. & Vadadi, M., 2007. The use of differential scanning fluorimetry to detect ligand interactions that promote protein stability. *Nature Protocols*, Volume 2, pp. 2212-2221). Upon binding, the dye's fluorescence increases significantly, which is recorded by an rtPCR instrument and represented as the protein's melting curve (Lavinder, J. J., Hari, S. B., Sullivan, B. J. & Magilery, T. J., 2009. High-Throughput Thermal Scanning: A General, Rapid Dye-Binding Thermal Shift Screen for Protein Engineering. *Journal of the American Chemical Society*, pp. 3794-3795). After the thermal shift is complete, samples are examined for insoluble precipitates and further analyzed by analytical size exclusion chromatography (SEC).

[00151] In some embodiments a nutritive protein of this disclosure shows resistance to aggregation, exhibiting, for example, less than 80% aggregation, 10% aggregation, or no detectable aggregation at elevated temperatures (e.g, 50°C, 60°C, 70°C, 80°C, 85°C, 90°C, or 95°C).

[00152] One benefit of stable nutritive proteins as disclosed herein is that they may be able to be stored for an extended period of time before use, in some instances without the need for refrigeration or cooling. In some embodiments, nutritive proteins are processed into a dry form (e.g., by lyophilization). In some embodiments, nutritive proteins are stable upon lyophilization. In some embodiments, such lyophilized nutritive proteins maintain their stability upon reconstitution (e.g., liquid formulation).

[00153] For most embodiments it is preferred that the nutritive protein not exhibit inappropriately high allergenicity. Accordingly, in some embodiments the potential allergenicity of the nutritive protein is assessed. This can be done by any suitable method known in the art. In some embodiments an allergenicity score is calculated. The allergenicity score is a primary sequence based metric based on WHO recommendations (<http://www.fao.org/ag/agn/food/pdf/allergygm.pdf>) for assessing how similar a protein is to any known allergen, the primary hypothesis being that high percent identity between a target and a known allergen is likely indicative of cross reactivity. For a given protein, the likelihood of eliciting an allergic response can be assessed via one or both of a complimentary pair of sequence homology based tests. The first test determines the protein's percent identity across the entire sequence via a global-global sequence alignment to a database of known allergens using the FASTA algorithm with the BLOSUM50 substitution matrix, a gap open penalty of 10, and a gap extension penalty of 2. It has been suggested that proteins with less than 50% global homology are unlikely to be allergenic (Goodman R. E. et al. Allergenicity assessment of genetically modified crops—what makes sense? Nat. Biotech. 26, 73-81 (2008); Aalberse R. C. Structural biology of allergens. J. Allergy Clin. Immunol. 106, 228-238 (2000)).

[00154] In some embodiments of a nutritive protein, the nutritive protein has less than 50% global homology to any known allergen in the database used for the analysis. In some embodiments a cutoff of less than 40% homology is used. In some embodiments a cutoff of less than 30% homology is used. In some embodiments a cutoff of less than 20% homology is used. In some embodiments a cutoff of less than 10% homology is used. In some embodiments a cutoff of from 40% to 50% is used. In some embodiments a cutoff of from 30% to 50% is used. In some embodiments a cutoff of from 20% to 50% is used. In some embodiments a cutoff of from 10% to 50% is used. In some embodiments a cutoff of from 5% to 50% is used. In some embodiments a cutoff of from 0% to 50% is used. In some

embodiments a cutoff of greater than 50% global homology to any known allergen in the database used for the analysis is used. In some embodiments a cutoff of from 50% to 60% is used. In some embodiments a cutoff of from 50% to 70% is used. In some embodiments a cutoff of from 50% to 80% is used. In some embodiments a cutoff of from 50% to 90% is used. In some embodiments a cutoff of from 55% to 60% is used. In some embodiments a cutoff of from 65% to 70% is used. In some embodiments a cutoff of from 70% to 75% is used. In some embodiments a cutoff of from 75% to 80% is used.

[00155] The second test assesses the local allergenicity along the protein sequence by determining the local allergenicity of all possible contiguous 80 amino acid fragments via a global-local sequence alignment of each fragment to a database of known allergens using the FASTA algorithm with the BLOSUM50 substitution matrix, a gap open penalty of 10, and a gap extension penalty of 2. The highest percent identity of any 80 amino acid window with any allergen is taken as the final score for the protein of interest. The WHO guidelines suggest using a 35% identity cutoff with this fragment test. In some embodiments of a nutritive protein, all possible fragments of the nutritive protein have less than 35% local homology to any known allergen in the database used for the analysis using this test. In some embodiments a cutoff of less than 30% homology is used. In some embodiments a cutoff of from 30% to 35% homology is used. In some embodiments a cutoff of from 25% to 30% homology is used. In some embodiments a cutoff of from 20% to 25% homology is used. In some embodiments a cutoff of from 15% to 20% homology is used. In some embodiments a cutoff of from 10% to 15% homology is used. In some embodiments a cutoff of from 5% to 10% homology is used. In some embodiments a cutoff of from 0% to 5% homology is used. In some embodiments a cutoff of greater than 35% homology is used. In some embodiments a cutoff of from 35% to 40% homology is used. In some embodiments a cutoff of from 40% to 45% homology is used. In some embodiments a cutoff of from 45% to 50% homology is used. In some embodiments a cutoff of from 50% to 55% homology is used. In some embodiments a cutoff of from 55% to 60% homology is used. In some embodiments a cutoff of from 65% to 70% homology is used. In some embodiments a cutoff of from 70% to 75% homology is used. In some embodiments a cutoff of from 75% to 80% homology is used.

[00156] Skilled artisans are able to identify and use a suitable database of known allergens for this purpose. In some embodiments the database is custom made by selecting proteins from more than one database source. In some embodiments the custom database

comprises pooled allergen lists collected by the Food Allergy Research and Resource Program (<http://www.allergenonline.org/>), UNIPROT annotations (<http://www.uniprot.org/docs/allergen>), and the Structural Database of Allergenic Proteins (SDAP, http://fermi.utmb.edu/SDAP/sdap_lnk.html). This database includes all currently

5 recognized allergens by the International Union of Immunological Societies (IUIS, <http://www.allergen.org/>) as well as a large number of additional allergens not yet officially named. In some embodiments the database comprises a subset of known allergen proteins available in known databases; that is, the database is a custom selected subset of known allergen proteins. In some embodiments the database of known allergens comprises at least
 10 10 proteins, at least 20 proteins, at least 30 proteins, at least 40 proteins, at least 50 proteins, at least 100, proteins, at least 200 proteins, at least 300 proteins, at least 400 proteins, at least 500 proteins, at least 600 proteins, at least 700 proteins, at least 800 proteins, at least 900 proteins, at least 1,000 proteins, at least 1,100 proteins, at least 1,200 proteins, at least 1,300 proteins, at least 1,400 proteins, at least 1,500 proteins, at least 1,600 proteins, at least 1,700
 15 proteins, at least 1,800 proteins, at least 1,900 proteins, or at least 2,000 proteins. In some embodiments the database of known allergens comprises from 100 to 500 proteins, from 200 to 1,000 proteins, from 500 to 1,000 proteins, from 500 to 1,000 proteins, or from 1,000 to 2,000 proteins.

[00157] In some embodiments all (or a selected subset) of contiguous amino acid
 20 windows of different lengths (e.g., 70, 60, 50, 40, 30, 20, 10, 8 or 6 amino acid windows) of a nutritive protein are tested against the allergen database and peptide sequences that have 100% identity, 95% or higher identity, 90% or higher identity, 85% or higher identity, 80% or higher identity, 75% or higher identity, 70% or higher identity, 65% or higher identity, 60% or higher identity, 55% or higher identity, or 50% or higher identity matches are
 25 identified for further examination of potential allergenicity.

[00158] Another method of predicting the allergenicity of a protein is to assess the homology of the protein to a protein of human origin. The human immune system is exposed to a multitude of possible allergenic proteins on a regular basis and has the intrinsic ability to differentiate between the host body's proteins and exogenous proteins. The exact nature of
 30 this ability is not always clear, and there are many diseases that arise as a result of the failure of the body to differentiate self from non-self (e.g. arthritis). Nonetheless, the fundamental hypothesis is that proteins that share a degree of sequence homology to human proteins are

less likely to elicit an immune response. In particular, it has been shown that for some protein families with known allergenic members (tropomyosins, parvalbumins, caseins), those proteins that bear more sequence homology to their human counterparts relative to known allergenic proteins, are not thought to be allergenic (Jenkins J. A. et al. Evolutionary distance from human homologs reflects allergenicity of animal food proteins. *J. Allergy Clin Immunol.* 120 (2007): 1399-1405). For a given protein, a human homology score is measured by determining the maximum percent identity of the protein to a database of human proteins (e.g., the UNIPROT database) from a global-local alignment using the FASTA algorithm with the BLOSUM50 substitution matrix, a gap open penalty of 10, and a gap extension penalty of 2. According to Jenkins et al. (Jenkins J. A. et al. Evolutionary distance from human homologs reflects allergenicity of animal food proteins. *J. Allergy Clin Immunol.* 120 (2007): 1399-1405) proteins with a sequence identity to a human protein above about 62% are less likely to be allergenic. Skilled artisans are able to identify and use a suitable database of known human proteins for this purpose, for example, by searching the UNIPROT database (<http://www.uniprot.org>). In some embodiments the database is custom made by selecting proteins from more than one database source. Of course the database may but need not be comprehensive. In some embodiments the database comprises a subset of human proteins; that is, the database is a custom selected subset of human proteins. In some embodiments the database of human proteins comprises at least 10 proteins, at least 20 proteins, at least 30 proteins, at least 40 proteins, at least 50 proteins, at least 100, proteins, at least 200 proteins, at least 300 proteins, at least 400 proteins, at least 500 proteins, at least 600 proteins, at least 700 proteins, at least 800 proteins, at least 900 proteins, at least 1,000 proteins, at least 2,000 proteins, at least 3,000 proteins, at least 4,000 proteins, at least 5,000 proteins, at least 6,000 proteins, at least 7,000 proteins, at least 8,000 proteins, at least 9,000 proteins, or at least 10,000 proteins. In some embodiments the database comprises from 100 to 500 proteins, from 200 to 1,000 proteins, from 500 to 1,000 proteins, from 500 to 1,000 proteins, from 1,000 to 2,000 proteins, from 1,000 to 5,000 proteins, or from 5,000 to 10,000 proteins. In some embodiments the database comprises at least 90%, at least 95%, or at least 99% of all known human proteins.

[00159] In some embodiments of a nutritive protein, the nutritive protein is at least 20% homologous to a human protein. In some embodiments a cutoff of at least 30% homology is used. In some embodiments a cutoff of at least 40% homology is used. In some embodiments a cutoff of at least 50% homology is used. In some embodiments a cutoff of at

least 60% homology is used. In some embodiments a cutoff of at least 70% homology is used. In some embodiments a cutoff of at least 80% homology is used. In some embodiments a cutoff of at least 62% homology is used. In some embodiments a cutoff of from at least 20% homology to at least 30% homology is used. In some embodiments a cutoff of from at least 30% homology to at least 40% homology is used. In some embodiments a cutoff of from at least 50% homology to at least 60% homology is used. In some embodiments a cutoff of from at least 60% homology to at least 70% homology is used. In some embodiments a cutoff of from at least 70% homology to at least 80% homology is used.

10 [00160] For most embodiments it is preferred that the nutritive protein not exhibit inappropriately high toxicity. Accordingly, in some embodiments the potential toxicity of the nutritive protein is assessed. This can be done by any suitable method known in the art. In some embodiments a toxicity score is calculated by determining the protein's percent identity to databases of known toxic proteins (e.g., toxic proteins identified from the UNIPROT
15 database). A global-global alignment of the protein of interest against the database of known toxins is performed using the FASTA algorithm with the BLOSUM50 substitution matrix, a gap open penalty of 10, and a gap extension penalty of 2. In some embodiments of a nutritive protein, the nutritive protein is less than 35% homologous to a known toxin. In some embodiments a cutoff of less than 35% homology is used. In some embodiments a cutoff of from 30% to 35% homology is used. In some embodiments a cutoff of from 25% to 35% homology is used. In some embodiments a cutoff of from 20% to 35% homology is used. In some embodiments a cutoff of from 15% to 35% homology is used. In some
20 embodiments a cutoff of from 10% to 35% homology is used. In some embodiments a cutoff of from 5% to 35% homology is used. In some embodiments a cutoff of from 0% to 35% homology is used. In some embodiments a cutoff of greater than 35% homology is used. In some embodiments a cutoff of from 35% to 40% homology is used. In some embodiments a cutoff of from 35% to 45% homology is used. In some embodiments a cutoff of from 35% to 50% homology is used. In some embodiments a cutoff of from 35% to 55% homology is used. In some embodiments a cutoff of from 35% to 60% homology is used. In some
25 embodiments a cutoff of from 35% to 70% homology is used. In some embodiments a cutoff of from 35% to 75% homology is used. In some embodiments a cutoff of from 35% to 80% homology is used. Skilled artisans are able to identify and use a suitable database of known toxins for this purpose, for example, by searching the UNIPROT database
30

(<http://www.uniprot.org>). In some embodiments the database is custom made by selecting proteins identified as toxins from more than one database source. In some embodiments the database comprises a subset of known toxic proteins; that is, the database is a custom selected subset of known toxic proteins. In some embodiments the database of toxic proteins

- 5 comprises at least 10 proteins, at least 20 proteins, at least 30 proteins, at least 40 proteins, at least 50 proteins, at least 100 proteins, at least 200 proteins, at least 300 proteins, at least 400 proteins, at least 500 proteins, at least 600 proteins, at least 700 proteins, at least 800 proteins, at least 900 proteins, at least 1,000 proteins, at least 2,000 proteins, at least 3,000 proteins, at least 4,000 proteins, at least 5,000 proteins, at least 6,000 proteins, at least 7,000 proteins, at
- 10 least 8,000 proteins, at least 9,000 proteins, or at least 10,000 proteins. In some embodiments the database comprises from 100 to 500 proteins, from 200 to 1,000 proteins, from 500 to 1,000 proteins, from 1,000 to 2,000 proteins, from 1,000 to 5,000 proteins, or from 5,000 to 10,000 proteins.

- [00161] For some embodiments it is preferred that the nutritive protein not exhibit
- 15 anti-nutritional activity (“anti-nutricity”), i.e., proteins that have the potential to prevent the absorption of nutrients from food. Examples of anti-nutritive factors include protease inhibitors, which inhibit the actions of trypsin, pepsin and other proteases in the gut, preventing the digestion and subsequent absorption of protein. Accordingly, in some embodiments the potential anti-nutricity of the nutritive protein is assessed. This can be done
- 20 by any suitable method known in the art. In some embodiments an anti-nutricity score is calculated by determining the protein’s percent identity to databases of known protease inhibitors (e.g., protease inhibitors identified from the UNIPROT database). A global-global alignment of the protein of interest against the database of known protease inhibitors is performed using the FASTA algorithm with the BLOSUM50 substitution matrix, a gap open
- 25 penalty of 10, and a gap extension penalty of 2, to identify whether the nutritive protein is homologous to a known anti-nutritive protein. In some embodiments of a nutritive protein, the nutritive protein has less than 35% global homology to any known anti-nutritive protein (e.g., any known protease inhibitor) in the database used for the analysis. In some
- 30 embodiments a cutoff of less than 35% identity is used. In some embodiments a cutoff of from 30% to 35% is used. In some embodiments a cutoff of from 25% to 35% is used. In some embodiments a cutoff of from 20% to 35% is used. In some embodiments a cutoff of from 15% to 35% is used. In some embodiments a cutoff of from 10% to 35% is used. In some embodiments a cutoff of from 5% to 35% is used. In some embodiments a cutoff of

from 0% to 35% is used. In some embodiments a cutoff of greater than 35% identify is used. In some embodiments a cutoff of from 35% to 40% is used. In some embodiments a cutoff of from 35% to 45% is used. In some embodiments a cutoff of from 35% to 50% is used. In some embodiments a cutoff of from 35% to 55% is used. In some embodiments a cutoff of from 35% to 60% is used. In some embodiments a cutoff of from 35% to 70% is used. In some embodiments a cutoff of from 35% to 75% is used. In some embodiments a cutoff of from 35% to 80% is used. Skilled artisans are able to identify and use a suitable database of known protease inhibitors for this purpose, for example, by searching the UNIPROT database (<http://www.uniprot.org>). In some embodiments the database is custom made by selecting proteins identified protease-inhibitors as from more than one database source. In some embodiments the database comprises a subset of known protease inhibitors available in databases; that is, the database is a custom selected subset of known protease inhibitor proteins. In some embodiments the database of known protease inhibitor proteins comprises at least 10 proteins, at least 20 proteins, at least 30 proteins, at least 40 proteins, at least 50 proteins, at least 100, proteins, at least 200 proteins, at least 300 proteins, at least 400 proteins, at least 500 proteins, at least 600 proteins, at least 700 proteins, at least 800 proteins, at least 900 proteins, at least 1,000 proteins, at least 1,100 proteins, at least 1,200 proteins, at least 1,300 proteins, at least 1,400 proteins, at least 1,500 proteins, at least 1,600 proteins, at least 1,700 proteins, at least 1,800 proteins, at least 1,900 proteins, or at least 2,000 proteins. In some embodiments the database of known protease inhibitor proteins comprises from 100 to 500 proteins, from 200 to 1,000 proteins, from 500 to 1,000 proteins, from 500 to 1,000 proteins, or from 1,000 to 2,000 proteins, or from 2,000 to 3,000 proteins.

[00162] In other embodiments a nutritive protein that does exhibit some degree of protease inhibitor activity is used. For example, in some embodiments such a protein may be useful because it delays protease digestion when the nutritive protein is consumed such that the nutritive protein traverses a greater distance within the GI tract before it is digested, thus delaying absorption. For example, in some embodiments the nutritive protein inhibits gastric digestion but not intestinal digestion.

[00163] Delaney B. et al. (Evaluation of protein safety in the context of agricultural biotechnology. Food. Chem. Toxicol. 46 (2008: S71-S97)) suggests that one should avoid both known toxic and anti-nutritive proteins when assessing the safety of a possible food protein. In some embodiments of a nutritive protein, the nutritive protein has a favorably low

level of global homology to a database of known toxic proteins and/or a favorably low level of global homology to a database of known anti-nutricity proteins (e.g., protease inhibitors), as defined herein.

[00164] One feature that can enhance the utility of a nutritive protein is its charge (or per amino acid charge). Nutritive proteins with higher charge can in some embodiments exhibit desirable characteristics such as increased solubility, increased stability, resistance to aggregation, and desirable taste profiles. For example, a charged nutritive protein that exhibits enhanced solubility can be formulated into a beverage or liquid formulation that includes a high concentration of nutritive protein in a relatively low volume of solution, thus delivering a large dose of protein nutrition per unit volume. A charged nutritive protein that exhibits enhanced solubility can be useful, for example, in sports drinks or recovery drinks wherein a user (e.g., an athlete) wants to ingest nutritive protein before, during or after physical activity. A charged nutritive protein that exhibits enhanced solubility can also be particularly useful in a clinical setting wherein a subject (e.g., a patient or an elderly person) is in need of protein nutrition but is unable to ingest solid foods or large volumes of liquids.

[00165] For example, the net charge (ChargeP) of a polypeptide at pH 7 can be calculated using the following formula:

$$[00166] \quad \text{ChargeP} = -0.002 - (C)(0.045) - (D)(0.999) - (E)(0.998) + (H)(0.091) + (K)(1.0) + (R)(1.0) - (Y)(-0.001)$$

[00167] where C is the number of cysteine residues, D is the number of aspartic acid residues, E is the number of glutamic acid residues, H is the number of histidine residues, K is the number of lysine residues, R is the number of arginine residues and Y is the number of tyrosine residues in the polypeptide. The per amino acid charge (ChargeA) of the polypeptide can be calculated by dividing the net charge (ChargeP) by the number of amino acid residues (N), i.e., $\text{ChargeA} = \text{ChargeP}/N$. (See Bassi S (2007), "A Primer on Python for Life Science Researchers." PLoS Comput Biol 3(11): e199. doi:10.1371/journal.pcbi.0030199).

[00168] One metric for assessing the hydrophilicity and potential solubility of a given protein is the solvation score. Solvation score is defined as the total free energy of solvation (i.e. the free energy change associated with transfer from gas phase to a dilute solution) for all amino acid side chains if each residue were solvated independently, normalized by the total

number of residues in the sequence. The side chain solvation free energies are found computationally by calculating the electrostatic energy difference between a vacuum dielectric of 1 and a water dielectric of 80 (by solving the Poisson-Boltzmann equation) as well as the non-polar, Van der Waals energy using a linear solvent accessible surface area

5 model (D. Sitkoff, K. A. Sharp, B. Honig. "Accurate Calculation of Hydration Free Energies Using Macroscopic Solvent Models". J. Phys. Chem. 98, 1994). For amino acids with ionizable sidechains (Arg, Asp, Cys, Glu, His, Lys and Tyr), an average solvation free energy is used based on the relative probabilities for each ionization state at the specified pH.

Solvation scores start at 0 and continue into negative values, and the more negative the
 10 solvation score, the more hydrophilic and potentially soluble the protein is predicted to be. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -10 or less at pH 7. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -15 or less at pH 7. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -20 or less at pH 7. In some embodiments of a nutritive protein, the
 15 nutritive protein has a solvation score of -25 or less at pH 7. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -30 or less at pH 7. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -35 or less at pH 7. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -40 or less at pH 7.

20 [00169] The solvation score is a function of pH by virtue of the pH dependence of the molar ratio of undissociated weak acid ([HA]) to conjugate base ([A-]) as defined by the Henderson-Hasselbalch equation:

$$[00170] \quad pH = pKa + \log \left(\frac{[A^-]}{[HA]} \right)$$

[00171] All weak acids have different solvation free energies compared to their
 25 conjugate bases, and the solvation free energy used for a given residue when calculating the solvation score at a given pH is the weighted average of those two values.

[00172] Accordingly, in some embodiments of a nutritive protein, the nutritive protein has a solvation score of -10 or less at an acidic pH. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -15 or less at an acidic pH. In some
 30 embodiments of a nutritive protein, the nutritive protein has a solvation score of -20 or less at an acidic pH. In some embodiments of a nutritive protein, the nutritive protein has a

solvation score of -25 or less at an acidic pH. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -30 or less at an acidic pH. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -35 or less at an acidic pH. In some embodiments of a nutritive protein, the nutritive protein has a

5 solvation score of -40 or less at acidic pH.

[00173] Accordingly, in some embodiments of a nutritive protein, the nutritive protein has a solvation score of -10 or less at a basic pH. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -15 or less at a basic pH. In some
 10 embodiments of a nutritive protein, the nutritive protein has a solvation score of -20 or less at a basic pH. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -25 or less at a basic pH. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -30 or less at a basic pH. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -35 or less at a basic pH. In some
 15 embodiments of a nutritive protein, the nutritive protein has a solvation score of -40 or less at basic pH.

[00174] Accordingly, in some embodiments of a nutritive protein, the nutritive protein has a solvation score of -10 or less at a pH range selected from 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-9, 9-10, 10-11, and 11-12. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -15 or less at a pH range selected from 2-3, 3-4, 4-5, 5-6, 6-7, 7-8,
 20 8-9, 9-10, 10-11, and 11-12. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -20 or less at a pH range selected from 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-9, 9-10, 10-11, and 11-12. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -25 or less at a pH range selected from 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-9, 9-10, 10-11, and 11-12. In some embodiments of a nutritive protein, the nutritive protein
 25 has a solvation score of -30 or less at a pH range selected from 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-9, 9-10, 10-11, and 11-12. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -35 or less at a pH range selected from 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-9, 9-10, 10-11, and 11-12. In some embodiments of a nutritive protein, the nutritive protein has a solvation score of -40 or less at a pH range selected from 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-
 30 9, 9-10, 10-11, and 11-12.

[00175] The aggregation score is a primary sequence based metric for assessing the hydrophobicity and likelihood of aggregation of a given protein. Using the Kyte and

Doolittle hydrophobicity scale (Kyte J, Doolittle RF (May 1982) "A simple method for displaying the hydropathic character of a protein". J. Mol. Biol. 157 (1): 105-32), which gives hydrophobic residues positive values and hydrophilic residues negative values, the average hydrophobicity of a protein sequence is calculated using a moving average of five residues.

- 5 The aggregation score is drawn from the resulting plot by determining the area under the curve for values greater than zero and normalizing by the total length of the protein. The underlying hypothesis is that aggregation is the result of two or more hydrophobic patches coming together to exclude water and reduce surface exposure, and the likelihood that a protein will aggregate is a function of how densely packed its hydrophobic (i.e., aggregation
- 10 prone) residues are. Aggregation scores start at 0 and continue into positive values, and the smaller the aggregation score, the less hydrophobic and potentially less prone to aggregation the protein is predicted to be. In some embodiments of a nutritive protein, the nutritive protein has an aggregation score of 2 or less. In some embodiments of a nutritive protein, the nutritive protein has an aggregation score of 1.5 or less. In some embodiments of a nutritive
- 15 protein, the nutritive protein has an aggregation score of 1 or less. In some embodiments of a nutritive protein, the nutritive protein has an aggregation score of 0.9 or less. In some embodiments of a nutritive protein, the nutritive protein has an aggregation score of 0.8 or less. In some embodiments of a nutritive protein, the nutritive protein has an aggregation score of 0.7 or less. In some embodiments of a nutritive protein, the nutritive protein has an
- 20 aggregation score of 0.6 or less. In some embodiments of a nutritive protein, the nutritive protein has an aggregation score of 0.5 or less. In some embodiments of a nutritive protein, the nutritive protein has an aggregation score of 0.4 or less. In some embodiments of a nutritive protein, the nutritive protein has an aggregation score of 0.3 or less. In some
- 25 embodiments of a nutritive protein, the nutritive protein has an aggregation score of 0.2 or less. In some embodiments of a nutritive protein, the nutritive protein has an aggregation score of 0.1 or less.

- [00176] In some cases, soluble expression is desirable because it can increase the amount and/or yield of the nutritive protein and facilitate one or more of the isolation and purification of the nutritive protein. In some embodiments, the nutritive proteins of this
- 30 disclosure are solubly expressed in the host organism. Solvation score and aggregation score can be used to predict soluble expression of recombinant nutritive proteins in a host organism. As shown in Example 8, this disclosure provides evidence suggesting that nutritive proteins with solvation scores of ≤ -20 and aggregation scores of ≤ 0.75 are more

likely to be recombinantly expressed in a particular *E. coli* expression system. Moreover, the data also suggests that nutritive proteins with solvation scores of ≤ -20 and aggregation scores of ≤ 0.5 are more likely to be solubly expressed in this system. Therefore, in some embodiments the nutritive protein of this disclosure has a solvation score of -20 or less. In some embodiments the nutritive protein has an aggregation score of 0.75 or less. In some embodiments the nutritive protein has an aggregation score of 0.5 or less. In some embodiments the nutritive protein has a solvation score of -20 or less and an aggregation score of 0.75 or less. In some embodiments the nutritive protein has a solvation score of -20 or less and an aggregation score of 0.5 or less.

[00177] Certain free amino acids and mixtures of free amino acids are known to have a bitter or otherwise unpleasant taste. In addition, hydrolysates of common proteins (e.g., whey and soy) often have a bitter or unpleasant taste. In some embodiments, nutritive proteins disclosed and described herein do not have a bitter or otherwise unpleasant taste. In some embodiments, nutritive proteins disclosed and described herein have a more acceptable taste as compared to at least one of free amino acids, mixtures of free amino acids, and/or protein hydrolysates. In some embodiments, nutritive proteins disclosed and described herein have a taste that is equal to or exceeds at least one of whey protein.

[00178] Proteins are known to have tastes covering the five established taste modalities: sweet, sour, bitter, salty and umami. The taste of a particular protein (or its lack thereof) can be attributed to several factors, including the primary structure, the presence of charged side chains, and the electronic and conformational features of the protein. In some embodiments, nutritive proteins disclosed and described herein are designed to have a desired taste (e.g., sweet, salty, umami) and/or not to have an undesired taste (e.g., bitter, sour). In this context “design” includes, for example, selecting naturally occurring proteins embodying features that achieve the desired taste property, as well as creating muteins of naturally-occurring proteins that have desired taste properties. For example, nutritive proteins can be designed to interact with specific taste receptors, such as sweet receptors (T1R2-T1R3 heterodimer) or umami receptors (T1R1-T1R3 heterodimer, mGluR4, and/or mGluR1). Further, nutritive proteins may be designed not to interact, or to have diminished interaction, with other taste receptors, such as bitter receptors (T2R receptors).

[00179] Nutritive proteins disclosed and described herein can also elicit different physical sensations in the mouth when ingested, sometimes referred to as “mouth feel”. The

mouth feel of the nutritive proteins may be due to one or more factors including primary structure, the presence of charged side chains, and the electronic and conformational features of the protein. In some embodiments, nutritive proteins elicit a buttery or fat-like mouth feel when ingested.

5 [00180] In some embodiments the nutritive protein comprises from 20 to 5,000 amino acids, from 20-2,000 amino acids, from 20-1,000 amino acids, from 20-500 amino acids, from 20-250 amino acids, from 20-200 amino acids, from 20-150 amino acids, from 20-100 amino acids, from 20-40 amino acids, from 30-50 amino acids, from 40-60 amino acids, from 50-70 amino acids, from 60-80 amino acids, from 70-90 amino acids, from 80-100 amino
10 acids, at least 25 amino acids, at least 30 amino acids, at least 35 amino acids, at least 40 amino acids, at least 45 amino acids, at least 50 amino acids, at least 55 amino acids, at least 60 amino acids, at least 65 amino acids, at least 70 amino acids, at least 75 amino acids, at least 80 amino acids, at least 85 amino acids, at least 90 amino acids, at least 95 amino acids, at least 100 amino acids, at least 105 amino acids, at least 110 amino acids, at least 115
15 amino acids, at least 120 amino acids, at least 125 amino acids, at least 130 amino acids, at least 135 amino acids, at least 140 amino acids, at least 145 amino acids, at least 150 amino acids, at least 155 amino acids, at least 160 amino acids, at least 165 amino acids, at least 170 amino acids, at least 175 amino acids, at least 180 amino acids, at least 185 amino acids, at least 190 amino acids, at least 195 amino acids, at least 200 amino acids, at least 205 amino
20 acids, at least 210 amino acids, at least 215 amino acids, at least 220 amino acids, at least 225 amino acids, at least 230 amino acids, at least 235 amino acids, at least 240 amino acids, at least 245 amino acids, or at least 250 amino acids. In some embodiments the nutritive protein consists of from 20 to 5,000 amino acids, from 20-2,000 amino acids, from 20-1,000 amino acids, from 20-500 amino acids, from 20-250 amino acids, from 20-200 amino acids, from 20-150 amino acids, from 20-100 amino acids, from 20-40 amino acids, from 30-50
25 amino acids, from 40-60 amino acids, from 50-70 amino acids, from 60-80 amino acids, from 70-90 amino acids, from 80-100 amino acids, at least 25 amino acids, at least 30 amino acids, at least 35 amino acids, at least 40 amino acids, at least 45 amino acids, at least 50 amino acids, at least 55 amino acids, at least 60 amino acids, at least 65 amino acids, at least 70
30 amino acids, at least 75 amino acids, at least 80 amino acids, at least 85 amino acids, at least 90 amino acids, at least 95 amino acids, at least 100 amino acids, at least 105 amino acids, at least 110 amino acids, at least 115 amino acids, at least 120 amino acids, at least 125 amino acids, at least 130 amino acids, at least 135 amino acids, at least 140 amino acids, at least 145

amino acids, at least 150 amino acids, at least 155 amino acids, at least 160 amino acids, at least 165 amino acids, at least 170 amino acids, at least 175 amino acids, at least 180 amino acids, at least 185 amino acids, at least 190 amino acids, at least 195 amino acids, at least 200 amino acids, at least 205 amino acids, at least 210 amino acids, at least 215 amino acids, at least 220 amino acids, at least 225 amino acids, at least 230 amino acids, at least 235 amino acids, at least 240 amino acids, at least 245 amino acids, or at least 250 amino acids.

B. Nucleic Acids

[00181] Also provided herein are nucleic acids encoding nutritive polypeptides or proteins. In some embodiments the nucleic acid is isolated. In some embodiments the nucleic acid is purified.

[00182] In some embodiments of the nucleic acid, the nucleic acid comprises a nucleic acid sequence that encodes a first polypeptide sequence disclosed in Section A above. In some embodiments of the nucleic acid, the nucleic acid consists of a nucleic acid sequence that encodes a first polypeptide sequence disclosed in Section A above. In some embodiments of the nucleic acid, the nucleic acid comprises a nucleic acid sequence that encodes a nutritive protein disclosed in Section A above. In some embodiments of the nucleic acid, the nucleic acid consists of a nucleic acid sequence that encodes a nutritive protein disclosed in Section A above. In some embodiments of the nucleic acid the nucleic acid sequence that encodes the first polypeptide sequence is operatively linked to at least one expression control sequence. For example, in some embodiments of the nucleic acid the nucleic acid sequence that encodes the first polypeptide sequence is operatively linked to a promoter such as a promoter described in Section D below.

[00183] Accordingly, in some embodiments the nucleic acid molecule of this disclosure encodes a polypeptide or protein that itself is a nutritive polypeptide or protein. Such a nucleic acid molecule may be referred to as a “nutritive nucleic acid”. In some embodiments the nutritive nucleic acid encodes a polypeptide or protein that itself comprises at least one of: a) a ratio of branch chain amino acid residues to total amino acid residues of at least 24%; b) a ratio of Leu residues to total amino acid residues of at least 11%; and c) a ratio of essential amino acid residues to total amino acid residues of at least 49%. In some embodiments the nutritive nucleic acid comprises at least 10 nucleotides, at least 20 nucleotides, at least 30 nucleotides, at least 40 nucleotides, at least 50 nucleotides, at least 60 nucleotides, at least 70 nucleotides, at least 80 nucleotides, at least 90 nucleotides, at least

100 nucleotides, at least 200 nucleotides, at least 300 nucleotides, at least 400 nucleotides, at least 500 nucleotides, at least 600 nucleotides, at least 700 nucleotides, at least 800 nucleotides, at least 900 nucleotides, at least 1,000 nucleotides. In some embodiments the nutritive nucleic acid comprises from 10 to 100 nucleotides, from 20 to 100 nucleotides, from 10 to 50 nucleotides, or from 20 to 40 nucleotides. In some embodiments the nutritive nucleic acid comprises all or part of an open reading frame that encodes a naturally occurring nutritive polypeptide or protein. In some embodiments the nutritive nucleic acid consists of an open reading frame that encodes a fragment of a naturally occurring nutritive protein, wherein the open reading frame does not encode the complete naturally occurring nutritive protein.

[00184] In some embodiments the nutritive nucleic acid is a cDNA.

[00185] In some embodiments nucleic acid molecules are provided that comprise a sequence that is at least 50%, 60%, 70%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 99.9% identical to a naturally occurring nutritive nucleic acid. In some embodiments nucleic acids are provided that hybridize under stringent hybridization conditions with at least one reference nutritive nucleic acid.

[00186] The nutritive nucleic acids and fragments thereof provided in this disclosure display utility in a variety of systems and methods. For example, the fragments may be used as probes in various hybridization techniques. Depending on the method, the target nucleic acid sequences may be either DNA or RNA. The target nucleic acid sequences may be fractionated (e.g., by gel electrophoresis) prior to the hybridization, or the hybridization may be performed on samples in situ. One of skill in the art will appreciate that nucleic acid probes of known sequence find utility in determining chromosomal structure (e.g., by Southern blotting) and in measuring gene expression (e.g., by Northern blotting). In such experiments, the sequence fragments are preferably detectably labeled, so that their specific hybridization to target sequences can be detected and optionally quantified. One of skill in the art will appreciate that the nucleic acid fragments of this disclosure may be used in a wide variety of blotting techniques not specifically described herein.

[00187] It should also be appreciated that the nucleic acid sequence fragments disclosed herein also find utility as probes when immobilized on microarrays. Methods for creating microarrays by deposition and fixation of nucleic acids onto support substrates are

well known in the art. Reviewed in DNA Microarrays: A Practical Approach (Practical Approach Series), Schena (ed.), Oxford University Press (1999) (ISBN: 0199637768); Nature Genet. 21(1)(suppl):1-60 (1999); Microarray Biochip: Tools and Technology, Schena (ed.), Eaton Publishing Company/BioTechniques Books Division (2000) (ISBN: 1881299376), the disclosures of which are incorporated herein by reference in their entireties. Analysis of, for example, gene expression using microarrays comprising nucleic acid sequence fragments, such as the nucleic acid sequence fragments disclosed herein, is a well-established utility for sequence fragments in the field of cell and molecular biology. Other uses for sequence fragments immobilized on microarrays are described in Gerhold et al., Trends Biochem. Sci. 24:168-173 (1999) and Zweiger, Trends Biotechnol. 17:429-436 (1999); DNA Microarrays: A Practical Approach (Practical Approach Series), Schena (ed.), Oxford University Press (1999) (ISBN: 0199637768); Nature Genet. 21(1)(suppl):1-60 (1999); Microarray Biochip: Tools and Technology, Schena (ed.), Eaton Publishing Company/BioTechniques Books Division (2000) (ISBN: 1881299376).

15 C. Vectors

[00188] Also provided are vectors, including expression vectors, which comprise at least one of the nucleic acid molecules disclosed herein, as described further herein. In some embodiments, the vectors comprise at least one isolated nucleic acid molecule encoding a nutritive protein as disclosed herein. In alternative embodiments, the vectors comprise such a nucleic acid molecule operably linked to one or more expression control sequence. The vectors can thus be used to express at least one recombinant protein in a recombinant microbial host cell.

[0016] Suitable vectors for expression of nucleic acids in microorganisms are well known to those of skill in the art. Suitable vectors for use in cyanobacteria are described, for example, in Heidorn et al., "Synthetic Biology in Cyanobacteria: Engineering and Analyzing Novel Functions," Methods in Enzymology, Vol. 497, Ch. 24 (2011). Exemplary replicative vectors that can be used for engineering cyanobacteria as disclosed herein include pPMQAK1, pSL1211, pFC1, pSB2A, pSCR119/202, pSUN119/202, pRL2697, pRL25C, pRL1050, pSG111M, and pPBH201.

[0017] Other vectors such as pJB161 which are capable of receiving nucleic acid sequences disclosed herein may also be used. Vectors such as pJB161 comprise sequences which are homologous with sequences present in plasmids endogenous to certain

photosynthetic microorganisms (e.g., plasmids pAQ1, pAQ3, and pAQ4 of certain *Synechococcus* species). Examples of such vectors and how to use them is known in the art and provided, for example, in Xu et al., "Expression of Genes in Cyanobacteria: Adaptation of Endogenous Plasmids as Platforms for High-Level Gene Expression in *Synechococcus* sp.

5 PCC 7002," Chapter 21 in Robert Carpentier (ed.), "Photosynthesis Research Protocols," Methods in Molecular Biology, Vol. 684, 2011, which is hereby incorporated herein by reference. Recombination between pJB161 and the endogenous plasmids in vivo yield engineered microbes expressing the genes of interest from their endogenous plasmids. Alternatively, vectors can be engineered to recombine with the host cell chromosome, or the
10 vector can be engineered to replicate and express genes of interest independent of the host cell chromosome or any of the host cell's endogenous plasmids.

[0018] A further example of a vector suitable for recombinant protein production is the pET system (Novagen®). This system has been extensively characterized for use in *E. coli* and other microorganisms. In this system, target genes are cloned in pET plasmids under
15 control of strong bacteriophage T7 transcription and (optionally) translation signals; expression is induced by providing a source of T7 RNA polymerase in the host cell. T7 RNA polymerase is so selective and active that, when fully induced, almost all of the microorganism's resources are converted to target gene expression; the desired product can comprise more than 50% of the total cell protein a few hours after induction. It is also
20 possible to attenuate the expression level simply by lowering the concentration of inducer. Decreasing the expression level may enhance the soluble yield of some target proteins. In some embodiments this system also allows for maintenance of target genes in a transcriptionally silent un-induced state.

[0019] In some embodiments of using this system, target genes are cloned using hosts
25 that do not contain the T7 RNA polymerase gene, thus alleviating potential problems related to plasmid instability due to the production of proteins potentially toxic to the host cell. Once established in a non-expression host, target protein expression may be initiated either by infecting the host with λ CE6, a phage that carries the T7 RNA polymerase gene under the control of the λ pL and pI promoters, or by transferring the plasmid into an expression host
30 containing a chromosomal copy of the T7 RNA polymerase gene under lacUV5 control. In the second case, expression is induced by the addition of IPTG or lactose to the bacterial culture or using an autoinduction medium. Other plasmids systems that are controlled by the *lac* operator, but do not require the T7 RNA polymerase gene and rely upon *E. coli*'s native

RNA polymerase include the pTrc plasmid suite (Invitrogen) or pQE plasmid suite (QIAGEN).

[0020] In other embodiments it is possible to clone directly into expression hosts. Two types of T7 promoters and several hosts that differ in their stringency of suppressing basal expression levels are available, providing great flexibility and the ability to optimize the expression of a wide variety of target genes.

[00189] Suitable vectors for expression of nucleic acids in mammalian cells typically comprise control functions provided by viral regulatory elements. For example, commonly used promoters are derived from polyoma virus, Adenovirus 2, cytomegalovirus, or Simian Virus 40.

D. Promoters

[00190] Promoters useful for expressing the recombinant genes described herein include both constitutive and inducible/repressible promoters. Examples of inducible/repressible promoters include nickel-inducible promoters (e.g., PnrsA, PnrsB ; see, e.g., Lopez-Mauy et al., Cell (2002) v.43: 247-256) and urea repressible promoters such as PnirA (described in, e.g., Qi et al., Applied and Environmental Microbiology (2005) v.71: 5678-5684). Additional examples of inducible/repressible promoters include PnirA (promoter that drives expression of the nirA gene, induced by nitrate and repressed by urea) and Psuf (promoter that drives expression of the sufB gene, induced by iron stress).

Examples of constitutive promoters include Pcpc (promoter that drives expression of the cpc operon), Prbc (promoter that drives expression of rubisco), PpsbAII (promoter that drives expression of PpsbAII), Pcro (lambda phage promoter that drives expression of cro). In other embodiments, a PaphII and/or a lacIq-Ptrc promoter can be used to control expression. Where multiple recombinant genes are expressed in an engineered microorganism, the different genes can be controlled by different promoters or by identical promoters in separate operons, or the expression of two or more genes may be controlled by a single promoter as part of an operon.

[0021] Further non-limiting examples of inducible promoters may include, but are not limited to, those induced by expression of an exogenous protein (e.g., T7 RNA polymerase, SP6 RNA polymerase), by the presence of a small molecule (e.g., IPTG, galactose, tetracycline, steroid hormone, abscisic acid), by absence of small molecules (e.g., CO₂, iron, nitrogen), by metals or metal ions (e.g., copper, zinc, cadmium, nickel), and by environmental factors (e.g., heat, cold, stress, light, darkness), and by growth phase. In some

embodiments, the inducible promoter is tightly regulated such that in the absence of induction, substantially no transcription is initiated through the promoter. In some embodiments, induction of the promoter does not substantially alter transcription through other promoters. Also, generally speaking, the compound or condition that induces an inducible promoter is not be naturally present in the organism or environment where expression is sought.

[0022] In some embodiments, the inducible promoter is induced by limitation of CO₂ supply to a cyanobacteria culture. By way of non-limiting example, the inducible promoter may be the promoter sequence of *Synechocystis* PCC 6803 that are up-regulated under the CO₂-limitation conditions, such as the *cmp* genes, *ntp* genes, *ndh* genes, *sbt* genes, *chp* genes, and *rbc* genes, or a variant or fragment thereof.

[0023] In some embodiments, the inducible promoter is induced by iron starvation or by entering the stationary growth phase. In some embodiments, the inducible promoter may be variant sequences of the promoter sequence of cyanobacterial genes that are up-regulated under Fe-starvation conditions such as *isiA*, or when the culture enters the stationary growth phase, such as *isiA*, *phrA*, *sigC*, *sigB*, and *sigH* genes, or a variant or fragment thereof.

[0024] In some embodiments, the inducible promoter is induced by a metal or metal ion. By way of non-limiting example, the inducible promoter may be induced by copper, zinc, cadmium, mercury, nickel, gold, silver, cobalt, and bismuth or ions thereof. In some embodiments, the inducible promoter is induced by nickel or a nickel ion. In some embodiments, the inducible promoter is induced by a nickel ion, such as Ni²⁺. In another exemplary embodiment, the inducible promoter is the nickel inducible promoter from *Synechocystis* PCC 6803. In another embodiment, the inducible promoter may be induced by copper or a copper ion. In yet another embodiment, the inducible promoter may be induced by zinc or a zinc ion. In still another embodiment, the inducible promoter may be induced by cadmium or a cadmium ion. In yet still another embodiment, the inducible promoter may be induced by mercury or a mercury ion. In an alternative embodiment, the inducible promoter may be induced by gold or a gold ion. In another alternative embodiment, the inducible promoter may be induced by silver or a silver ion. In yet another alternative embodiment, the inducible promoter may be induced by cobalt or a cobalt ion. In still another alternative embodiment, the inducible promoter may be induced by bismuth or a bismuth ion.

[0025] In some embodiments, the promoter is induced by exposing a cell comprising the inducible promoter to a metal or metal ion. The cell may be exposed to the metal or metal ion by adding the metal to the microbial growth media. In certain embodiments, the metal or metal ion added to the microbial growth media may be efficiently recovered from the media.

5 In other embodiments, the metal or metal ion remaining in the media after recovery does not substantially impede downstream processing of the media or of the bacterial gene products.

[00191] Further non-limiting examples of constitutive promoters include constitutive promoters from Gram-negative bacteria or a bacteriophage propagating in a Gram-negative bacterium. For instance, promoters for genes encoding highly expressed Gram-negative gene products may be used, such as the promoter for Lpp, OmpA, rRNA, and ribosomal proteins. Alternatively, regulatable promoters may be used in a strain that lacks the regulatory protein for that promoter. For instance P_{lac} , P_{tac} , and P_{trc} , may be used as constitutive promoters in strains that lack LacI. Similarly, P_{22} , P_R and P_L may be used in strains that lack the lambda C2 repressor protein, and lambda P_R and P_L may be used in strains that lack the lambda C1 repressor protein. In one embodiment, the constitutive promoter is from a bacteriophage. In another embodiment, the constitutive promoter is from a *Salmonella* bacteriophage. In yet another embodiment, the constitutive promoter is from a cyanophage. In some embodiments, the constitutive promoter is a *Synechocystis* promoter. For instance, the constitutive promoter may be the PpsbAll promoter or its variant sequences, the Prbc promoter or its variant sequences, the P_{cpc} promoter or its variant sequences, and the PrnpB promoter or its variant sequences.

E. Host Cells

[00192] Also provided are host cells transformed with the nucleic acid molecules or vectors disclosed herein, and descendants thereof. In some embodiments the host cells are microbial cells. In some embodiments, the host cells carry the nucleic acid sequences on vectors, which may but need not be freely replicating vectors. In other embodiments, the nucleic acids have been integrated into the genome of the host cells and/or into an endogenous plasmid of the host cells. The transformed host cells find use, e.g., in the production of recombinant nutritive proteins disclosed herein.

30 [0026] "Microorganisms" includes prokaryotic and eukaryotic microbial species from the Domains *Archaea*, *Bacteria* and *Eucarya*, the latter including yeast and filamentous

fungi, protozoa, algae, or higher Protista. The terms “microbial cells” and “microbes” are used interchangeably with the term microorganism.

[0027] A variety of host microorganisms may be transformed with a nucleic acid sequence disclosed herein and may in some embodiments be used to produce a recombinant nutritive protein disclosed herein. Suitable host microorganisms include both autotrophic and heterotrophic microbes. In some applications the autotrophic microorganisms allows for a reduction in the fossil fuel and/or electricity inputs required to make a nutritive protein encoded by a recombinant nucleic acid sequence introduced into the host microorganism. This, in turn, in some applications reduces the cost and/or the environmental impact of producing the nutritive protein and/or reduces the cost and/or the environmental impact in comparison to the cost and/or environmental impact of manufacturing alternative nutritive proteins, such as whey, egg, and soy. For example, the cost and/or environmental impact of making a nutritive protein disclosed herein using a host microorganism as disclosed herein is in some embodiments lower than the cost and/or environmental impact of making whey protein in a form suitable for human consumption by processing of cows milk.

[0028] Non-limiting examples of heterotrophs include *Escherichia coli*, *Salmonella typhimurium*, *Bacillus subtilis*, *Bacillus megaterium*, *Corynebacterium glutamicum*, *Streptomyces coelicolor*, *Streptomyces lividans*, *Streptomyces vanesuelae*, *Streptomyces roseosporus*, *Streptomyces fradiae*, *Streptomyces griseus*, *Streptomyces calvuligerus*, *Streptomyces hygroscopicus*, *Streptomyces platensis*, *Saccharopolyspora erythraea*, *Corynebacterium glutamicum*, *Aspergillus niger*, *Aspergillus nidulans*, *Aspergillus oryzae*, *Aspergillus terreus*, *Aspergillus sojae*, *Penicillium chrysogenum*, *Trichoderma reesei*, *Clostridium acetobutylicum*, *Clostridium beijerinckii*, *Clostridium thermocellum*, *Fusibacter paucivorans*, *Saccharomyces cerevisiae*, *Saccharomyces boulardii*, *Pichia pastoris*, and *Pichia stipitis*.

[0029] Photoautotrophic microorganisms include eukaryotic algae, as well as prokaryotic cyanobacteria, green-sulfur bacteria, green non-sulfur bacteria, purple sulfur bacteria, and purple non-sulfur bacteria.

[0030] Extremophiles are also contemplated as suitable organisms. Such organisms withstand various environmental parameters such as temperature, radiation, pressure, gravity, vacuum, desiccation, salinity, pH, oxygen tension, and chemicals. They include hyperthermophiles, which grow at or above 80°C such as *Pyrolobus fumarii*; thermophiles,

which grow between 60-80°C such as *Synechococcus lividis*; mesophiles, which grow between 15-60°C; and psychrophiles, which grow at or below 15°C such as *Psychrobacter* and some insects. Radiation tolerant organisms include *Deinococcus radiodurans*. Pressure-tolerant organisms include piezophiles, which tolerate pressure of 130 MPa. Weight-tolerant organisms include barophiles. Hypergravity (e.g., >1g) hypogravity (e.g., <1g) tolerant organisms are also contemplated. Vacuum tolerant organisms include tardigrades, insects, microbes and seeds. Dessicant tolerant and anhydrobiotic organisms include xerophiles such as *Artemia salina*; nematodes, microbes, fungi and lichens. Salt-tolerant organisms include halophiles (e.g., 2-5 M NaCl) *Halobacteriaceae* and *Dunaliella salina*. pH-tolerant organisms include alkaliphiles such as *Natronobacterium*, *Bacillus firmus* OF4, *Spirulina spp.* (e.g., pH > 9) and acidophiles such as *Cyanidium caldarium*, *Ferroplasma sp.* (e.g., low pH). Anaerobes, which cannot tolerate O₂ such as *Methanococcus jannaschii*; microaerophils, which tolerate some O₂ such as *Clostridium* and aerobes, which require O₂ are also contemplated. Gas-tolerant organisms, which tolerate pure CO₂ include *Cyanidium caldarium* and metal tolerant organisms include metalotolerants such as *Ferroplasma acidarmanus* (e.g., Cu, As, Cd, Zn), *Ralstonia sp.* CH34 (e.g., Zn, Co, Cd, Hg, Pb). Gross, Michael. *Life on the Edge: Amazing Creatures Thriving in Extreme Environments*. New York: Plenum (1998) and Seckbach, J. "Search for Life in the Universe with Terrestrial Microbes Which Thrive Under Extreme Conditions." In Cristiano Batalli Cosmovici, Stuart Bowyer, and Dan Wertheimer, eds., *Astronomical and Biochemical Origins and the Search for Life in the Universe*, p. 511. Milan: Editrice Compositori (1997).

[0031] Mixotrophic organisms are also suitable organisms. Mixotrophic organisms can utilize a mix of different sources of energy and carbon, for example, photo- and chemotrophy, litho- and organotrophy, auto- and heterotrophy, and combinations thereof or a combination of it. Mixotrophs can be either eukaryotic or prokaryotic. Additionally, mixotrophs can be obligate or facultative. Suitable mixotrophic organisms include mixotrophic algae and mixotrophic bacteria.

[0032] Algae and cyanobacteria include but are not limited to the following genera: Acanthoceras, Acanthococcus, Acaryochloris, Achnanthes, Achnanthidium, Actinastrum, Actinochloris, Actinocyclus, Actinotaenium, Amphichrysis, Amphidinium, Amphikrikos, Amphipleura, Amphiprora, Amphithrix, Amphora, Anabaena, Anabaenopsis, Aneumastus, Ankistrodesmus, Ankyra, Anomoeoneis, Apatococcus, Aphanizomenon, Aphanocapsa, Aphanochaete, Aphanothece, Apiocystis, Apistonema, Arthrodesmus, Artherospira,

- Ascochloris, Asterionella, Asterococcus, Audouinella, Aulacoseira, Bacillaria, Balbiania, Bambusina, Bangia, Basichlamys, Batrachospermum, Binuclearia, Bitrichia, Blidingia, Botriopsis, Botrydium, Botryococcus, Botryosphaerella, Brachiomonas, Brachysira, Brachytrichia, Brebissonia, Bulbochaete, Bumilleria, Bumilleriopsis, Caloneis, Calothrix,
- 5** Campylodiscus, Capsosiphon, Carteria, Catena, Cavinula, Centritractus, Centronella, Ceratium, Chaetoceros, Chaetochloris, Chaetomorpha, Chaetonella, Chaetonema, Chaetopeltis, Chaetophora, Chaetosphaeridium, Chamaesiphon, Chara, Characiochloris, Characiopsis, Characium, Charales, Chilomonas, Chlainomonas, Chlamydoublepharis, Chlamydocapsa, Chlamydomonas, Chlamydomonopsis, Chlamydomyxa, Chlamydonephris,
- 10** Chlorangiella, Chlorangiopsis, Chlorella, Chlorobotrys, Chlorobrachis, Chlorochytrium, Chlorococcum, Chlorogloea, Chlorogloeopsis, Chlorogonium, Chlorolobion, Chloromonas, Chlorophysema, Chlorophyta, Chlorosaccus, Chlorosarcina, Choricystis, Chromophyton, Chromulina, Chroococcidiopsis, Chroococcus, Chroodactylon, Chroomonas, Chrootheca, Chrysamoeba, Chrysopsis, Chrysidiastrium, Chrysocapsa, Chrysocapsella, Chrysochaete,
- 15** Chrysochromulina, Chrysococcus, Chrysocrinus, Chrysolepidomonas, Chrysolykos, Chrysonebula, Chrysophyta, Chrysopyxis, Chrysosaccus, Chrysosphaerella, Chrysostephanosphaera, Clodophora, Clastidium, Closteriopsis, Closterium, Coccomyxa, Cocconeis, Coelastrella, Coelastrum, Coelosphaerium, Coenochloris, Coenococcus, Coenocystis, Colacium, Coleochaete, Collodictyon, Compsogonopsis, Compsopogon,
- 20** Conjugatophyta, Conochaete, Coronastrum, Cosmarium, Cosmioneis, Cosmocladium, Crateriportula, Craticula, Crinalium, Crucigenia, Crucigeniella, Cryptoaulax, Cryptomonas, Cryptophyta, Ctenophora, Cyanodictyon, Cyanonephron, Cyanophora, Cyanophyta, Cyanotheca, Cyanothomonas, Cyclonexis, Cyclostephanos, Cyclotella, Cylirocapsa, Cylirocystis, Cylirospermum, Cylirotheca, Cymatopleura, Cymbella,
- 25** Cymbellonitzschia, Cystodinium Dactylococcopsis, Debarya, Denticula, Dermatochrysis, Dermocarpa, Dermocarpella, Desmatractum, Desmidium, Desmococcus, Desmonema, Desmosiphon, Diacanthos, Diacronema, Diadesmis, Diatoma, Diatomella, Dicellula, Dichothrix, Dichotomococcus, Dicranochaete, Dictyochloris, Dictyococcus, Dictyosphaerium, Didymocystis, Didymogenes, Didymosphenia, Dilabifilum,
- 30** Dimorphococcus, Dinobryon, Dinococcus, Diplochloris, Diploneis, Diplostauron, Distrionella, Docidium, Draparnaldia, Dunaliella, Dysmorphococcus, Ecballocystis, Elakatothrix, Ellerbeckia, Encyonema, Enteromorpha, Entocladia, Entomoneis, Entophysalis, Epichrysis, Epipyxis, Epithemia, Eremosphaera, Euastropsis, Euastrum, Eucapsis, Eucoconeis, Eudorina, Euglena, Euglenophyta, Eunotia, Eustigmatophyta, Eutreptia,

- Fallacia, Fischerella, Fragilaria, Fragilariforma, Franceia, Frustulia, Curcilla, Geminella, Genicularia, Glaucocystis, Glaucophyta, Glenodiniopsis, Glenodinium, Gloeocapsa, Gloeochaete, Gloeochrysis, Gloeococcus, Gloeocystis, Gloeodendron, Gloeomonas, Gloeoplax, Gloeotheca, Gloeotila, Gloeotrichia, Gloiodictyon, Golenkinia, Golenkiniopsis, 5 Gomontia, Gomphocymbella, Gomphonema, Gomphosphaeria, Gonatozygon, Gongrosia, Gongrosira, Goniochloris, Gonium, Gonyostomum, Granulochloris, Granulocystopsis, Groenbladia, Gymnodinium, Gymnozyga, Gyrosigma, Haematococcus, Hafniomonas, Hallassia, Hammatoidea, Hannaea, Hantzschia, Hapalosiphon, Haplotaenium, Haptophyta, Haslea, Hemidinium, Hemitoma, Heribaudiella, Heteromastix, Heterothrix, Hibberdia, 10 Hildenbrandia, Hillea, Holopedium, Homoeothrix, Hormanthonema, Hormotila, Hyalobrachion, Hyalocardium, Hyalodiscus, Hyalogonium, Hyalotheca, Hydrium, Hydrococcus, Hydrocoleum, Hydrocoryne, Hydrodictyon, Hydrosera, Hydrurus, Hyella, Hymenomonas, Isthmochloron, Johannesbaptistia, Juranyiella, Karayevia, Kathablepharis, Katodinium, Kephyrion, Keratococcus, Kirchneriella, Klebsormidium, Kolbesia, Koliella, 15 Komarekia, Korshikoviella, Kraskella, Lagerheimia, Lagynion, Lamprothamnium, Lemanea, Lepocinclis, Leptosira, Lobococcus, Lobocystis, Lobomonas, Luticola, Lyngbya, Malleochloris, Mallomonas, Mantoniella, Marssoniella, Martyana, Mastigocoleus, Gastogloia, Melosira, Merismopedia, Mesostigma, Mesotaenium, Micractinium, Micrasterias, Microchaete, Microcoleus, Microcystis, Microglana, Micromonas, Microspora, 20 Microthamnion, Mischococcus, Monochrysis, Monodus, Monomastix, Monoraphidium, Monostroma, Mougeotia, Mougeotiopsis, Myochloris, Myromezia, Myxosarcina, Naegeliella, Nannochloris, Nautococcus, Navicula, Neglectella, Neidium, Nephroclamys, Nephrocystium, Nephrodiella, Nephroselmis, Netrium, Nitella, Nitellopsis, Nitzschia, Nodularia, Nostoc, Ochromonas, Oedogonium, Oligochaetophora, Onychonema, Oocardium, 25 Oocystis, Opephora, Ophiocystium, Orthoseira, Oscillatoria, Oxyneis, Pachycladella, Palmella, Palmodictyon, Pnadorina, Pannus, Paralia, Pascherina, Paulschulzia, Pediastrum, Pedinella, Pedinomonas, Pedinopera, Pelagodictyon, Penium, Peranema, Peridiniopsis, Peridinium, Peronia, Petroneis, Phacotus, Phacus, Phaeaster, Phaeodermatium, Phaeophyta, Phaeosphaera, Phaeothamnion, Phormidium, Phycopeltis, Phyllariochloris, Phyllocardium, 30 Phyllomita, Pinnularia, Pitophora, Placoneis, Planctonema, Planktosphaeria, Planothidium, Plectonema, Pleodorina, Pleurastrum, Pleurocapsa, Pleurocladia, Pleurodiscus, Pleurosigma, Pleurosira, Pleurotaenium, Pocillomonas, Podohedra, Polyblepharides, Polychaetophora, Polyedriella, Polyedriopsis, Polygoniochloris, Polyepidomonas, Polytaenia, Polytoma, Polytomella, Porphyridium, Posteriochromonas, Prasiniochloris, Prasinocladus, Prasinophyta,

- Prasiola, Prochlorophyta, Prochlorothrix, Protoderma, Protosiphon, Provasoliella, Prymnesium, Psammodictyon, Psammothidium, Pseudanabaena, Pseudenoclonium, Psuedocarteria, Pseudochate, Pseudocharacium, Pseudococcomyxa, Pseudodictyosphaerium, Pseudokephyrion, Pseudoncobyrsa, Pseudoquadrigula, Pseudosphaerocystis,
- 5 Pseudostaurastrum, Pseudostaurosira, Pseudotetrastrum, Pteromonas, Punctastruata, Pyramichlamys, Pyramimonas, Pyrrophyta, Quadrichloris, Quadricoccus, Quadrigula, Radiococcus, Radiofilum, Raphidiopsis, Raphidocelis, Raphidonema, Raphidophyta, Peimeria, Rhabdoderma, Rhabdomonas, Rhizoclonium, Rhodomonas, Rhodophyta, Rhoicosphenia, Rhopalodia, Rivularia, Rosenvingiella, Rossithidium, Roya, Scenedesmus,
- 10 Scherffelia, Schizochlamydeella, Schizochlamys, Schizomeris, Schizothrix, Schroederia, Scolioneis, Scotiella, Scotiellopsis, Scourfieldia, Scytonema, Selenastrum, Selenochloris, Sellaphora, Semiorbis, Siderocelis, Diderocystopsis, Dimonsenia, Siphononema, Sirocladium, Sirogonium, Skeletonema, Sorastrum, Spennatozopsis, Sphaerellocystis, Sphaerellopsis, Sphaerodinium, Sphaeroplea, Sphaerosoma, Spiniferomonas, Spirogyra,
- 15 Spirotaenia, Spirulina, Spondylomorum, Spondylosium, Sporotetras, Spumella, Staurastrum, Staurerodesmus, Stauroneis, Staurosira, Staurosirella, Stenopterobia, Stephanocostis, Stephanodiscus, Stephanoporus, Stephanosphaera, Stichococcus, Stichogloea, Stigeoclonium, Stigonema, Stipitococcus, Stokesiella, Strombomonas, Stylochrysalis, Stylodinium, Styloxyis, Stylosphaeridium, Surirella, Sykidion, Symploca, Synechococcus, Synechocystis,
- 20 Synedra, Synochromonas, Synura, Tabellaria, Tabularia, Teilingia, Temnogametum, Tetmemorus, Tetrachlorella, Tetracyclus, Tetradesmus, Tetraedriella, Tetraedron, Tetraselmis, Tetraspora, Tetrastrum, Thalassiosira, Thamniochaete, Thorakochloris, Thorea, Tolypella, Tolypothrix, Trachelomonas, Trachydiscus, Trebouxia, Trentepohlia, Treubaria, Tribonema, Trichodesmium, Trichodiscus, Trochiscia, Tryblionella, Ulothrix, Uroglena,
- 25 Uronema, Urosolenia, Urospora, Uva, Vacuolaria, Vaucheria, Volvox, Volvulina, Westella, Woloszynskia, Xanthidium, Xanthophyta, Xenococcus, Zygnema, Zygnemopsis, and Zygonium.

- [0033] Additional cyanobacteria include members of the genus Chamaesiphon, Chroococcus, Cyanobacterium, Cyanobium, Cyanothece, Dactylococcopsis, Gloeobacter,
- 30 Gloeocapsa, Gloeotheca, Microcystis, Prochlorococcus, Prochloron, Synechococcus, Synechocystis, Cyanocystis, Dermocarpella, Stanieria, Xenococcus, Chroococcidiopsis, Myxosarcina, Arthrospira, Borzia, Crinalium, Geitlerinema, Leptolyngbya, Limnothrix, Lyngbya, Microcoleus, Oscillatoria, Planktothrix, Prochlorothrix, Pseudanabaena, Spirulina,

Starria, Symploca, Trichodesmium, Tychonema, Anabaena, Anabaenopsis, Aphanizomenon, Cyanospira, Cylandrospermopsis, Cylandrospermum, Nodularia, Nostoc, Scylonema, Calothrix, Rivularia, Tolypothrix, Chlorogloeopsis, Fischerella, Geitieria, Iyengariella, Nostochopsis, Stigonema and Thermosynechococcus.

- 5 [0034] Green non-sulfur bacteria include but are not limited to the following genera: Chloroflexus, Chloronema, Oscillochloris, Heliothrix, Herpetosiphon, Roseiflexus, and Thermomicrobium.

[0035] Green sulfur bacteria include but are not limited to the following genera: *Chlorobium*, *Clathrochloris*, and *Prosthecochloris*.

- 10 [0036] Purple sulfur bacteria include but are not limited to the following genera: Allochromatium, Chromatium, Halochromatium, Isochromatium, Marichromatium, Rhodovulum, Thermochromatium, Thiocapsa, Thiorhodococcus, and Thiocystis.

[0037] Purple non-sulfur bacteria include but are not limited to the following genera: Phaeospirillum, Rhodobaca, Rhodobacter, Rhodomicrobium, Rhodopila,

- 15 Rhodopseudomonas, Rhodothalassium, Rhodospirillum, Rodovibrio, and Roseospira.

[0038] Aerobic chemolithotrophic bacteria include but are not limited to nitrifying bacteria such as *Nitrobacteraceae* sp., *Nitrobacter* sp., *Nitrospina* sp., *Nitrococcus* sp., *Nitrospira* sp., *Nitrosomonas* sp., *Nitrosococcus* sp., *Nitrosospira* sp., *Nitrosolobus* sp., *Nitrosovibrio* sp.; colorless sulfur bacteria such as, *Thiovulum* sp., *Thiobacillus* sp.,

- 20 *Thiomicrospira* sp., *Thiosphaera* sp., *Thermothrix* sp.; obligately chemolithotrophic hydrogen bacteria such as *Hydrogenobacter* sp., iron and manganese-oxidizing and/or depositing bacteria such as *Siderococcus* sp., and magnetotactic bacteria such as *Aquaspirillum* sp.

[0039] Archaeobacteria include but are not limited to methanogenic archaeobacteria such as *Methanobacterium* sp., *Methanobrevibacter* sp., *Methanothermus* sp., *Methanococcus* sp., *Methanomicrobium* sp., *Methanospirillum* sp., *Methanogenium* sp., *Methanosarcina* sp., *Methanolobus* sp., *Methanotherix* sp., *Methanococcoides* sp., *Methanoplanus* sp.; extremely thermophilic S-Metabolizers such as *Thermoproteus* sp., *Pyrodictium* sp., *Sulfolobus* sp., *Acidianus* sp. and other microorganisms such as, *Bacillus subtilis*, *Saccharomyces cerevisiae*, *Streptomyces* sp., *Ralstonia* sp., *Rhodococcus* sp., *Corynebacteria* sp., *Brevibacteria* sp.,

- 30 *Mycobacteria* sp., and oleaginous yeast.

[0040] Yet other suitable organisms include synthetic cells or cells produced by synthetic genomes as described in Venter et al. US Pat. Pub. No. 2007/0264688, and cell-like systems or synthetic cells as described in Glass et al. US Pat. Pub. No. 2007/0269862.

[0041] Still other suitable organisms include *Escherichia coli*, *Acetobacter acetii*,
 5 *Bacillus subtilis*, yeast and fungi such as *Clostridium ljungdahlii*, *Clostridium thermocellum*, *Penicillium chrysogenum*, *Pichia pastoris*, *Saccharomyces cerevisiae*, *Schizosaccharomyces pombe*, *Pseudomonas fluorescens*, or *Zymomonas mobilis*. In some embodiments those organisms are engineered to fix carbon dioxide while in other embodiments they are not.

[00193] In some embodiments eukaryotic cells, such as insect cells or mammalian
 10 cells, such as human cells are used as host cells. Vectors and expression control sequences including promoters and enhancers are well known for such cells. Examples of useful mammalian host cell lines for this purpose are monkey kidney CV1 line transformed by SV40 (COS-7, ATCC CRL 1651); human embryonic kidney line (293 or 293 cells subcloned for growth in suspension culture, Graham et al., J. Gen Virol. 36:59 (1977)); baby hamster
 15 kidney cells (BHK, ATCC CCL 10); Chinese hamster ovary cells/-DHFR (CHO, Urlaub et al., Proc. Natl. Acad. Sci. USA 77:4216 (1980)); mouse sertoli cells (TM4, Mather, Biol. Reprod. 23:243-251 (1980)); monkey kidney cells (CV1 ATCC CCL 70); African green monkey kidney cells (VERO-76, ATCC CRL-1587); human cervical carcinoma cells (HELA, ATCC CCL 2); canine kidney cells (MDCK, ATCC CCL 34); buffalo rat liver cells
 20 (BRL 3A, ATCC CRL 1442); human lung cells (W138, ATCC CCL 75); human liver cells (Hep G2, HB 8065); mouse mammary tumor (MMT 060562, ATCC CCL51); TRI cells (Mather et al., Annals N.Y. Acad. Sci. 383:44-68 (1982)); MRC 5 cells; FS4 cells; and a human hepatoma line (Hep G2).

F. Production of Nutritive Proteins

[00194] Skilled artisans are aware of many suitable methods available for culturing
 25 recombinant cells to produce (and optionally secrete) a recombinant nutritive protein as disclosed herein, as well as for purification and/or isolation of expressed recombinant proteins. The methods chosen for protein purification depend on many variables, including the properties of the protein of interest, its location and form within the cell, the vector, host
 30 strain background, and the intended application for the expressed protein. Culture conditions can also have an effect on solubility and localization of a given target protein. Many

approaches can be used to purify target proteins expressed in recombinant microbial cells as disclosed herein, including without limitation ion exchange and gel filtration.

[00195] In some embodiments a peptide fusion tag is added to the recombinant protein making possible a variety of affinity purification methods that take advantage of the peptide fusion tag. In some embodiments, the use of an affinity method enables the purification of the target protein to near homogeneity in one step. Purification may include cleavage of part or all of the fusion tag with enterokinase, factor Xa, thrombin, or HRV 3C proteases, for example. In some embodiments, before purification or activity measurements of an expressed target protein, preliminary analysis of expression levels, cellular localization, and solubility of the target protein is performed. The target protein may be found in any or all of the following fractions: soluble or insoluble cytoplasmic fractions, periplasm, or medium. Depending on the intended application, preferential localization to inclusion bodies, medium, or the periplasmic space can be advantageous, in some embodiments, for rapid purification by relatively simple procedures.

[00196] While *Escherichia coli* is widely regarded as a robust host for heterologous protein expression, it is also widely known that over-expression of many proteins in this host is prone to aggregation in the form of insoluble inclusion bodies. One of the most commonly used methods for either rescuing inclusion body formation, or to improve the titer of the protein itself, is to include an amino-terminal maltose-binding protein (MBP) [Austin BP, Nallamsetty S, Waugh DS. Hexahistidine-tagged maltose-binding protein as a fusion partner for the production of soluble recombinant proteins in *Escherichia coli*. *Methods Mol Biol.* 2009;498:157-72], or small ubiquitin-related modifier (SUMO) [Saitoh H, Uwada J, Azusa K. Strategies for the expression of SUMO-modified target proteins in *Escherichia coli*. *Methods Mol Biol.* 2009;497:211-21; Malakhov MP, Mattern MR, Malakhova OA, Drinker M, Weeks SD, Butt TR. SUMO fusions and SUMO-specific protease for efficient expression and purification of proteins. *J Struct Funct Genomics.* 2004;5(1-2):75-86; Panavas T, Sanders C, Butt TR. SUMO fusion technology for enhanced protein production in prokaryotic and eukaryotic expression systems. *Methods Mol Biol.* 2009;497:303-17] fusion to the protein of interest. These two proteins are expressed extremely well, and in the soluble form, in *Escherichia coli* such that the protein of interest is also effectively produced in the soluble form. The protein of interest can be cleaved by designing a site specific protease recognition

sequence (such as the tobacco etch virus (TEV) protease) in-between the protein of interest and the fusion protein [1].

[00197] In some embodiments the recombinant protein is initially not folded correctly or is insoluble. A variety of methods are well known for refolding of insoluble proteins.

5 Most protocols comprise the isolation of insoluble inclusion bodies by centrifugation followed by solubilization under denaturing conditions. The protein is then dialyzed or diluted into a non-denaturing buffer where refolding occurs. Because every protein possesses unique folding properties, the optimal refolding protocol for any given protein can be empirically determined by a skilled artisan. Optimal refolding conditions can, for example,
10 be rapidly determined on a small scale by a matrix approach, in which variables such as protein concentration, reducing agent, redox treatment, divalent cations, etc., are tested. Once the optimal concentrations are found, they can be applied to a larger scale solubilization and refolding of the target protein.

[00198] In some embodiments the nutritive protein does not comprise a tertiary
15 structure. In some embodiments less than half of the amino acids in the nutritive protein participate in a tertiary structure. In some embodiments the nutritive protein does not comprise a secondary structure. In some embodiments less than half of the amino acids in the nutritive protein participate in a secondary structure. Recombinant nutritive proteins may be isolated from a culture of cells expressing them in a state that comprises one or more of these
20 structural features. In some embodiments the tertiary structure of a recombinant nutritive protein is reduced or eliminated after the protein is isolated from a culture producing it. In some embodiments the secondary structure of a recombinant nutritive protein is reduced or eliminated after the protein is isolated from a culture producing it.

[00199] In some embodiments a CAPS buffer at alkaline pH in combination with N-
25 lauroylsarcosine is used to achieve solubility of the inclusion bodies, followed by dialysis in the presence of DTT to promote refolding. Depending on the target protein, expression conditions, and intended application, proteins solubilized from washed inclusion bodies may be > 90% homogeneous and may not require further purification. Purification under fully denaturing conditions (before refolding) is possible using His•Tag® fusion proteins and
30 His•Bind® immobilized metal affinity chromatography (Novogen®). In addition, S•Tag™, T7•Tag®, and Strep•Tag® II fusion proteins solubilized from inclusion bodies using 6 M urea can be purified under partially denaturing conditions by dilution to 2 M urea (S•Tag and

T7•Tag) or 1 M urea (Strep•Tag II) prior to chromatography on the appropriate resin. Refolded fusion proteins can be affinity purified under native conditions using His•Tag, S•Tag, Strep•Tag II, and other appropriate affinity tags (e.g., GST•Tag™, and T7•Tag) (Novogen®).

5 [00200] In some embodiments the recombinant nutritive protein is an endogenous protein of the host cell used to express it. That is, the cellular genome of the host cell comprises an open reading frame that encodes the recombinant nutritive protein. In some embodiments regulatory sequences sufficient to increase expression of the nutritive protein are inserted into the host cell genome and operatively linked to the endogenous open reading
10 frame such that the regulatory sequences drive overexpression of the recombinant nutritive protein from a recombinant nucleic acid. In some embodiments heterologous nucleic acid sequences are fused to the endogenous open reading frame of the nutritive protein and cause the nutritive protein to be synthesized comprising a heterologous amino acid sequence that changes the cellular trafficking of the recombinant nutritive protein, such as directing it to an
15 organelle or to a secretion pathway. In some embodiments an open reading frame that encodes the endogenous host cell protein is introduced into the host cell on a plasmid that further comprises regulatory sequences operatively linked to the open reading frame. In some embodiments the recombinant host cell expresses at least 2 times, at least 3 times, at least 4 times, at least 5 times, at least 10 times, or at least 20 times, at least 30 times, at least
20 40 times, at least 50 times, or at least 100 times more of the recombinant nutritive protein than the amount of the nutritive protein produced by a similar host cell grown under similar conditions.

[00201] In some embodiments nutritive proteins of this disclosure are synthesized chemically without the use of a recombinant production system. Protein synthesis can be
25 carried out in a liquid-phase system or in a solid-phase system using techniques known in the art (see, e.g., Atherton, E., Sheppard, R.C. (1989). Solid Phase peptide synthesis: a practical approach. Oxford, England: IRL Press; Stewart, J.M., Young, J.D. (1984). Solid phase peptide synthesis (2nd ed.). Rockford: Pierce Chemical Company.

G. Production of Recombinant Nutritive Proteins in Plants

30 [00202] The nucleic acid molecules comprising a nucleic acid sequence encoding a nutritive protein of this disclosure enable production of transgenic plants comprising the nucleic acid sequence. Accordingly, this disclosure also provides plant comprising a

recombinant nucleic acid molecule comprising a nucleic acid sequence encoding a nutritive protein of this disclosure. The plant can be any plant that is subject to transformation and regeneration and include, but are not limited to, Acacia, alfalfa, aneth, apple, apricot, artichoke, arugula, asparagus, avocado, banana, barley, beans, beet, blackberry, blueberry, 5 broccoli, brussels sprouts, cabbage, canola, cantaloupe, carrot, cassaya, cauliflower, celery, Chinese cabbage, cherry, cilantro, citrus, clementines, coffee, corn, cotton, cucumber, Douglas fir, eggplant, endive, escarole, eucalyptus, fennel, figs, forest trees, gourd, grape, grapefruit, honey dew, jicama, kiwifruit, lettuce, leeks, lemon, lime, Loblolly pine, mango, melon, mushroom, nut, oat, okra, onion, orange, an ornamental plant, papaya, parsley, pea, 10 peach, peanut, pear, pepper, persimmon, pine, pineapple, plantain, plum, pomegranate, poplar, potato, pumpkin, quince, radiata pine, radicchio, radish, rapeseed, raspberry, rice, rye, sorghum, Southern pine, soybean, spinach, squash, strawberry, sugarbeet, sugarcane, sunflower, sweet corn, sweet potato, sweetgum, tangerine, tea, tobacco, tomato, turf, a vine, watermelon, wheat, yams, and zucchini. In preferred embodiments, the plant is a bean, 15 broccoli, cabbage, canola, carrot, cauliflower, celery, Chinese cabbage, corn, cotton cucumber, eggplant, leek, lettuce, melon, pea, pepper, pumpkin, radish, spinach, soybean, squash, sugarcane, sweet corn, tomato, watermelon, and wheat plant. In some embodiments, the plant is a corn plant. In some embodiments, the plant is a soybean plant. In some embodiments, the plant is a cotton plant. In some embodiments, the plant is a canola plant. In 20 some embodiments the plant is a member of a genus selected from Arabidopsis, Beta, Glycine, Jatropha, Miscanthus, Panicum, Phalaris, Populus, Saccharum, Salix, Simmondsia and Zea.

[00203] Numerous promoters that are active in plant cells have been described in the literature. These include promoters present in plant genomes as well as promoters from other 25 sources, including nopaline synthase (NOS) promoter and octopine synthase (OCS) promoters carried on tumor-inducing plasmids of Agrobacterium tumefaciens, caulimovirus promoters such as the cauliflower mosaic virus. For instance, see U.S. Pat. Nos. 5,858,742 and 5,322,938, which disclose versions of the constitutive promoter derived from cauliflower mosaic virus (CaMV35S), U.S. Pat. No. 5,641,876, which discloses a rice actin promoter, 30 U.S. Patent Application Publication 2002/0192813A1, which discloses 5', 3' and intron elements useful in the design of effective plant expression vectors, U.S. patent application Ser. No. 09/757,089, which discloses a maize chloroplast aldolase promoter, U.S. patent application Ser. No. 08/706,946, which discloses a rice glutelin promoter, U.S. patent

application Ser. No. 09/757,089, which discloses a maize aldolase (FDA) promoter, and U.S. patent application Ser. No. 60/310,370, which discloses a maize nicotianamine synthase promoter. These and numerous other promoters that function in plant cells are known to those skilled in the art and available for use in recombinant nucleic acids to provide for expression of nutritive proteins in transgenic plants.

[00204] For some applications preferential expression in plant green tissues is desired. Promoters of interest for such uses include those from genes such as *Arabidopsis thaliana* ribulose-1,5-bisphosphate carboxylase (Rubisco) small subunit (Fischhoff et al. (1992) *Plant Mol. Biol.* 20:81-93), aldolase and pyruvate orthophosphate dikinase (PPDK) (Taniguchi et al. (2000) *Plant Cell Physiol.* 41(1):42-48).

[0036] Furthermore, the promoters may be altered to contain at least one enhancer sequence to assist in elevating gene expression. Such enhancers are known in the art. By including an enhancer sequence with such constructs, the expression of the nutritive protein may be enhanced. These enhancers often are found 5' to the start of transcription in a promoter that functions in eukaryotic cells, but can often be inserted upstream (5') or downstream (3') to the coding sequence. In some instances, these 5' enhancing elements are introns. Particularly useful as enhancers are the 5' introns of the rice actin 1 (see U.S. Pat. No. 5,641,876) and rice actin 2 genes, the maize alcohol dehydrogenase gene intron, the maize heat shock protein 70 gene intron (U.S. Pat. No. 5,593,874) and the maize shrunken 1 gene.

[00205] For some applications expression in plant seed tissues is desired to effect modify seed composition. Exemplary promoters for use for seed composition modification include promoters from seed genes such as napin (U.S. Pat. No. 5,420,034), maize L3 oleosin (U.S. Pat. No. 6,433,252), zein Z27 (Russell et al. (1997) *Transgenic Res.* 6(2):157-166), globulin 1 (Belanger et al (1991) *Genetics* 129:863-872), glutelin 1 (Russell (1997) *supra*), and peroxiredoxin antioxidant (Per1) (Stacy et al. (1996) *Plant Mol. Biol.* 31(6):1205-1216)

[00206] Recombinant nucleic acid constructs prepared in accordance with the disclosure will also generally include a 3' element that typically contains a polyadenylation signal and site. Well-known 3' elements include those from *Agrobacterium tumefaciens* genes such as nos 3', tml 3', tmr 3', tms 3', ocs 3', tr7 3', for example disclosed in U.S. Pat. No. 6,090,627; 3' elements from plant genes such as wheat (*Triticum aestivum*) heat shock protein 17 (Hsp17 3'), a wheat ubiquitin gene, a wheat fructose-1,6-bisphosphatase gene, a rice glutelin gene a rice lactate dehydrogenase gene and a rice beta-tubulin gene, all of which

are disclosed in U.S. published patent application 2002/0192813 A1; and the pea (*Pisum sativum*) ribulose biphosphate carboxylase gene (rbs 3'), and 3' elements from the genes within the host plant.

[00207] Constructs and vectors may also include a transit peptide for targeting of a gene target to a plant organelle, particularly to a chloroplast, leucoplast or other plastid organelle. For descriptions of the use of chloroplast transit peptides see U.S. Pat. No. 5,188,642 and U.S. Pat. No. 5,728,925. For description of the transit peptide region of an Arabidopsis EPSPS gene, see Klee, H. J. et al (MGG (1987) 210:437-442).

[00208] Numerous methods for transforming plant cells with recombinant DNA are known in the art and may be used in the present disclosure. Two commonly used methods for plant transformation are Agrobacterium-mediated transformation and microprojectile bombardment. Microprojectile bombardment methods are illustrated in U.S. Pat. Nos. 5,015,580 (soybean); 5,550,318 (corn); 5,538,880 (corn); 5,914,451 (soybean); 6,160,208 (corn); 6,399,861 (corn) and 6,153,812 (wheat) and Agrobacterium-mediated transformation is described in U.S. Pat. Nos. 5,159,135 (cotton); 5,824,877 (soybean); 5,591,616 (corn); and 6,384,301 (soybean). For Agrobacterium tumefaciens based plant transformation system, additional elements present on transformation constructs will include T-DNA left and right border sequences to facilitate incorporation of the recombinant polynucleotide into the plant genome.

[00209] In general it is useful to introduce recombinant DNA randomly, i.e. at a non-specific location, in the genome of a target plant line. In special cases it may be useful to target recombinant DNA insertion in order to achieve site-specific integration, for example to replace an existing gene in the genome, to use an existing promoter in the plant genome, or to insert a recombinant polynucleotide at a predetermined site known to be active for gene expression. Several site specific recombination systems exist which are known to function in plants, including cre-lox as disclosed in U.S. Pat. No. 4,959,317 and FLP-FRT as disclosed in U.S. Pat. No. 5,527,695.

[00210] Transformation methods are generally practiced in tissue culture on media and in a controlled environment. "Media" refers to the numerous nutrient mixtures that are used to grow cells in vitro, that is, outside of the intact living organism. Recipient cell targets include, but are not limited to, meristem cells, callus, immature embryos and gametic cells

such as microspores, pollen, sperm and egg cells. It is contemplated that any cell from which a fertile plant may be regenerated is useful as a recipient cell. Callus may be initiated from tissue sources including, but not limited to, immature embryos, seedling apical meristems, microspores and the like. Cells capable of proliferating as callus are also recipient cells for genetic transformation. Practical transformation methods and materials for making transgenic plants of this disclosure, for example various media and recipient target cells, transformation of immature embryo cells and subsequent regeneration of fertile transgenic plants are disclosed in U.S. Pat. Nos. 6,194,636 and 6,232,526.

[00211] The seeds of transgenic plants can be harvested from fertile transgenic plants and used to grow progeny generations of transformed plants that produce the recombinant nutritive protein of this disclosure. In addition to direct transformation of a plant with a recombinant DNA, transgenic plants can be prepared by crossing a first plant having a recombinant DNA with a second plant lacking the DNA. For example, recombinant DNA can be introduced into first plant line that is amenable to transformation to produce a transgenic plant which can be crossed with a second plant line to introgress the recombinant DNA into the second plant line. A transgenic plant with recombinant DNA encoding a nutritive protein of this disclosure, can be crossed with transgenic plant line having other recombinant DNA that confers another trait, for example herbicide resistance or pest resistance, or production of a second nutritive product such as an oil, to produce progeny plants having recombinant DNA that confers both traits. Typically, in such breeding for combining traits the transgenic plant donating the additional trait is a male line and the transgenic plant carrying the base traits is the female line. The progeny of this cross will segregate such that some of the plants will carry the DNA for both parental traits and some will carry DNA for one parental trait; such plants can be identified by markers associated with parental recombinant DNA, e.g. marker identification by analysis for recombinant DNA or, in the case where a selectable marker is linked to the recombinant, by application of the selecting agent such as a herbicide for use with a herbicide tolerance marker, or by selection for the enhanced trait. Progeny plants carrying DNA for both parental traits can be crossed back into the female parent line multiple times, for example usually 6 to 8 generations, to produce a progeny plant with substantially the same genotype as one original transgenic parental line but for the recombinant DNA of the other transgenic parental line.

[00212] In the practice of transformation DNA is typically introduced into only a small percentage of target plant cells in any one transformation experiment. Marker genes are used to provide an efficient system for identification of those cells that are stably transformed by receiving and integrating a transgenic DNA construct into their genomes. Preferred marker genes provide selective markers which confer resistance to a selective agent, such as an antibiotic or herbicide. Any of the herbicides to which the transformed plants may be resistant are useful agents for selective markers. Potentially transformed cells are exposed to the selective agent. In the population of surviving cells will be those cells where, generally, the resistance-conferring gene is integrated and expressed at sufficient levels to permit cell survival. Cells may be tested further to confirm stable integration of the exogenous DNA. Commonly used selective marker genes include those conferring resistance to antibiotics such as kanamycin and paromomycin (nptII), hygromycin B (aph IV) and gentamycin (aac3 and aacC4) or resistance to herbicides such as glufosinate (bar or pat) and glyphosate (aroA or EPSPS). Examples of such selectable are illustrated in U.S. Pat. Nos. 5,550,318; 5,633,435; 5,780,708 and 6,118,047. Selectable markers which provide an ability to visually identify transformants can also be employed, for example, a gene expressing a colored or fluorescent protein such as a luciferase or green fluorescent protein (GFP) or a gene expressing a beta-glucuronidase or uidA gene (GUS) for which various chromogenic substrates are known.

[00213] Plant cells that survive exposure to the selective agent, or plant cells that have been scored positive in a screening assay, may be cultured in regeneration media and allowed to mature into plants. Developing plantlets regenerated from transformed plant cells can be transferred to plant growth mix, and hardened off, for example, in an environmentally controlled chamber. Plants are regenerated from about 6 weeks to 10 months after a transformant is identified, depending on the initial tissue. Plants may be pollinated using conventional plant breeding methods known to those of skill in the art and seed produced, for example self-pollination is commonly used with transgenic corn. The regenerated transformed plant or its progeny seed or plants can be tested for expression of the recombinant DNA and selected for the presence of a heterologous nutritive protein.

[00214] Transgenic plants derived from the plant cells of this disclosure are grown to generate transgenic plants comprising the heterologous nucleic acid that encodes a nutritive protein of this disclosure and produce transgenic seed and haploid pollen comprising the

heterologous nucleic acid sequence. Such plants with enhanced traits are identified by selection of transformed plants or progeny seed for the enhanced trait. Transgenic plants grown from transgenic seed provided herein demonstrate improved agronomic traits that contribute to increased yield or other traits that provide increased plant value, including, for example, improved protein quality such as increasing the content of at least one of essential amino acids, branch chain amino acids, or Leu.

[00215] The transgenic plants are useful as sources of nutritive proteins. For example, in some embodiments a transgenic plant comprising a recombinant nutritive protein of this disclosure comprises an increased weight fraction of total protein compared to a control non-transgenic plant. In some embodiments a transgenic plant comprising a recombinant nutritive protein of this disclosure comprises an increased weight fraction of essential amino acids compared to a control non-transgenic plant. In some embodiments a transgenic plant comprising a recombinant nutritive protein of this disclosure comprises an increased weight fraction of branch chain amino acids compared to a control non-transgenic plant. In some embodiments a transgenic plant comprising a recombinant nutritive protein of this disclosure comprises an increased weight fraction of Leu compared to a control non-transgenic plant. In some embodiments a transgenic plant comprising a recombinant nutritive protein of this disclosure comprises at least one of: a) an increased ratio of branch chain amino acid residues to total amino acid residues compared to a control non-transgenic plant; b) an increased ratio of Leu residues to total amino acid residues compared to a control non-transgenic plant; and c) an increased ratio of essential amino acid residues to total amino acid residues compared to a control non-transgenic plant. In some embodiments a transgenic plant comprising a recombinant nutritive protein of this disclosure comprises: a) an increased ratio of branch chain amino acid residues to total amino acid residues compared to a control non-transgenic plant; b) an increased ratio of Leu residues to total amino acid residues compared to a control non-transgenic plant; and c) an increased ratio of essential amino acid residues to total amino acid residues compared to a control non-transgenic plant.

[00216] Accordingly, the transgenic plants are useful as sources of high quality protein. The plants may be harvested and used in mammalian diets with or without further processing. For example, flour made from transgenic wheat, cornmeal made from transgenic corn, or rice or rice flour derived from transgenic rice is enriched in at least one of protein, essential amino acids, branch chain amino acids, and Leu compared to similar products made

from plants that do not comprise the recombinant nutritive protein. In some embodiments the recombinant nutritive protein is a plant protein or comprises a polypeptide sequence of a plant protein or a derivative or mutein thereof, such as but not necessarily a protein or polypeptide sequence of the same type of plant. In other embodiments the recombinant

5 nutritive protein is not a plant protein or a derivative or mutein thereof.

[00217] In some embodiments the recombinant nutritive protein is recovered or partially recovered from the transgenic plant before it is consumed by a mammal.

H. Compositions

[00218] At least one nutritive protein disclosed herein may be combined with at least
10 one second component to form a nutritive composition. In some embodiments the only source of amino acid in the composition is the at least one nutritive protein disclosed herein. In such embodiments the amino acid composition of the composition will be the same as the amino acid composition of the at least one nutritive protein disclosed herein. In some
15 embodiments the composition comprises at least one nutritive protein disclosed herein and at least one second protein. In some embodiments the at least one second protein is a second nutritive protein disclosed herein, while in other embodiments the at least one second protein is not a nutritive protein disclosed herein. In some embodiments the composition comprises
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 or more nutritive proteins disclosed herein. In some embodiments the composition comprises 0, 1, 2, 3, 4, 5, 6, 7, 8, 9,
20 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 or more proteins that are not nutritive proteins disclosed herein. In some embodiments the composition comprises 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 or more nutritive proteins and the composition comprises 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 or more proteins that are not nutritive proteins disclosed herein.

25 [00219] In some embodiments the nutritive composition as described in the preceding paragraph, further comprises at least one of at least one polypeptide, at least one peptide, and at least one free amino acid. In some embodiments the nutritive composition comprises at least one polypeptide and at least one peptide. In some embodiments the nutritive
30 composition comprises at least one polypeptide and at least one free amino acid. In some embodiments the nutritive composition comprises at least one peptide and at least one free amino acid. In some embodiments the at least one polypeptide, at least one peptide, and/or at least one free amino acid comprises amino acids selected from 1) branch chain amino acids,

2) leucine, and 3) essential amino acids. In some embodiments the at least one polypeptide, at least one peptide, and/or at least one free amino acid consists of amino acids selected from 1) branch chain amino acids, 2) leucine, and 3) essential amino acids. In some embodiments, the nutritive composition comprises at least one modified amino acid or a non-standard amino acid. Modified amino acids include amino acids that have modifications to one or more of the carboxy terminus, amino terminus, and/or side chain. Non-standard amino acids may be selected from those that are formed by post-translational modification of proteins, for example, carboxylated glutamate, hydroxyproline, or hypusine. Other non-standard amino acids are not found in proteins. Examples include lanthionine, 2-aminoisobutyric acid, dehydroalanine, gamma-aminobutyric acid, ornithine and citrulline. In some embodiments, the nutritive composition comprises one or more D-amino acids. In some embodiments, the nutritive composition comprises one or more L-amino acids. In some embodiments, the nutritive composition comprises a mixture of one or more D-amino acids and one or more L-amino acids.

[00220] By adding at least one of a polypeptide, a peptide, and a free amino acid to a nutritive composition the proportion of at least one of branch chain amino acids, leucine, and essential amino acids, to total amino acid, present in the composition can be increased.

[00221] In some embodiments the composition comprises at least one carbohydrate. A “carbohydrate” refers to a sugar or polymer of sugars. The terms “saccharide,”

“polysaccharide,” “carbohydrate,” and “oligosaccharide” may be used interchangeably. Most carbohydrates are aldehydes or ketones with many hydroxyl groups, usually one on each carbon atom of the molecule. Carbohydrates generally have the molecular formula $C_nH_{2n}O_n$. A carbohydrate may be a monosaccharide, a disaccharide, trisaccharide, oligosaccharide, or polysaccharide. The most basic carbohydrate is a monosaccharide, such as glucose, sucrose, galactose, mannose, ribose, arabinose, xylose, and fructose.

Disaccharides are two joined monosaccharides. Exemplary disaccharides include sucrose, maltose, cellobiose, and lactose. Typically, an oligosaccharide includes between three and six monosaccharide units (e.g., raffinose, stachyose), and polysaccharides include six or more monosaccharide units. Exemplary polysaccharides include starch, glycogen, and cellulose.

Carbohydrates may contain modified saccharide units such as 2'-deoxyribose wherein a hydroxyl group is removed, 2'-fluororibose wherein a hydroxyl group is replaced with a fluorine, or N-acetylglucosamine, a nitrogen-containing form of glucose (e.g., 2'-

fluororibose, deoxyribose, and hexose). Carbohydrates may exist in many different forms, for example, conformers, cyclic forms, acyclic forms, stereoisomers, tautomers, anomers, and isomers.

[00222] In some embodiments the composition comprises at least one lipid. As used
 5 herein a “lipid” includes fats, oils, triglycerides, cholesterol, phospholipids, fatty acids in any form including free fatty acids. Fats, oils and fatty acids may be saturated, unsaturated (cis or trans) or partially unsaturated (cis or trans). In some embodiments the lipid comprises at least one fatty acid selected from lauric acid (12:0), myristic acid (14:0), palmitic acid (16:0),
 10 palmitoleic acid (16:1), margaric acid (17:0), heptadecenoic acid (17:1), stearic acid (18:0), oleic acid (18:1), linoleic acid (18:2), linolenic acid (18:3), octadecatetraenoic acid (18:4), arachidic acid (20:0), eicosenoic acid (20:1), eicosadienoic acid (20:2), eicosatetraenoic acid (20:4), eicosapentaenoic acid (20:5) (EPA), docosanoic acid (22:0), docosenoic acid (22:1), docosapentaenoic acid (22:5), docosahexaenoic acid (22:6) (DHA), and tetracosanoic acid (24:0). In some embodiments the composition comprises at least one modified lipid, for
 15 example a lipid that has been modified by cooking.

[00223] In some embodiments the composition comprises at least one supplemental mineral or mineral source. Examples of minerals include, without limitation: chloride, sodium, calcium, iron, chromium, copper, iodine, zinc, magnesium, manganese, molybdenum, phosphorus, potassium, and selenium. Suitable forms of any of the foregoing
 20 minerals include soluble mineral salts, slightly soluble mineral salts, insoluble mineral salts, chelated minerals, mineral complexes, non-reactive minerals such as carbonyl minerals, and reduced minerals, and combinations thereof.

[00224] In some embodiments the composition comprises at least one supplemental vitamin. The at least one vitamin can be fat-soluble or water soluble vitamins. Suitable
 25 vitamins include but are not limited to vitamin C, vitamin A, vitamin E, vitamin B12, vitamin K, riboflavin, niacin, vitamin D, vitamin B6, folic acid, pyridoxine, thiamine, pantothenic acid, and biotin. Suitable forms of any of the foregoing are salts of the vitamin, derivatives of the vitamin, compounds having the same or similar activity of the vitamin, and metabolites of the vitamin.

[00225] In some embodiments the composition comprises at least one organism. Suitable examples are well known in the art and include probiotics (e.g., species of Lactobacillus or Bifidobacterium), spirulina, chlorella, and porphyra.

5 [00226] In some embodiments the composition comprises at least one dietary supplement. Suitable examples are well known in the art and include herbs, botanicals, and certain hormones. Non limiting examples include ginkgo, ginseng, and melatonin.

10 [00227] In some embodiments the composition comprises an excipient. Non-limiting examples of suitable excipients include a buffering agent, a preservative, a stabilizer, a binder, a compaction agent, a lubricant, a dispersion enhancer, a disintegration agent, a flavoring agent, a sweetener, a coloring agent.

[00228] In some embodiments the excipient is a buffering agent. Non-limiting examples of suitable buffering agents include sodium citrate, magnesium carbonate, magnesium bicarbonate, calcium carbonate, and calcium bicarbonate.

15 [00229] In some embodiments the excipient comprises a preservative. Non-limiting examples of suitable preservatives include antioxidants, such as alpha-tocopherol and ascorbate, and antimicrobials, such as parabens, chlorobutanol, and phenol.

20 [00230] In some embodiments the composition comprises a binder as an excipient. Non-limiting examples of suitable binders include starches, pregelatinized starches, gelatin, polyvinylpyrrolidone, cellulose, methylcellulose, sodium carboxymethylcellulose, ethylcellulose, polyacrylamides, polyvinylloxazolidone, polyvinylalcohols, C12-C18 fatty acid alcohol, polyethylene glycol, polyols, saccharides, oligosaccharides, and combinations thereof.

25 [00231] In some embodiments the composition comprises a lubricant as an excipient. Non-limiting examples of suitable lubricants include magnesium stearate, calcium stearate, zinc stearate, hydrogenated vegetable oils, stearotex, polyoxyethylene monostearate, talc, polyethyleneglycol, sodium benzoate, sodium lauryl sulfate, magnesium lauryl sulfate, and light mineral oil.

[00232] In some embodiments the composition comprises a dispersion enhancer as an excipient. Non-limiting examples of suitable dispersants include starch, alginic acid,

polyvinylpyrrolidones, guar gum, kaolin, bentonite, purified wood cellulose, sodium starch glycolate, isoamorphous silicate, and microcrystalline cellulose as high HLB emulsifier surfactants.

[00233] In some embodiments the composition comprises a disintegrant as an
5 excipient. In some embodiments the disintegrant is a non-effervescent disintegrant. Non-limiting examples of suitable non-effervescent disintegrants include starches such as corn starch, potato starch, pregelatinized and modified starches thereof, sweeteners, clays, such as bentonite, micro-crystalline cellulose, alginates, sodium starch glycolate, gums such as agar, guar, locust bean, karaya, pectin, and tragacanth. In some embodiments the disintegrant is
10 an effervescent disintegrant. Non-limiting examples of suitable effervescent disintegrants include sodium bicarbonate in combination with citric acid, and sodium bicarbonate in combination with tartaric acid.

[00234] In some embodiments the excipient comprises a flavoring agent. Flavoring agents incorporated into the outer layer can be chosen from synthetic flavor oils and flavoring
15 aromatics; natural oils; extracts from plants, leaves, flowers, and fruits; and combinations thereof. In some embodiments the flavoring agent is selected from cinnamon oils; oil of wintergreen; peppermint oils; clover oil; hay oil; anise oil; eucalyptus; vanilla; citrus oil such as lemon oil, orange oil, grape and grapefruit oil; and fruit essences including apple, peach, pear, strawberry, raspberry, cherry, plum, pineapple, and apricot.

[00235] In some embodiments the excipient comprises a sweetener. Non-limiting
20 examples of suitable sweeteners include glucose (corn syrup), dextrose, invert sugar, fructose, and mixtures thereof (when not used as a carrier); saccharin and its various salts such as the sodium salt; dipeptide sweeteners such as aspartame; dihydrochalcone compounds, glycyrrhizin; Stevia Rebaudiana (Stevioside); chloro derivatives of sucrose such
25 as sucralose; and sugar alcohols such as sorbitol, mannitol, xylitol, and the like. Also contemplated are hydrogenated starch hydrolysates and the synthetic sweetener 3,6-dihydro-6-methyl-1,2,3-oxathiazin-4-one-2,2-dioxide, particularly the potassium salt (acesulfame-K), and sodium and calcium salts thereof.

[00236] In some embodiments the composition comprises a coloring agent. Non-
30 limiting examples of suitable color agents include food, drug and cosmetic colors (FD&C),

drug and cosmetic colors (D&C), and external drug and cosmetic colors (Ext. D&C). The coloring agents can be used as dyes or their corresponding lakes.

[00237] The weight fraction of the excipient or combination of excipients in the formulation is usually about 50% or less, about 45% or less, about 40% or less, about 35% or less, about 30% or less, about 25% or less, about 20% or less, about 15% or less, about 10% or less, about 5% or less, about 2% or less, or about 1% or less of the total weight of the amino acids in the composition.

[00238] The nutritive proteins and nutritive compositions disclosed herein can be formulated into a variety of forms and administered by a number of different means. The compositions can be administered orally, rectally, or parenterally, in formulations containing conventionally acceptable carriers, adjuvants, and vehicles as desired. The term "parenteral" as used herein includes subcutaneous, intravenous, intramuscular, or intrasternal injection and infusion techniques. In an exemplary embodiment, the nutritive protein or composition is administered orally.

[00239] Solid dosage forms for oral administration include capsules, tablets, caplets, pills, troches, lozenges, powders, and granules. A capsule typically comprises a core material comprising a nutritive protein or composition and a shell wall that encapsulates the core material. In some embodiments the core material comprises at least one of a solid, a liquid, and an emulsion. In some embodiments the shell wall material comprises at least one of a soft gelatin, a hard gelatin, and a polymer. Suitable polymers include, but are not limited to: cellulosic polymers such as hydroxypropyl cellulose, hydroxyethyl cellulose, hydroxypropyl methyl cellulose (HPMC), methyl cellulose, ethyl cellulose, cellulose acetate, cellulose acetate phthalate, cellulose acetate trimellitate, hydroxypropylmethyl cellulose phthalate, hydroxypropylmethyl cellulose succinate and carboxymethylcellulose sodium; acrylic acid polymers and copolymers, such as those formed from acrylic acid, methacrylic acid, methyl acrylate, ammonio methacrylate, ethyl acrylate, methyl methacrylate and/or ethyl methacrylate (e.g., those copolymers sold under the trade name "Eudragit"); vinyl polymers and copolymers such as polyvinyl pyrrolidone, polyvinyl acetate, polyvinylacetate phthalate, vinylacetate crotonic acid copolymer, and ethylene-vinyl acetate copolymers; and shellac (purified lac). In some embodiments at least one polymer functions as taste-masking agents.

[00240] Tablets, pills, and the like can be compressed, multiply compressed, multiply layered, and/or coated. The coating can be single or multiple. In one embodiment, the coating material comprises at least one of a saccharide, a polysaccharide, and glycoproteins extracted from at least one of a plant, a fungus, and a microbe. Non-limiting examples include corn starch, wheat starch, potato starch, tapioca starch, cellulose, hemicellulose, dextrans, maltodextrin, cyclodextrins, inulins, pectin, mannans, gum arabic, locust bean gum, mesquite gum, guar gum, gum karaya, gum ghatti, tragacanth gum, funori, carrageenans, agar, alginates, chitosans, or gellan gum. In some embodiments the coating material comprises a protein. In some embodiments the coating material comprises at least one of a fat and an oil. In some embodiments the at least one of a fat and an oil is high temperature melting. In some embodiments the at least one of a fat and an oil is hydrogenated or partially hydrogenated. In some embodiments the at least one of a fat and an oil is derived from a plant. In some embodiments the at least one of a fat and an oil comprises at least one of glycerides, free fatty acids, and fatty acid esters. In some embodiments the coating material comprises at least one edible wax. The edible wax can be derived from animals, insects, or plants. Non-limiting examples include beeswax, lanolin, bayberry wax, carnauba wax, and rice bran wax. Tablets and pills can additionally be prepared with enteric coatings.

[00241] Alternatively, powders or granules embodying the nutritive proteins and nutritive compositions disclosed herein can be incorporated into a food product. In some embodiments the food product is be a drink for oral administration. Non-limiting examples of a suitable drink include fruit juice, a fruit drink, an artificially flavored drink, an artificially sweetened drink, a carbonated beverage, a sports drink, a liquid dairy product, a shake, an alcoholic beverage, a caffeinated beverage, infant formula and so forth. Other suitable means for oral administration include aqueous and nonaqueous solutions, creams, pastes, emulsions, suspensions and slurries, , each of which may optionally also contain at least one of suitable solvents, preservatives, emulsifying agents, suspending agents, diluents, sweeteners, coloring agents, and flavoring agents.

[00242] In some embodiments the food product is a solid foodstuff. Suitable examples of a solid foodstuff include without limitation a food bar, a snack bar, a cookie, a brownie, a muffin, a cracker, a biscuit, a cream or paste, an ice cream bar, a frozen yogurt bar, and the like.

[00243] In some embodiments, the nutritive proteins and nutritive compositions disclosed herein are incorporated into a therapeutic food. In some embodiments, the therapeutic food is a ready-to-use food that optionally contains some or all essential macronutrients and micronutrients. In some embodiments, the nutritive proteins and nutritive compositions disclosed herein are incorporated into a supplementary food that is designed to be blended into an existing meal. In some embodiments, the supplemental food contains some or all essential macronutrients and micronutrients. In some embodiments, the nutritive proteins and nutritive compositions disclosed herein are blended with or added to an existing food to fortify the food's protein nutrition. Examples include food staples (grain, salt, sugar, cooking oil, margarine), beverages (coffee, tea, soda, beer, liquor, sports drinks), snacks, sweets and other foods.

[00244] The compositions disclosed herein can be utilized in methods to increase at least one of muscle mass, strength and physical function, thermogenesis, metabolic expenditure, satiety, mitochondrial biogenesis, weight or fat loss, and lean body composition for example.

I. Methods of Use

[00245] In some embodiments the nutritive proteins and nutritive compositions disclosed herein are administered to a patient or a user (sometimes collectively referred to as a "subject"). As used herein "administer" and "administration" encompasses embodiments in which one person directs another to consume a nutritive protein or nutritive composition in a certain manner and/or for a certain purpose, and also situations in which a user uses a nutritive protein or nutritive composition in a certain manner and/or for a certain purpose independently of or in variance to any instructions received from a second person. Non-limiting examples of embodiments in which one person directs another to consume a nutritive protein or nutritive composition in a certain manner and/or for a certain purpose include when a physician prescribes a course of conduct and/or treatment to a patient, when a trainer advises a user (such as an athlete) to follow a particular course of conduct and/or treatment, and when a manufacturer, distributor, or marketer recommends conditions of use to an end user, for example through advertisements or labeling on packaging or on other materials provided in association with the sale or marketing of a product.

[00246] In some embodiments the nutritive proteins or nutritive compositions are provided in a dosage form. In some embodiments the dosage form is designed for

administration of at least one nutritive protein disclosed herein, wherein the total amount of nutritive protein administered is selected from 0.1g to 1g, 1g to 5g, from 2g to 10g, from 5g to 15g, from 10g to 20g, from 15g to 25g, from 20g to 40g, from 25-50g, and from 30-60g. In some embodiments the dosage form is designed for administration of at least one nutritive protein disclosed herein, wherein the total amount of nutritive protein administered is selected from about 0.1g, 0.1g-1g, 1g, 2g, 3g, 4g, 5g, 6g, 7g, 8g, 9g, 10g, 15g, 20g, 25g, 30g, 35g, 40g, 45g, 50g, 55g, 60g, 65g, 70g, 75g, 80g, 85g, 90g, 95g, and 100g.

[00247] In some embodiments the dosage form is designed for administration of at least one nutritive protein disclosed herein, wherein the total amount of essential amino acids administered is selected from 0.1g to 1g, from 1g to 5g, from 2g to 10g, from 5g to 15g, from 10g to 20g, and from 1-30 g. In some embodiments the dosage form is designed for administration of at least one nutritive protein disclosed herein, wherein the total amount of nutritive protein administered is selected from about 0.1g, 0.1-1g, 1g, 2g, 3g, 4g, 5g, 6g, 7g, 8g, 9g, 10g, 15g, 20g, 25g, 30g, 35g, 40g, 45g, 50g, 55g, 60g, 65g, 70g, 75g, 80g, 85g, 90g, 95g, and 100g.

[00248] In some embodiments the nutritive protein or nutritive composition is consumed at a rate of from 0.1g to 1g a day, 1g to 5 g a day, from 2g to 10g a day, from 5g to 15g a day, from 10g to 20g a day, from 15g to 30g a day, from 20g to 40g a day, from 25g to 50g a day, from 40g to 80g a day, from 50g to 100g a day, or more.

[00249] In some embodiments, of the total protein intake by the subject, at least 5%, at least 10%, at least 15%, at least 20%, at least 25%, at least 30%, at least 35%, at least 40%, at least 45%, at least 50%, at least 55%, at least 60%, at least 65%, at least 70%, at least 75%, at least 80%, at least 85%, at least 90%, at least 95%, or about 100% of the total protein intake by the subject over a dietary period is made up of at least one nutritive protein according to this disclosure. In some embodiments, of the total protein intake by the subject, from 5% to 100% of the total protein intake by the subject, from 5% to 90% of the total protein intake by the subject, from 5% to 80% of the total protein intake by the subject, from 5% to 70% of the total protein intake by the subject, from 5% to 60% of the total protein intake by the subject, from 5% to 50% of the total protein intake by the subject, from 5% to 40% of the total protein intake by the subject, from 5% to 30% of the total protein intake by the subject, from 5% to 20% of the total protein intake by the subject, from 5% to 10% of the total protein intake by the subject, from 10% to 100% of the total protein intake by the subject, from 10%

to 100% of the total protein intake by the subject, from 20% to 100% of the total protein intake by the subject, from 30% to 100% of the total protein intake by the subject, from 40% to 100% of the total protein intake by the subject, from 50% to 100% of the total protein intake by the subject, from 60% to 100% of the total protein intake by the subject, from 70% to 100% of the total protein intake by the subject, from 80% to 100% of the total protein intake by the subject, or from 90% to 100% of the total protein intake by the subject, over a dietary period, is made up of at least one nutritive protein according to this disclosure. In some embodiments the at least one nutritive protein of this disclosure accounts for at least 5%, at least 10%, at least 15%, at least 20%, at least 25%, at least 30%, at least 35%, at least 40%, at least 45%, or at least 50% of the subject's calorie intake over a dietary period.

[00250] In some embodiments the at least one nutritive protein according to this disclosure comprises at least 2 nutritive proteins of this disclosure, at least 3 nutritive proteins of this disclosure, at least 4 nutritive proteins of this disclosure, at least 5 nutritive proteins of this disclosure, at least 6 nutritive proteins of this disclosure, at least 7 nutritive proteins of this disclosure, at least 8 nutritive proteins of this disclosure, at least 9 nutritive proteins of this disclosure, at least 10 nutritive proteins of this disclosure, or more.

[00251] In some embodiments the dietary period is 1 meal, 2 meals, 3 meals, at least 1 day, at least 2 days, at least 3 days, at least 4 days, at least 5 days, at least 6 days, at least 1 week, at least 2 weeks, at least 3 weeks, at least 4 weeks, at least 1 month, at least 2 months, at least 3 months, at least 4 months, at least 5 months, at least 6 months, or at least 1 year. In some embodiments the dietary period is from 1 day to 1 week, from 1 week to 4 weeks, from 1 month, to 3 months, from 3 months to 6 months, or from 6 months to 1 year.

[00252] Clinical studies provide evidence that protein prevents muscle loss due to aging or bed rest. In particular, studies have shown that protein supplementation increases muscle fractional synthetic rate (FSR) during prolonged bed rest, maintains leg mass and strength during prolonged bed rest, increases lean body mass, improves functional measures of gait and balance, and may serve as a viable intervention for individuals at risk of sarcopenia due to immobility or prolonged bed rest. (See, e.g., Paddon-Jones D, et al. J Clin Endocrinol Metab 2004, 89:4351-4358; Ferrando, A et al. Clinical Nutrition 2009 1-6; Katsanos C et al. Am J Physiol Endocrinol Metab. 2006, 291: 381-387).

[00253] Studies on increasing muscle protein anabolism in athletes have shown that protein provided following exercise promotes muscle hypertrophy to a greater extent than that achieved by exercise alone. It has also been shown that protein provided following exercise supports protein synthesis without any increase in protein breakdown, resulting in a net positive protein balance and muscle mass accretion. While muscle protein synthesis appears to respond in a dose-response fashion to essential amino acid supplementation, not all proteins are equal in building muscle. For example, the amino acid leucine is an important factor in stimulating muscle protein synthesis. (See, e.g., Borsheim E et al. Am J Physiol Endocrinol Metab 2002, 283: E648-E657; Borsheim E et al. Clin Nutr. 2008, 27: 189-95; Esmarck B et al J Physiol 2001, 535: 301-311; Moore D et al. Am J Clin Nutr 2009, 89: 161-8).

[00254] In another aspect this disclosure provides methods of maintaining or increasing at least one of muscle mass, muscle strength, and functional performance in a subject. In some embodiments the methods comprise providing to the subject a sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure. In some embodiments the subject is at least one of elderly, critically-medically ill, and suffering from protein-energy malnutrition. In some embodiments the sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure is consumed by the subject in coordination with performance of exercise. In some embodiments the nutritive protein of this disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject by an oral, enteral, or parenteral route.

[00255] In another aspect this disclosure provides methods of maintaining or achieving a desirable body mass index in a subject. In some embodiments the methods comprise providing to the subject a sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure. In some embodiments the subject is at least one of elderly, critically-medically ill, and suffering from protein-energy malnutrition. In some embodiments the sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure is consumed by the subject in coordination with performance of exercise. In some embodiments the nutritive protein of this

disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject by an oral, enteral, or parenteral route.

[00256] In another aspect this disclosure provides methods of providing protein to a subject with protein-energy malnutrition. In some embodiments the methods comprise providing to the subject a sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure. In some embodiments the nutritive protein of this disclosure, nutritive composition of this disclosure, or nutritive composition made by a method of this disclosure is consumed by the subject by an oral, enteral, or parenteral route.

[00257] The need for essential amino acid supplementation has been suggested in cancer patients and other patients suffering from cachexia. Dietary studies in mice have shown survival and functional benefits to cachectic cancer-bearing mice through dietary intervention with essential amino acids. Beyond cancer, essential amino acid supplementation has also shown benefits, such as improved muscle function and muscle gain, in patients suffering from other diseases who have difficulty exercising and therefore suffer from muscular deterioration, such as chronic obstructive pulmonary disease, chronic heart failure, HIV, and other disease states.

[00258] Studies have shown that specific amino acids have advantages in managing cachexia. A relatively high content of BCAAs and Leu in diets are thought to have a positive effect in cachexia by promoting total protein synthesis by signaling an increase in translation, enhancing insulin release, and inhibiting protein degradation. Thus, consuming increased dietary BCAAs in general and/or Leu in particular will contribute positively to reduce or reverse the effects of cachexia. Because nitrogen balance is important in countering the underlying cause of cachexia it is thought that consuming increased dietary glutamine and/or arginine will contribute positively to reduce or reverse the effects of cachexia. (See, e.g., Op den Kamp C, Langen R, Haegens A, Schols A. "Muscle atrophy in cachexia: can dietary protein tip the balance?" *Current Opinion in Clinical Nutrition and Metabolic Care* 2009, 12:611–616; Poon RT-P, Yu W-C, Fan S-T, et al. "Long-term oral branched chain amino acids in patients undergoing chemoembolization for hepatocellular carcinoma: a randomized trial." *Aliment Pharmacol Ther* 2004; 19:779–788; Tayek JA, Bistrian BR, Hehir DJ, Martin R, Moldawer LL, Blackburn GL. "Improved protein kinetics and albumin synthesis by branched chain amino acid-enriched total parenteral nutrition in cancer cachexia." *Cancer*.

1986;58:147–57; Xi P, Jiang Z, Zheng C, Lin Y, Wu G “Regulation of protein metabolism by glutamine: implications for nutrition and health.” Front Biosci. 2011 Jan 1;16:578-97).

[00259] Accordingly, also provided herein are methods of treating cachexia in a subject. In some embodiments a sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure for a subject with cachexia is an amount such that the amount of protein of this disclosure ingested by the person meets or exceeds the metabolic needs (which are often elevated). A protein intake of 1.5 g/kg of body weight per day or 15-20% of total caloric intake appears to be an appropriate target for persons with cachexia. In some embodiments all of the protein consumed by the subject is a nutritive protein according to this disclosure. In some embodiments nutritive protein according to this disclosure is combined with other sources of protein and/or free amino acids to provide the total protein intake of the subject. In some embodiments the subject is at least one of elderly, critically-medically ill, and suffering from protein-energy malnutrition. In some embodiments the subject suffers from a disease that makes exercise difficult and therefore causes muscular deterioration, such as chronic obstructive pulmonary disease, chronic heart failure, HIV, cancer, and other disease states. In some embodiments, the nutritive protein according to disclosure, the nutritive composition according to disclosure, or the nutritive composition made by a method according to disclosure is consumed by the subject in coordination with performance of exercise. In some embodiments, the nutritive protein according to this disclosure, the nutritive composition according to disclosure, or the nutritive composition made by a method according to disclosure is consumed by the subject by an oral, enteral, or parenteral route.

[00260] Sarcopenia is the degenerative loss of skeletal muscle mass (typically 0.5-1% loss per year after the age of 25), quality, and strength associated with aging. Sarcopenia is a component of the frailty syndrome. The European Working Group on Sarcopenia in Older People (EWGSOP) has developed a practical clinical definition and consensus diagnostic criteria for age-related sarcopenia. For the diagnosis of sarcopenia, the working group has proposed using the presence of both low muscle mass and low muscle function (strength or performance). Sarcopenia is characterized first by a muscle atrophy (a decrease in the size of the muscle), along with a reduction in muscle tissue “quality,” caused by such factors as replacement of muscle fibres with fat, an increase in fibrosis, changes in muscle metabolism, oxidative stress, and degeneration of the neuromuscular junction. Combined, these changes

lead to progressive loss of muscle function and eventually to frailty. Frailty is a common geriatric syndrome that embodies an elevated risk of catastrophic declines in health and function among older adults. Contributors to frailty can include sarcopenia, osteoporosis, and muscle weakness. Muscle weakness, also known as muscle fatigue, (or “lack of strength”)

5 refers to the inability to exert force with one’s skeletal muscles. Weakness often follows muscle atrophy and a decrease in activity, such as after a long bout of bedrest as a result of an illness. There is also a gradual onset of muscle weakness as a result of sarcopenia.

[00261] The nutritive proteins of this disclosure are useful for treating sarcopenia or frailty once it develops in a subject or for preventing the onset of sarcopenia or frailty in a
10 subject who is a member of an at risk groups. In some embodiments all of the protein consumed by the subject is a nutritive protein according to this disclosure. In some embodiments nutritive protein according to this disclosure is combined with other sources of protein and/or free amino acids to provide the total protein intake of the subject. In some
15 embodiments the subject is at least one of elderly, critically-medically ill, and suffering from protein-energy malnutrition. In some embodiments, the nutritive protein according to disclosure, the nutritive composition according to disclosure, or the nutritive composition made by a method according to disclosure is consumed by the subject in coordination with performance of exercise. In some embodiments, the nutritive protein according to this
20 disclosure, the nutritive composition according to disclosure, or the nutritive composition made by a method according to disclosure is consumed by the subject by an oral, enteral, or parenteral route.

[00262] Obesity is a multifactorial disorder associated with a host of comorbidities including hypertension, type 2 diabetes, dyslipidemia, coronary heart disease, stroke, cancer (eg, endometrial, breast, and colon), osteoarthritis, sleep apnea, and respiratory problems.

25 The incidence of obesity, defined as a body mass index $>30 \text{ kg/m}^2$, has increased dramatically in the United States, from 15% (1976–1980) to 33% (2003–2004), and it continues to grow. Although the mechanisms contributing to obesity are complex and involve the interplay of behavioral components with hormonal, genetic, and metabolic processes, obesity is largely viewed as a lifestyle-dependent condition with 2 primary causes: excessive
30 energy intake and insufficient physical activity. With respect to energy intake, there is evidence that modestly increasing the proportion of protein in the diet, while controlling total energy intake, may improve body composition, facilitate fat loss, and improve body weight

maintenance after weight loss. Positive outcomes associated with increased dietary protein are thought to be due primarily to lower energy intake associated with increased satiety, reduced energy efficiency and/or increased thermogenesis, positive effects on body composition (specifically lean muscle mass), and enhanced glycemic control.

- 5 [00263] Dietary proteins are more effective in increasing post-prandial energy expenditure than isocaloric intakes of carbohydrates or fat (see, e.g., Dauncey M, Bingham S. “Dependence of 24 h energy expenditure in man on composition of the nutrient intake.” *Br J Nutr* 1983, 50: 1-13; Karst H et al. “Diet-induced thermogenesis in man: thermic effects of single proteins, carbohydrates and fats depending on their energy amount.” *Ann Nutr*
- 10 *Metab.* 1984, 28: 245-52; Tappy L et al “Thermic effect of infused amino acids in healthy humans and in subjects with insulin resistance.” *Am J Clin Nutr* 1993, 57 (6): 912-6). This property along with other properties (satiety induction; preservation of lean body mass) make protein an attractive component of diets directed at weight management. The increase in energy expenditure caused by such diets may in part be due to the fact that the energy cost of
- 15 digesting and metabolizing protein is higher than for other calorie sources. Protein turnover, including protein synthesis, is an energy consuming process. In addition, high protein diets may also up-regulate uncoupling protein in liver and brown adipose, which is positively correlated with increases in energy expenditure. It has been theorized that different proteins may have unique effects on energy expenditure.
- 20 [00264] Studies suggest that ingestion of protein, particularly proteins with high EAA and/or BCAA content, leads to distinct effects on thermogenesis and energy expenditure (see, e.g., Mikkelsen P. et al. “Effect of fat-reduced diets on 24 h energy expenditure: comparisons between animal protein, vegetable protein and carbohydrate.” *Am J Clin Nutr* 2000, 72:1135-41; Acheson K. et al. “Protein choices targeting thermogenesis and metabolism.” *Am J Clin*
- 25 *Nutr* 2011, 93:525-34; Alfenas R. et al. “Effects of protein quality on appetite and energy metabolism in normal weight subjects” *Arg Bras Endocrinol Metabol* 2010, 54 (1): 45-51; Lorenzen J. et al. “The effect of milk proteins on appetite regulation and diet-induced thermogenesis.” *J Clin Nutr* 2012 66 (5): 622-7). Additionally, L-tyrosine has been identified as an amino acid that plays a role in thermogenesis (see, e.g., Belza A. et al. “The beta-
- 30 adrenergic antagonist propranolol partly abolishes thermogenic response to bioactive food ingredients.” *Metabolism* 2009, 58 (8):1137-44). Further studies suggest that Leucine and Arginine supplementation appear to alter energy metabolism by directing substrate to lean

body mass rather than adipose tissue (Dulloo A. "The search for compounds that stimulate thermogenesis in obesity management: from pharmaceuticals to functional food ingredients." *Obes Rev* 2011 12: 866-83).

[00265] Collectively the literature suggests that different protein types leads to distinct effects on thermogenesis. Because proteins or peptides rich in EAAs, BCAA, and/or at least one of Tyr, Arg, and Leu are believed to have a stimulatory effect on thermogenesis, and because stimulation of thermogenesis is believed to lead to positive effects on weight management, this disclosure also provides products and methods useful to stimulation thermogenesis and/or to bring about positive effects on weight management in general.

[00266] More particularly, this disclosure provides methods of increasing thermogenesis in a subject. In some embodiments the methods comprise providing to the subject a sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure. In some embodiments the subject is obese. In some embodiments, the nutritive protein according to disclosure, the nutritive composition according to disclosure, or the nutritive composition made by a method according to disclosure is consumed by the subject in coordination with performance of exercise. In some embodiments, the nutritive protein according to disclosure, the nutritive composition according to disclosure, or the nutritive composition made by a method according to disclosure is consumed by the subject by an oral, enteral, or parenteral route.

[00267] At the basic level, the reason for the development of an overweight condition is due to an imbalance between energy intake and energy expenditure. Attempts to reduce food at any particular occasion (satiation) and across eating occasions (satiety) have been a major focus of recent research. Reduced caloric intake as a consequence of feeling satisfied during a meal and feeling full after a meal results from a complex interaction of internal and external signals. Various nutritional studies have demonstrated that variation in food properties such as energy density, content, texture and taste influence both satiation and satiety.

[00268] There are three macronutrients that deliver energy: fat, carbohydrates and proteins. A gram of protein or carbohydrate provides 4 calories while a gram of fat 9 calories. Protein generally increases satiety to a greater extent than carbohydrates or fat and

therefore may facilitate a reduction in calorie intake. However, there is considerable evidence that indicates the type of protein matters in inducing satiety (see, e.g., W.L. Hall, et al.

“Casein and whey exert different effects on plasma amino acid profiles, gastrointestinal hormone secretion and appetite.” Br J Nutr. 2003 Feb, 89(2):239-48; R. Abou-Samra, et al.

- 5 “Effect of different protein sources on satiation and short-term satiety when consumed as a starter.” Nutr J. 2011 Dec 23, 10:139; T. Akhavan, et al. “Effect of premeal consumption of whey protein and its hydrolysate on food intake and postmeal glycemia and insulin responses in young adults.” Am J Clin Nutr. 2010 Apr, 91(4):966-75, Epub 2010 Feb 17; MA Veldhorst “Dose-dependent satiating effect of whey relative to casein or soy” Physiol Behav. 10 2009 Mar 23, 96(4-5):675-82). Evidence indicates that protein rich in Leucine is particularly effective at inducing satiety (see, e.g., Fromentin G et al “Peripheral and central mechanisms involved in the control of food intake by dietary amino acids and proteins.” Nutr Res Rev 2012 25: 29-39).

- [00269] In some embodiments a nutritive protein of this disclosure is consumed by a 15 subject concurrently with at least one pharmaceutical or biologic drug product. In some embodiments the beneficial effects of the nutritive protein and the at least one pharmaceutical or biologic drug product have an additive effect while in some embodiments the beneficial effects of the nutritive protein and the at least one pharmaceutical or biologic drug product have a synergistic effect. Examples of pharmaceutical or biologic drug products that can be 20 administered with the nutritive proteins of this disclosure are well known in the art. For example, when a nutritive protein of this disclosure is used to maintain or increase at least one of muscle mass, muscle strength, and functional performance in a subject, the nutritive protein may be consumed by a subject concurrently with a therapeutic dosage regime of at least one pharmaceutical or biologic drug product indicated to maintain or increase at least 25 one of muscle mass, muscle strength, and functional performance in a subject, such as an anabolic steroid. When a nutritive protein of this disclosure is used to maintain or achieve a desirable body mass index in a subject, the nutritive protein may be consumed by a subject concurrently with a therapeutic dosage regime of at least one pharmaceutical or biologic drug product indicated to maintain or achieve a desirable body mass index in a subject, such as 30 orlistat, lorcaserin, sibutramine, rimonabant, metformin, exenatide, or pramlintide. When a nutritive protein of this disclosure is used to induce at least one of a satiation response and a satiety response in a subject, the nutritive protein may be consumed by a subject concurrently with a therapeutic dosage regime of at least one pharmaceutical or biologic drug product

indicated to induce at least one of a satiation response and a satiety response in a subject, such as rimonabant, exenatide, or pramlintide. When a nutritive protein of this disclosure is used to treat at least one of cachexia, sarcopenia and frailty in a subject, the nutritive protein may be consumed by a subject concurrently with a therapeutic dosage regime of at least one pharmaceutical or biologic drug product indicated to treat at least one of cachexia, sarcopenia and frailty, such as omega-3 fatty acids or anabolic steroids. Because of the role of dietary protein in inducing satiation and satiety, the nutritive proteins and nutritive compositions disclosed herein can be used to induce at least one of a satiation response and a satiety response in a subject. In some embodiments the methods comprise providing to the subject a sufficient amount of a nutritive protein of this disclosure, a nutritive composition of this disclosure, or a nutritive composition made by a method of this disclosure. In some embodiments the subject is obese. In some embodiments, the nutritive protein according to disclosure, the nutritive composition according to disclosure, or the nutritive composition made by a method according to disclosure is consumed by the subject in coordination with performance of exercise. In some embodiments, the nutritive protein according to disclosure, the nutritive composition according to disclosure, or the nutritive composition made by a method according to disclosure is consumed by the subject by an oral, enteral, or parenteral route.

[00270] In some embodiments incorporating a least one nutritive protein or nutritive composition of this disclosure into the diet of a subject has at least one effect selected from inducing postprandial satiety (including by suppressing hunger), inducing thermogenesis, reducing glycemic response, positively affecting energy expenditure positively affecting lean body mass, reducing the weight gain caused by overeating, and decreasing energy intake. In some embodiments incorporating a least one nutritive protein or nutritive composition of this disclosure into the diet of a subject has at least one effect selected from increasing loss of body fat, reducing lean tissue loss, improving lipid profile, and improving glucose tolerance and insulin sensitivity in the subject.

EXAMPLES

[00271] The following examples serve to more fully describe the manner of using the invention. These examples are presented for illustrative purposes and should not serve to limit the true scope of the invention.

Example 1: Identification of Protein Fragments Containing Ratios of Essential Amino Acids, Branch Chain Amino Acids, and Leucine Greater Than or Equal to Whey and Containing All Essential Amino Acids

[00272] The UniProtKB/Swiss-Prot (a collaboration between the European
5 Bioinformatics Institute and the Swiss Institute of Bioinformatics) is a manually curated and reviewed protein database, and was used as the starting point for protein identification. Proteins from the edible species *Solanum lycopersicum*, *Zea mays*, *Oryza sativa subsp. Japonica*, *Glycine max*, *Ovis aries*, *Pisum sativum*, *Spinacia oleracea*, *Oryza sativa subsp. Indica*, *Triticum aestivum*, *Sus scrofa*, *Prunus persica*, *Capsicum annuum*, *Malus domestica*,
10 *Thunnus albacares*, *Capra hircus*, *Cicer arietinum*, *Salmo salar*, *Meleagris gallopavo*, *Solanum tuberosum*, and *Agaricus bisporus* having greater than or equal to fifty (50) amino acids were considered as viable targets. Roughly 8,415 such proteins were selected for evaluation and the proteins were then fragmented into roughly fifty (50), roughly one hundred (100), or roughly one hundred and fifty (150) amino acids portions of the original
15 protein, designed to contain digestive enzyme cleavage sites on both ends. In addition, the proteins were screened against a database of known allergens to determine whether any had greater than 50% global homology to a known allergen. A total of 1,000 fragments were identified that contain greater than or equal to 51% EAA, greater than or equal to 25% BCAA, and greater than or equal to 13% Leu, and contain all essential amino acids, and have
20 less than 50% global homology to known allergens (**SEQ ID NOS: 1 to 1000**). (Note that for Examples 1-5, 51% EAA/25% BCAA/13% Leu represent values that are each 1-2% greater than those of whey (defined herein to be 49% EAA/24% BCAA/11% Leu). These values were used to identify nutritive protein fragments of interest for the purposes of this Example only, in order to ensure that the identified proteins have a higher content of EAA,
25 BCAA, and Leu than whey). For the set of proteins the solvation score at pH 7 (“SolvScore”), aggregation score at pH 7 (“AggScore”), allergenicity (i.e., percent local homology to known allergens, as described herein), toxicity (i.e., percent homology to known toxins, as described herein), anti-nutricity (i.e., percent homology to known protease inhibitors, as described herein), and human homology (i.e., percent homology to known
30 human proteins, as described herein) were calculated, and the total number of Cys residues (“C”) were determined. The characteristics of 75 representative fragments thus identified are presented in **Tables 3A and 3B**.

Table 3A

Seq ID No	UniProt	FragEnds	EAA	BCAA	L	C
1	Q29550	101:301	0.53	0.27	0.13	3
2	Q29078	1:176	0.52	0.27	0.14	5
3	Q29550	201:426	0.56	0.25	0.13	2
4	Q29078	1:76	0.60	0.34	0.20	3
5	Q9N2D1	1:76	0.57	0.27	0.18	3
6	Q29079	1:76	0.56	0.29	0.18	1
7	Q29550	101:176	0.53	0.31	0.15	1
8	Q70BM6	201:326	0.58	0.26	0.15	0
9	Q70BM6	201:426	0.59	0.30	0.17	3
10	Q70BM6	101:326	0.56	0.28	0.14	2
11	O81122	101:301	0.53	0.29	0.16	1
12	Q9M7M1	101:201	0.55	0.28	0.19	1
13	O81122	101:201	0.55	0.28	0.19	1
14	Q9M7M1	101:301	0.53	0.28	0.16	1
15	Q8WNV7	151:226	0.51	0.29	0.14	1
16	P50118	176:276	0.52	0.26	0.15	3
17	P12263	451:526	0.55	0.26	0.13	0
18	Q29197	26:126	0.52	0.29	0.18	0
19	O02799	151:301	0.54	0.26	0.19	2
20	P80229	201:276	0.55	0.27	0.18	1
21	Q29624	226:326	0.59	0.25	0.13	2
22	A5GFQ5	26:151	0.52	0.25	0.15	3
23	Q5GN48	1601:1676	0.57	0.26	0.15	0
24	Q5GN48	1026:1101	0.55	0.26	0.16	2
25	A6M931	176:276	0.54	0.26	0.13	1
26	P49039	1:101	0.51	0.27	0.14	0
27	P79430	226:326	0.62	0.25	0.14	3
28	P61291	1:151	0.53	0.27	0.14	2
29	B5X2B8	126:326	0.52	0.25	0.13	3
30	Q1A730	226:301	0.52	0.28	0.20	2
31	D2SW95	276:476	0.52	0.31	0.13	3
32	O02799	251:326	0.57	0.29	0.22	1

33	B5RI54	126:251	0.54	0.26	0.13	2
34	P21999	76:176	0.51	0.28	0.13	5
35	Q07511	151:276	0.52	0.27	0.13	2
36	A5A779	351:476	0.53	0.31	0.24	4
37	Q6ITT4	476:601	0.54	0.30	0.16	1
38	O46374	876:1076	0.55	0.26	0.13	2
39	Q4U116	901:1076	0.55	0.25	0.14	2
40	P04045	376:476	0.53	0.27	0.13	1
41	Q29121	151:226	0.52	0.30	0.13	2
42	Q2VEC3	1601:1726	0.54	0.27	0.16	1
43	B5X737	26:176	0.57	0.26	0.13	2
44	Q9XSW2	201:401	0.53	0.25	0.15	8
45	P19756	276:351	0.60	0.32	0.14	0
46	P67931	101:201	0.51	0.26	0.19	1
47	Q9AWA5	401:476	0.58	0.27	0.13	0
48	O46374	976:1051	0.56	0.26	0.19	2
49	Q9XSW2	301:401	0.59	0.29	0.16	3
50	Q8MIQ9	551:651	0.56	0.28	0.15	1
51	O02668	526:626	0.53	0.26	0.14	0
52	Q6UAQ8	51:226	0.51	0.27	0.13	3
53	P21343	326:401	0.54	0.33	0.17	1
54	P79430	126:326	0.58	0.26	0.13	5
55	P10691	26:176	0.52	0.25	0.14	0
56	O02697	626:701	0.52	0.27	0.19	1
57	Q5VI41	676:751	0.53	0.30	0.13	1
58	O97716	201:376	0.52	0.25	0.13	4
59	Q66UW5	51:151	0.52	0.25	0.16	2
60	D2SW95	1:201	0.54	0.27	0.14	5
61	O46491	201:351	0.53	0.25	0.15	1
62	Q52QT8	1:151	0.53	0.26	0.16	5
63	Q9P4T7	1:76	0.53	0.25	0.17	0
64	Q2VEE8	201:276	0.60	0.25	0.14	0
65	P37831	251:376	0.52	0.26	0.16	0
66	B9EPI1	1:126	0.56	0.30	0.16	4
67	B5X2B8	126:201	0.61	0.30	0.15	0

68	O02799	526:651	0.57	0.26	0.16	1
69	Q99028	76:151	0.53	0.30	0.16	3
70	Q07511	51:276	0.51	0.26	0.13	4
71	P08454	1:76	0.57	0.28	0.13	1
72	Q5GN48	2251:2501	0.51	0.26	0.14	0
73	O64390	276:426	0.52	0.25	0.15	1
74	P09954	1:101	0.53	0.31	0.14	0
75	P29196	801:876	0.57	0.28	0.18	0

Table 3B

Seq ID No	SolvScore	AggScore	Allergenicity	Toxicity	Antinutricity	Human Homology
1	-16.14	0.70	0.58	0.40	0.23	0.83
2	-15.72	0.57	0.54	0.00	0.25	0.50
3	-18.83	0.61	0.45	0.30	0.00	0.76
4	-18.32	0.80	0.43	0.28	0.29	0.46
5	-10.78	0.78	0.42	0.42	0.29	0.78
6	-18.03	0.62	0.41	0.28	0.28	0.48
7	-14.86	0.78	0.40	0.43	0.26	0.79
8	-17.96	0.60	0.36	0.00	0.25	0.81
9	-13.70	0.90	0.36	0.00	0.21	0.82
10	-15.03	0.80	0.36	0.00	0.22	0.81
11	-18.93	0.53	0.36	0.00	0.21	0.00
12	-22.36	0.47	0.35	0.21	0.00	0.00
13	-22.36	0.47	0.35	0.21	0.00	0.00
14	-18.90	0.52	0.35	0.00	0.24	0.00
15	-12.53	0.69	0.35	0.00	0.00	0.82
16	-20.41	0.43	0.35	0.20	0.25	0.86
17	-18.65	0.43	0.25	0.43	0.24	0.83
18	-28.11	0.37	0.31	0.00	0.00	0.98
19	-26.99	0.37	0.33	0.24	0.22	0.81
20	-26.56	0.35	0.34	0.29	1.00	0.79
21	-26.33	0.75	0.30	0.29	0.22	0.84
22	-25.32	0.42	0.29	0.23	0.29	0.95
23	-25.11	0.34	0.29	0.00	0.00	0.93

24	-24.91	0.25	0.28	0.00	0.26	0.88
25	-24.78	0.47	0.31	0.00	0.20	1.00
26	-24.60	0.44	0.29	0.25	0.31	0.25
27	-24.55	0.79	0.28	0.24	0.27	0.77
28	-24.41	0.38	0.33	0.00	0.25	1.00
29	-24.09	0.41	0.31	0.00	0.25	0.50
30	-23.74	0.38	0.27	0.26	0.26	0.99
31	-23.68	0.62	0.31	0.00	0.23	1.00
32	-23.68	0.38	0.27	0.00	0.24	0.80
33	-23.57	0.39	0.32	0.00	0.00	0.89
34	-23.51	0.64	0.33	0.17	0.27	0.99
35	-23.41	0.45	0.34	0.21	0.00	0.29
36	-23.38	0.50	0.32	0.23	0.26	0.98
37	-23.11	0.63	0.30	0.22	0.24	1.00
38	-23.11	0.41	0.33	0.22	0.00	0.99
39	-23.02	0.72	0.29	0.00	0.23	0.99
40	-22.98	0.36	0.30	0.00	0.28	0.57
41	-22.88	0.59	0.30	0.27	0.29	1.00
42	-22.87	0.49	0.32	0.00	0.23	0.00
43	-22.79	0.42	0.31	0.21	0.23	0.59
44	-22.74	0.56	0.31	0.00	0.21	0.88
45	-22.73	0.80	0.26	0.00	0.30	0.91
46	-22.72	0.50	0.29	0.00	0.30	0.73
47	-22.62	0.38	0.23	0.23	0.00	0.24
48	-22.55	0.42	0.24	0.27	0.24	1.00
49	-22.53	0.71	0.31	0.00	0.26	0.96
50	-22.43	0.59	0.30	0.00	0.00	0.90
51	-22.38	0.48	0.30	0.00	1.00	0.76
52	-22.32	0.47	0.33	0.00	0.00	0.96
53	-22.21	0.49	0.26	0.00	0.26	0.30
54	-22.18	0.64	0.31	0.20	0.21	0.78
55	-22.18	0.45	0.32	0.20	0.24	0.00
56	-22.16	0.52	0.24	0.00	0.23	1.00
57	-22.06	0.82	0.27	0.24	0.27	0.79
58	-22.05	0.59	0.30	0.00	0.22	1.00

59	-22.01	0.36	0.29	0.00	0.00	0.96
60	-21.91	0.62	0.33	0.00	0.21	1.00
61	-21.88	0.46	0.33	0.21	0.18	0.73
62	-21.83	0.49	0.30	0.24	0.22	0.99
63	-21.80	0.39	0.29	0.00	0.30	0.51
64	-21.75	0.44	0.28	0.00	0.24	0.22
65	-21.74	0.58	0.31	0.00	0.26	0.00
66	-21.65	0.52	0.33	0.25	0.26	0.82
67	-21.59	0.58	0.24	0.00	0.27	0.71
68	-21.58	0.40	0.30	0.26	0.25	0.85
69	-21.57	0.64	0.25	0.22	0.28	0.96
70	-21.54	0.46	0.31	0.22	0.00	0.28
71	-21.50	0.73	0.25	0.28	1.00	0.28
72	-21.47	0.34	0.32	0.22	0.00	0.86
73	-21.43	0.46	0.29	0.22	0.25	0.38
74	-21.41	0.62	0.31	0.00	0.27	0.85
75	-21.41	0.58	0.28	0.00	0.00	0.29

Example 2: Identification of Protein Fragments Containing Ratios of Essential Amino Acids, Branch Chain Amino Acids, and Leucine Greater Than or Equal to Whey

[00273] Fragments from the set of 8,415 proteins described in Example 1 were
5 evaluated for amino acid content, percentage of essential amino acids (“EAA”), the
percentage of branched chain amino acids (“BCAA”), the percentage of leucine (“L”), and
whether the protein contained all of the essential amino acids were calculated for each
protein. In addition, the protein fragments were screened against a database of known
allergens to determine whether any had greater than 50% global homology to a known
10 allergen. A total of 414 protein fragments were identified that contain greater than or equal
to 51% EAA, greater than or equal to 25% BCAA, and greater than or equal to 13% Leu, and
have less than 50% global homology to known allergens (**SEQ ID NOS: 1001 to 1414**). For
the set of proteins the solvation score at pH 7 (“SolvScore”), aggregation score at pH 7
(“AggScore”), allergenicity (i.e., percent local homology to known allergens, as described
15 herein), toxicity (i.e., percent homology to known toxins, as described herein), anti-nutricity
(i.e., percent homology to known protease inhibitors, as described herein), and human
homology (i.e., percent homology to known human proteins, as described herein) were

calculated, and the total number of Cys residues (“C”) were determined. The characteristics of 75 representative proteins thus identified are presented in **Tables 4A and 4B**.

Table 4A

Seq ID No	UniProt	FragEnds	EAA	BCAA	L	C
1001	P21641	1:126	0.52	0.30	0.19	1
1002	Q41782	151:276	0.52	0.25	0.14	4
1003	O24174	176:251	0.53	0.29	0.15	3
1004	Q41784	201:276	0.55	0.26	0.17	3
1005	P09315	276:351	0.51	0.35	0.14	1
1006	Q43695	201:276	0.53	0.26	0.17	3
1007	P18025	201:276	0.54	0.26	0.17	3
1008	P18026	201:276	0.54	0.26	0.17	3
1009	Q43697	201:276	0.54	0.26	0.17	3
1010	Q41783	201:276	0.54	0.26	0.17	3
1011	Q41785	201:276	0.54	0.26	0.17	3
1012	O24562	126:276	0.53	0.28	0.14	1
1013	Q6ZHS4	126:301	0.52	0.27	0.13	1
1014	Q6ERW7	226:301	0.55	0.29	0.13	1
1015	Q01595	51:126	0.52	0.36	0.22	7
1016	Q6ERW9	226:301	0.54	0.29	0.13	1
1017	Q0J6T3	151:276	0.55	0.28	0.13	1
1018	P93203	201:276	0.55	0.25	0.18	0
1019	Q7XWU3	151:276	0.52	0.27	0.14	1
1020	Q41874	126:251	0.51	0.29	0.16	2
1021	Q8H859	151:276	0.54	0.25	0.14	1
1022	P0CD58	301:476	0.53	0.32	0.18	3
1023	P0CD59	301:476	0.53	0.32	0.18	3
1024	O04161	251:376	0.58	0.26	0.13	5
1025	Q2R114	151:276	0.54	0.26	0.13	1
1026	Q5Z987	1051:1276	0.54	0.30	0.14	3
1027	Q41808	176:276	0.51	0.28	0.17	2
1028	Q41807	176:276	0.51	0.29	0.17	2
1029	P54773	101:276	0.55	0.29	0.15	0

1030	Q5Z987	1151:1251	0.60	0.34	0.14	2
1031	Q5Z987	1151:1351	0.54	0.33	0.16	4
1032	P31542	326:401	0.53	0.30	0.14	0
1033	P31541	126:201	0.51	0.32	0.15	0
1034	P04706	1:76	0.51	0.31	0.17	2
1035	O64411	1:76	0.53	0.32	0.18	0
1036	Q0JI49	351:426	0.60	0.26	0.17	0
1037	Q9XGC9	476:551	0.57	0.26	0.13	0
1038	P93648	326:401	0.51	0.25	0.17	1
1039	Q6H7U5	376:451	0.56	0.26	0.14	0
1040	Q43143	76:176	0.52	0.26	0.14	2
1041	Q9LGV5	51:126	0.52	0.27	0.14	0
1042	P0C8M8	126:201	0.51	0.26	0.16	4
1043	Q05761	51:126	0.56	0.32	0.16	0
1044	Q84NP7	326:426	0.54	0.26	0.16	1
1045	Q75HC2	276:351	0.51	0.27	0.14	2
1046	Q6QNU4	126:201	0.52	0.27	0.14	2
1047	Q5JMF2	51:126	0.55	0.26	0.14	4
1048	Q7XU38	276:351	0.54	0.25	0.16	1
1049	Q8GUQ5	1076:1151	0.53	0.27	0.16	2
1050	P51059	76:176	0.52	0.27	0.14	0
1051	P0C8M8	26:176	0.54	0.27	0.14	6
1052	P49037	26:101	0.51	0.29	0.15	0
1053	O49187	101:176	0.56	0.30	0.18	0
1054	Q0J4I1	26:176	0.52	0.25	0.14	2
1055	Q6ZAG3	51:176	0.53	0.25	0.13	1
1056	P29620	51:126	0.54	0.27	0.14	0
1057	P33544	201:276	0.54	0.26	0.15	1
1058	O24573	1:101	0.55	0.28	0.14	2
1059	Q3HRN8	126:201	0.55	0.26	0.15	0
1060	Q3HRP5	1:101	0.53	0.27	0.15	3
1061	P93647	801:876	0.53	0.32	0.16	0
1062	Q9ZS62	951:1026	0.53	0.35	0.16	0
1063	Q6Z4U2	276:351	0.53	0.29	0.13	1
1064	P29185	201:301	0.57	0.31	0.13	1

1065	Q75LU8	1:76	0.51	0.31	0.19	4
1066	Q43298	201:301	0.55	0.31	0.13	1
1067	P49971	26:101	0.52	0.27	0.13	2
1068	P46641	1:76	0.64	0.26	0.16	1
1069	Q2QMX9	701:776	0.52	0.25	0.14	0
1070	Q43270	226:301	0.53	0.25	0.13	0
1071	P93841	76:176	0.52	0.26	0.15	1
1072	P10581	151:226	0.52	0.29	0.14	1
1073	P93647	151:251	0.51	0.26	0.14	0
1074	Q2QQS5	126:201	0.52	0.30	0.13	0
1075	Q0JNK5	301:426	0.52	0.34	0.15	1

Table 4B

Seq ID No	SolvScore	AggScore	Allergenicity	Toxicity	Antinutricity	Human Homology
1001	-7.76	1.07	0.63	0.00	0.00	0.28
1002	-16.11	0.62	0.49	0.24	0.26	0.87
1003	-11.65	0.84	0.48	0.00	0.29	0.54
1004	-13.93	0.66	0.46	0.00	0.27	0.87
1005	-15.37	0.78	0.45	0.32	0.00	0.47
1006	-14.07	0.63	0.45	0.00	0.27	0.86
1007	-14.01	0.63	0.45	0.00	0.27	0.87
1008	-14.01	0.63	0.45	0.00	0.27	0.87
1009	-14.01	0.63	0.45	0.00	0.27	0.87
1010	-14.01	0.63	0.45	0.00	0.27	0.87
1011	-14.01	0.63	0.45	0.00	0.27	0.87
1012	-14.02	0.70	0.44	0.24	0.27	0.29
1013	-13.33	0.73	0.42	0.00	0.26	0.27
1014	-10.77	0.79	0.42	0.00	0.30	0.34
1015	-14.67	0.92	0.40	0.31	0.29	0.28
1016	-13.59	0.79	0.39	0.00	0.29	0.35
1017	-13.51	0.76	0.39	0.00	0.00	0.28
1018	-35.15	0.19	0.38	0.00	0.00	0.35
1019	-16.25	0.65	0.38	0.22	0.00	0.27
1020	-13.96	0.54	0.38	0.00	0.00	0.83

1021	-15.75	0.75	0.37	0.22	0.22	0.27
1022	-9.84	1.10	0.36	0.00	0.25	0.26
1023	-9.84	1.10	0.36	0.00	0.25	0.26
1024	-9.79	0.97	0.36	0.27	0.24	0.29
1025	-14.86	0.77	0.36	0.21	0.00	0.27
1026	-20.01	0.60	0.36	0.00	0.00	0.20
1027	-11.76	0.58	0.36	0.00	0.00	0.85
1028	-11.75	0.58	0.36	0.00	0.00	0.85
1029	-14.00	0.90	0.36	0.00	0.25	0.26
1030	-19.70	0.84	0.35	0.00	0.21	0.00
1031	-19.59	0.71	0.35	0.00	0.17	0.24
1032	-24.74	0.63	0.28	0.67	0.29	0.00
1033	-20.05	0.57	0.24	0.40	0.28	0.30
1034	-4.01	0.67	0.31	0.40	0.38	0.43
1035	-10.91	1.01	0.29	0.39	0.34	0.42
1036	-30.64	0.41	0.27	0.00	0.30	0.00
1037	-27.88	0.25	0.23	0.00	0.00	0.31
1038	-27.52	0.30	0.27	0.00	0.27	0.64
1039	-27.42	0.47	0.29	0.00	0.00	0.00
1040	-27.42	0.29	0.32	0.00	0.27	0.00
1041	-26.41	0.31	0.26	0.00	0.29	0.53
1042	-26.11	0.38	0.28	0.22	0.28	0.66
1043	-25.86	0.56	0.25	0.00	0.26	0.79
1044	-25.75	0.31	0.32	0.00	0.28	0.58
1045	-25.74	0.51	0.27	0.29	0.30	0.31
1046	-25.62	0.48	0.26	0.30	0.21	0.66
1047	-25.19	0.41	0.27	0.32	0.29	0.26
1048	-25.11	0.72	0.28	0.00	0.28	0.36
1049	-24.99	0.51	0.21	0.27	0.27	0.34
1050	-24.92	0.42	0.28	0.00	0.00	0.00
1051	-24.77	0.34	0.30	0.26	0.24	0.50
1052	-24.70	0.55	0.26	0.00	0.22	0.32
1053	-24.58	0.52	0.25	0.00	0.00	0.00
1054	-24.51	0.39	0.33	0.00	0.00	0.52
1055	-24.44	0.27	0.31	0.26	0.00	0.46

1056	-24.32	0.51	0.27	0.00	0.00	0.56
1057	-24.32	0.57	0.25	0.00	0.31	0.00
1058	-24.14	0.55	0.31	0.00	0.28	0.48
1059	-24.14	0.48	0.29	0.00	0.30	0.41
1060	-23.96	0.56	0.34	0.00	0.26	0.30
1061	-23.86	0.55	0.26	0.00	0.26	0.58
1062	-23.81	0.67	0.23	0.00	0.24	0.00
1063	-23.35	0.63	0.23	0.26	0.26	0.28
1064	-23.30	0.56	0.28	0.00	0.00	0.56
1065	-23.28	0.63	0.33	0.26	0.30	0.27
1066	-23.25	0.56	0.29	0.00	0.27	0.55
1067	-23.24	0.32	0.28	0.29	0.28	0.50
1068	-23.20	0.71	0.29	0.33	0.25	0.27
1069	-22.91	0.44	0.27	0.00	0.30	0.53
1070	-22.86	0.47	0.28	0.31	0.25	0.34
1071	-22.79	0.51	0.29	0.25	0.25	0.25
1072	-22.76	0.62	0.25	0.00	0.00	0.00
1073	-22.76	0.47	0.30	0.00	0.00	0.31
1074	-22.72	0.56	0.27	0.00	0.21	0.31
1075	-22.70	0.75	0.30	0.00	0.00	0.51

Example 3: Identification of Protein Fragments Containing Ratios of Essential Amino Acids and Branch Chain Amino Acids Greater Than or Equal to Whey and Containing All Essential Amino Acids

[00274] Fragments from the set of 8,415 proteins described in Example 1 were
5 evaluated for amino acid content, percentage of essential amino acids (“EAA”), the
percentage of branched chain amino acids (“BCAA”), the percentage of leucine (“L”), and
whether the protein contained all of the essential amino acids were calculated for each
protein. In addition, the protein fragments were screened against a database of known
allergens to determine whether any had greater than 50% global homology to a known
10 allergen. A total of 485 proteins were identified that contain greater than or equal to 51%
EAA and greater than or equal to 25% BCAA, and that contain all essential amino acids, and
have less than 50% global homology to known allergens (**SEQ ID NOS: 1415 to 1899**). For
the set of protein fragments the solvation score at pH 7 (“SolvScore”), aggregation score at
pH 7 (“AggScore”), allergenicity (i.e., percent local homology to known allergens, as

described herein), toxicity (i.e., percent homology to known toxins, as described herein), anti-nutricity (i.e., percent homology to known protease inhibitors, as described herein), and human homology (i.e., percent homology to known human proteins, as described herein) were calculated, and the total number of Cys residues ("C") were determined. The

5 characteristics of 75 representative proteins thus identified are presented in **Table 5A and 5B.**

Table 5A

Seq ID No	UniProt	FragEnds	EAA	BCAA	L	C
1415	Q96576	151:326	0.52	0.27	0.10	2
1416	P15722	176:276	0.53	0.28	0.04	1
1417	Q8GUQ5	876:1001	0.51	0.25	0.12	1
1418	P17801	476:751	0.52	0.26	0.12	3
1419	Q6ERW7	201:351	0.53	0.26	0.10	1
1420	Q7XWU3	51:276	0.51	0.25	0.09	6
1421	Q6ER94	76:226	0.52	0.26	0.10	1
1422	Q43272	176:376	0.52	0.26	0.10	6
1423	Q43272	76:326	0.52	0.28	0.11	7
1424	Q6ERW9	226:351	0.55	0.26	0.11	1
1425	Q10717	251:326	0.51	0.30	0.10	1
1426	Q6ERW9	126:276	0.51	0.25	0.06	5
1427	Q6ERW5	26:101	0.52	0.25	0.03	4
1428	P16243	226:476	0.51	0.27	0.12	4
1429	Q43272	76:226	0.51	0.28	0.12	4
1430	O04161	151:376	0.55	0.25	0.11	5
1431	Q9ATN1	101:251	0.56	0.29	0.11	2
1432	Q9ATN1	1:251	0.51	0.25	0.10	5
1433	P29185	26:301	0.52	0.25	0.08	3
1434	Q08451	126:276	0.53	0.27	0.08	2
1435	Q96575	1:276	0.52	0.26	0.12	4
1436	P09607	1:276	0.51	0.26	0.12	5
1437	Q6ETN3	401:501	0.52	0.25	0.06	0
1438	Q5BQN5	151:226	0.60	0.26	0.11	1
1439	Q2MI42	976:1176	0.64	0.25	0.10	0
1440	P28523	26:176	0.51	0.26	0.09	3

1441	Q8H6B1	126:226	0.57	0.26	0.10	1
1442	P54767	176:251	0.54	0.26	0.11	1
1443	Q67W82	401:526	0.51	0.26	0.06	0
1444	P0C8M8	1:226	0.53	0.25	0.11	7
1445	Q9FYT6	551:651	0.53	0.25	0.09	0
1446	P0C8M8	151:226	0.52	0.26	0.12	2
1447	Q10S72	426:551	0.52	0.26	0.10	1
1448	Q42982	426:551	0.53	0.26	0.06	0
1449	Q2MI46	26:101	0.51	0.25	0.09	4
1450	B4G0F3	276:401	0.52	0.26	0.07	1
1451	P93648	76:251	0.52	0.26	0.12	1
1452	C1K5M3	551:751	0.55	0.25	0.12	5
1453	Q41741	151:276	0.53	0.27	0.12	1
1454	O22424	151:251	0.60	0.25	0.05	0
1455	Q9XFH3	51:201	0.54	0.26	0.10	3
1456	Q7XTS4	201:451	0.51	0.25	0.11	3
1457	Q9FUZ0	176:276	0.52	0.25	0.12	2
1458	P05118	1:76	0.59	0.26	0.10	1
1459	Q8S7E1	51:126	0.52	0.27	0.12	1
1460	C1K5M2	101:201	0.55	0.25	0.10	3
1461	Q6Z4U2	151:351	0.52	0.26	0.12	4
1462	Q8H6B1	26:176	0.56	0.25	0.11	0
1463	Q0J7J7	176:351	0.51	0.27	0.11	5
1464	P10581	651:751	0.51	0.27	0.12	1
1465	Q2RAS0	26:251	0.51	0.25	0.09	2
1466	O24594	351:426	0.53	0.29	0.08	2
1467	Q0J7J7	276:351	0.54	0.31	0.12	3
1468	Q6XZ79	176:276	0.51	0.25	0.10	1
1469	P19862	651:801	0.53	0.26	0.11	3
1470	P28554	276:426	0.53	0.26	0.11	2
1471	C1K5M3	451:651	0.52	0.25	0.12	4
1472	P31927	451:551	0.51	0.26	0.12	1
1473	Q65X71	451:526	0.61	0.31	0.12	0
1474	Q00497	76:226	0.51	0.25	0.11	4
1475	Q7XKC0	76:176	0.51	0.26	0.06	3

1476	P10582	276:451	0.55	0.27	0.12	3
1477	P29535	176:401	0.51	0.26	0.11	8
1478	Q43298	26:301	0.51	0.25	0.08	3
1479	Q7XRA1	176:251	0.61	0.29	0.12	0
1480	Q852N2	826:1001	0.52	0.27	0.12	6
1481	Q65X71	451:726	0.52	0.26	0.09	5
1482	Q852N2	826:901	0.51	0.25	0.10	2
1483	Q65X71	51:326	0.52	0.27	0.10	3
1484	Q8H6B1	801:901	0.57	0.29	0.12	1
1485	P54767	176:451	0.52	0.26	0.10	2
1486	P61242	1626:1876	0.51	0.27	0.12	4
1487	Q65X71	451:626	0.54	0.26	0.09	3
1488	P04712	326:426	0.52	0.27	0.11	1
1489	Q75LR2	351:426	0.55	0.28	0.12	0

Table 5B

Seq ID No	SolvScore	AggScore	Allergenicity	Toxicity	Antinutricity	Human Homology
1415	-16.93	0.58	0.54	0.53	0.24	0.00
1416	-19.58	0.41	0.53	0.00	0.21	0.00
1417	-21.91	0.46	0.47	0.27	0.27	0.37
1418	-19.73	0.54	0.46	0.00	0.00	0.34
1419	-11.15	0.74	0.43	0.00	0.25	0.29
1420	-16.57	0.61	0.42	0.22	0.00	0.27
1421	-20.09	0.54	0.41	0.23	0.00	0.63
1422	-16.36	0.68	0.41	0.00	0.24	0.34
1423	-16.55	0.67	0.40	0.00	0.21	0.32
1424	-11.31	0.79	0.40	0.24	0.00	0.27
1425	-17.05	0.64	0.39	0.28	0.35	0.53
1426	-11.49	0.73	0.38	0.00	0.26	0.35
1427	-17.25	0.63	0.38	0.25	0.28	0.41
1428	-19.07	0.59	0.38	0.21	0.00	0.60
1429	-16.46	0.67	0.36	0.25	0.23	0.33
1430	-11.00	0.89	0.36	0.00	0.00	0.26
1431	-6.06	1.08	0.36	0.27	0.27	0.36

1432	-8.76	0.87	0.36	0.23	0.23	0.28
1433	-21.28	0.49	0.36	0.00	0.00	0.60
1434	-10.55	0.95	0.35	0.25	0.24	0.44
1435	-17.94	0.61	0.34	0.37	0.00	0.00
1436	-18.54	0.63	0.33	0.36	0.19	0.00
1437	-28.54	0.46	0.30	0.00	0.23	0.38
1438	-25.54	0.40	0.27	0.00	0.00	0.26
1439	-25.12	0.37	0.33	0.24	0.00	0.19
1440	-25.09	0.34	0.31	0.00	0.21	0.80
1441	-24.93	0.38	0.32	0.00	0.25	0.27
1442	-24.55	0.45	0.22	0.00	0.00	0.32
1443	-24.41	0.49	0.29	0.24	0.00	0.33
1444	-24.26	0.36	0.31	0.00	0.00	0.49
1445	-23.95	0.53	0.28	0.00	0.00	0.00
1446	-23.76	0.45	0.30	0.00	0.26	0.70
1447	-23.69	0.45	0.30	0.24	0.27	0.39
1448	-23.58	0.48	0.31	0.00	0.24	0.36
1449	-23.51	0.56	0.27	0.25	0.27	0.36
1450	-23.40	0.48	0.31	0.25	0.00	0.43
1451	-23.21	0.41	0.30	0.00	0.22	0.27
1452	-23.11	0.50	0.30	0.00	0.23	0.00
1453	-22.98	0.53	0.30	0.29	0.26	0.71
1454	-22.62	0.40	0.27	0.00	0.00	0.70
1455	-22.54	0.48	0.31	0.24	0.24	0.42
1456	-22.52	0.37	0.33	0.24	0.00	0.30
1457	-22.50	0.44	0.30	0.00	0.00	0.44
1458	-22.49	0.61	0.27	0.24	1.00	0.26
1459	-22.48	0.47	0.23	0.00	0.27	0.24
1460	-22.30	0.61	0.30	0.23	0.19	0.36
1461	-22.29	0.45	0.30	0.21	0.24	0.00
1462	-22.25	0.48	0.31	0.00	0.21	0.29
1463	-22.20	0.44	0.30	0.00	0.22	0.00
1464	-22.05	0.53	0.28	0.00	0.00	0.00
1465	-22.05	0.69	0.30	0.00	0.00	0.29
1466	-22.02	0.45	0.29	0.00	0.32	0.54

1467	-22.00	0.48	0.27	0.00	0.30	0.32
1468	-21.97	0.50	0.29	0.00	0.00	0.31
1469	-21.83	0.54	0.30	0.23	0.00	0.00
1470	-21.80	0.58	0.31	0.25	0.00	0.23
1471	-21.78	0.56	0.30	0.21	0.23	0.00
1472	-21.60	0.54	0.30	0.00	0.00	0.00
1473	-21.53	0.69	0.24	0.00	0.26	0.33
1474	-21.44	0.48	0.33	0.21	0.00	0.27
1475	-21.39	0.65	0.28	0.26	0.00	0.59
1476	-21.27	0.57	0.30	0.00	0.24	0.00
1477	-21.26	0.50	0.33	0.00	0.23	0.30
1478	-21.26	0.49	0.32	0.00	0.00	0.60
1479	-21.13	0.55	0.28	0.00	0.00	0.28
1480	-21.08	0.61	0.33	0.17	0.24	0.27
1481	-21.00	0.50	0.31	0.19	0.22	0.39
1482	-20.97	0.43	0.24	0.17	0.26	0.00
1483	-20.94	0.68	0.33	0.00	0.23	0.34
1484	-20.89	0.61	0.29	0.00	0.26	0.51
1485	-20.84	0.48	0.31	0.00	0.00	0.23
1486	-20.74	0.51	0.30	0.00	0.22	0.22
1487	-20.65	0.51	0.31	0.28	0.27	0.34
1488	-20.58	0.44	0.32	0.00	0.00	0.00
1489	-20.54	0.44	0.28	0.00	0.00	0.21

Example 4: Identification of Protein Fragments Containing Ratios of Essential Amino Acids and Leucine Greater Than or Equal to Whey and Containing All Essential Amino Acids.

- 5 [00275] Fragments from the set of 8,415 proteins described in Example 1 were evaluated for amino acid content, percentage of essential amino acids (“EAA”), the percentage of branched chain amino acids (“BCAA”), the percentage of leucine (“L”), and whether the protein contained all of the essential amino acids were calculated for each protein. In addition, the protein fragments were screened against a database of known
- 10 allergens to determine whether any had greater than 50% global homology to a known allergen. A total of 203 protein fragments were identified that contain greater than or equal

to 51% EAA and greater than or equal to 13% Leu, and that contain all essential amino acids, and have less than 50% global homology to known allergens (**SEQ ID NOS: 1900 to 2102**).

For the set of protein fragments the solvation score at pH 7 ("SolvScore"), aggregation score at pH 7 ("AggScore"), allergenicity (i.e., percent local homology to known allergens, as

described herein), toxicity (i.e., percent homology to known toxins, as described herein), anti-nutricity (i.e., percent homology to known protease inhibitors, as described herein), and human homology (i.e., percent homology to known human proteins, as described herein)

were calculated, and the total number of Cys residues ("C") were determined. The

characteristics of 75 representative protein fragments thus identified are presented in **Table**

6A and 6B.

Table 6A

Seq ID No	UniProt	FragEnds	EAA	BCAA	L	C
1900	Q41784	201:301	0.51	0.22	0.15	4
1901	P18025	201:301	0.51	0.22	0.15	4
1902	Q43697	201:301	0.51	0.22	0.15	4
1903	Q41783	201:301	0.51	0.22	0.15	4
1904	Q41785	201:301	0.51	0.22	0.15	4
1905	P18026	201:301	0.51	0.22	0.15	4
1906	P10708	76:176	0.51	0.24	0.13	1
1907	P27525	51:151	0.53	0.22	0.14	0
1908	Q3HRN9	51:201	0.52	0.23	0.14	1
1909	Q9ZSV1	726:801	0.51	0.23	0.14	1
1910	Q5BQN5	51:176	0.52	0.20	0.13	1
1911	P56669	1:76	0.53	0.18	0.14	1
1912	Q75LU8	1:201	0.52	0.24	0.13	4
1913	Q8S0F0	601:851	0.51	0.23	0.14	3
1914	Q9ZSV1	626:801	0.51	0.23	0.13	1
1915	Q0JI49	301:451	0.53	0.23	0.14	0
1916	P93703	201:401	0.51	0.24	0.14	1
1917	Q2MI42	426:601	0.52	0.23	0.13	1
1918	Q8S0F0	501:751	0.52	0.23	0.13	4
1919	Q2MI42	1601:1701	0.51	0.23	0.14	1
1920	Q7XTS3	401:476	0.57	0.21	0.13	2

1921	P49037	1:201	0.51	0.24	0.14	1
1922	Q9FQ11	1:76	0.53	0.24	0.16	1
1923	Q7X996	201:376	0.55	0.22	0.13	1
1924	P27061	126:201	0.53	0.24	0.14	0
1925	P53682	326:401	0.51	0.24	0.13	1
1926	Q84ZL0	1201:1476	0.51	0.24	0.16	4
1927	Q8S0F0	701:851	0.51	0.24	0.14	1
1928	Q6ZAG3	51:201	0.54	0.24	0.13	1
1929	Q69Q02	276:451	0.52	0.22	0.13	1
1930	P10581	276:526	0.51	0.24	0.13	2
1931	P49037	201:276	0.52	0.24	0.15	2
1932	P61242	776:951	0.51	0.23	0.15	2
1933	Q5Z987	1826:1926	0.51	0.19	0.14	1
1934	Q5JMM1	251:326	0.52	0.22	0.14	0
1935	Q84N48	426:526	0.51	0.24	0.14	0
1936	Q7G6K7	826:1101	0.51	0.23	0.14	4
1937	Q0J4I1	1:201	0.53	0.24	0.14	2
1938	Q7XWS7	1226:1476	0.51	0.22	0.13	3
1939	Q0JF02	76:276	0.51	0.24	0.14	4
1940	Q2QN26	201:351	0.51	0.24	0.14	5
1941	P49037	101:276	0.53	0.22	0.14	2
1942	Q6K5F8	351:626	0.51	0.24	0.14	3
1943	Q10QA2	101:226	0.51	0.22	0.13	6
1944	Q9XHR2	201:301	0.52	0.24	0.14	0
1945	Q0DCT8	176:351	0.52	0.24	0.15	5
1946	Q6AU53	476:576	0.52	0.24	0.16	0
1947	A7LFZ6	276:451	0.52	0.23	0.15	6
1948	Q6ZKB2	451:726	0.52	0.22	0.13	2
1949	Q8S983	176:251	0.51	0.22	0.14	0
1950	Q3LXA7	526:626	0.53	0.24	0.14	2
1951	P93703	201:276	0.55	0.24	0.14	1
1952	A3B9A0	76:226	0.51	0.21	0.13	2
1953	Q9XGD6	51:126	0.52	0.22	0.13	0
1954	P18485	301:376	0.54	0.20	0.14	2
1955	Q32SG6	876:951	0.52	0.23	0.16	0

1956	Q5VS72	501:576	0.54	0.24	0.18	2
1957	Q43503	401:476	0.54	0.21	0.15	1
1958	Q42896	101:326	0.52	0.24	0.13	4
1959	Q9MAX6	151:251	0.52	0.24	0.14	3
1960	Q9LKX9	1:201	0.52	0.22	0.14	5
1961	P09562	176:301	0.52	0.23	0.15	3
1962	Q7XWS7	1226:1376	0.51	0.22	0.13	1
1963	Q7XU38	151:351	0.51	0.24	0.14	4
1964	Q69LX2	926:1151	0.51	0.24	0.13	5
1965	Q7XD96	601:726	0.51	0.22	0.14	5
1966	Q7XI73	26:101	0.52	0.17	0.13	5
1967	Q42881	301:376	0.53	0.20	0.14	3
1968	C1K5M3	176:301	0.53	0.23	0.14	4
1969	Q6L4F8	226:301	0.53	0.22	0.15	2
1970	P48022	1:101	0.51	0.23	0.14	0
1971	Q8LHA8	51:201	0.51	0.24	0.14	3
1972	Q6ZAG3	151:301	0.52	0.24	0.14	3
1973	P04711	751:901	0.53	0.24	0.13	0
1974	Q5N870	576:801	0.53	0.23	0.13	8

Table 6B

Seq ID No	SolvScore	AggScore	Allergenicity	Toxicity	Antinutricity	Human Homology
1900	-14.31	0.56	0.48	0.00	0.25	0.88
1901	-14.31	0.54	0.46	0.00	0.25	0.88
1902	-14.31	0.54	0.46	0.00	0.25	0.88
1903	-14.31	0.54	0.46	0.00	0.25	0.88
1904	-14.31	0.54	0.46	0.00	0.25	0.88
1905	-14.42	0.53	0.46	0.00	0.24	0.87
1906	-16.21	0.63	0.41	0.00	0.00	0.28
1907	-14.10	0.61	0.39	0.00	0.25	0.00
1908	-24.00	0.41	0.36	0.22	0.26	0.31
1909	-27.98	0.27	0.25	0.29	0.33	0.49
1910	-27.07	0.17	0.33	0.23	0.24	0.00
1911	-27.03	0.25	0.22	0.00	0.27	0.41

1912	-25.61	0.41	0.35	0.23	0.25	0.32
1913	-24.50	0.36	0.33	0.00	0.00	0.30
1914	-24.43	0.35	0.35	0.00	0.23	0.39
1915	-24.41	0.37	0.32	0.24	0.23	0.00
1916	-24.40	0.42	0.32	0.00	0.24	0.30
1917	-24.34	0.23	0.33	0.00	0.23	0.00
1918	-23.77	0.39	0.32	0.00	0.00	0.34
1919	-23.65	0.44	0.31	0.00	0.22	0.00
1920	-23.49	0.37	0.28	0.00	0.00	0.33
1921	-23.32	0.40	0.33	0.22	0.25	0.00
1922	-23.31	0.48	0.25	0.26	0.24	0.00
1923	-23.23	0.39	0.30	0.00	0.21	0.27
1924	-23.18	0.42	0.24	0.00	0.00	0.00
1925	-23.13	0.29	0.28	0.25	0.26	0.27
1926	-23.12	0.37	0.34	0.00	0.00	0.32
1927	-23.00	0.35	0.34	0.00	0.25	0.29
1928	-22.83	0.31	0.31	0.00	0.22	0.49
1929	-22.74	0.36	0.29	0.00	0.23	0.00
1930	-22.67	0.39	0.31	0.00	0.00	0.00
1931	-22.62	0.50	0.26	0.25	0.27	0.26
1932	-22.44	0.44	0.33	0.24	0.22	0.00
1933	-22.39	0.41	0.31	0.22	0.25	0.34
1934	-22.25	0.36	0.22	0.00	0.33	0.33
1935	-22.24	0.40	0.30	0.00	0.25	0.00
1936	-22.14	0.35	0.32	0.00	0.00	0.31
1937	-22.12	0.41	0.34	0.00	0.00	0.48
1938	-21.99	0.35	0.31	0.00	0.00	0.29
1939	-21.98	0.49	0.33	0.00	0.23	0.00
1940	-21.79	0.55	0.32	0.26	0.24	0.36
1941	-21.63	0.40	0.29	0.00	0.21	0.00
1942	-21.60	0.42	0.33	0.00	0.24	0.65
1943	-21.54	0.62	0.30	0.25	0.24	0.33
1944	-21.23	0.37	0.28	0.00	0.00	0.42
1945	-21.20	0.48	0.32	0.00	0.25	0.40
1946	-21.19	0.55	0.30	0.00	0.25	0.00

1947	-21.18	0.43	0.30	0.00	0.25	0.00
1948	-21.10	0.36	0.32	0.00	0.00	0.31
1949	-20.98	0.41	0.24	0.00	0.26	0.24
1950	-20.85	0.56	0.30	0.00	0.24	0.37
1951	-20.78	0.47	0.26	0.00	0.23	0.31
1952	-20.67	0.40	0.30	0.23	0.22	0.00
1953	-20.65	0.55	0.26	0.00	0.00	0.37
1954	-20.62	0.51	0.28	0.28	0.26	0.30
1955	-20.55	0.33	0.26	0.00	0.29	0.00
1956	-20.51	0.45	0.26	0.28	0.00	0.46
1957	-20.51	0.66	0.26	0.00	0.25	0.26
1958	-20.48	0.48	0.32	0.00	0.20	0.25
1959	-20.40	0.55	0.32	0.00	0.26	0.56
1960	-20.37	0.48	0.29	0.24	0.22	0.00
1961	-20.36	0.45	0.29	0.25	0.23	0.00
1962	-20.34	0.33	0.30	0.23	0.24	0.30
1963	-20.33	0.59	0.30	0.00	0.22	0.25
1964	-20.31	0.50	0.30	0.21	0.20	0.25
1965	-20.18	0.36	0.29	0.30	0.21	0.32
1966	-20.15	0.38	0.28	0.31	0.29	0.27
1967	-20.14	0.50	0.31	0.00	0.27	0.36
1968	-20.11	0.36	0.27	0.00	0.00	0.00
1969	-19.97	0.40	0.23	0.23	0.28	0.63
1970	-19.89	0.73	0.30	0.00	0.00	0.29
1971	-19.81	0.55	0.32	0.22	0.22	0.31
1972	-19.49	0.46	0.33	0.00	0.25	0.51
1973	-19.43	0.48	0.34	0.26	0.20	0.00
1974	-19.42	0.46	0.32	0.00	0.00	0.26

Example 5: Identification of Proteins Containing Ratios of Branch Chain Amino Acids and Leucine Greater Than or Equal to Whey and Containing All Essential Amino Acids.

[00276] Fragments from the set of 8,415 proteins described in Example 1 were
5 evaluated for amino acid content, percentage of essential amino acids (“EAA”), the
percentage of branched chain amino acids (“BCAA”), the percentage of leucine (“L”), and
whether the protein contained all of the essential amino acids were calculated for each

protein. In addition, the proteins were screened against a database of known allergens to determine whether any had greater than 50% global homology to a known allergen. A total of 415 protein fragments were identified that contain greater than or equal to 25% BCAA and greater than or equal to 13% Leu, and that contain all essential amino acids, and have less than 50% global homology to known allergens (**SEQ ID NOS: 2103 to 2518**). For the set of protein fragments the solvation score at pH 7 ("SolvScore"), aggregation score at pH 7 ("AggScore"), allergenicity (i.e., percent local homology to known allergens, as described herein), toxicity (i.e., percent homology to known toxins, as described herein), anti-nutricity (i.e., percent homology to known protease inhibitors, as described herein), and human homology (i.e., percent homology to known human proteins, as described herein) were calculated, and the total number of Cys residues ("C") were determined. The characteristics of 75 representative protein fragments thus identified are presented in **Table 7A and 7B**.

Table 7A

Seq ID No	UniProt	FragEnds	EAA	BCAA	L	C
2103	O24174	76:251	0.49	0.26	0.14	4
2104	P24396	1:126	0.48	0.27	0.13	2
2105	P17801	501:776	0.49	0.26	0.13	3
2106	O24585	501:751	0.47	0.26	0.14	3
2107	O24585	626:751	0.46	0.29	0.14	1
2108	P42211	1:101	0.50	0.27	0.20	2
2109	Q75L42	51:226	0.48	0.28	0.13	3
2110	Q9LGV5	1:251	0.48	0.26	0.13	4
2111	Q9LGV5	101:226	0.45	0.26	0.14	3
2112	Q10PS6	101:276	0.47	0.26	0.13	5
2113	Q5JLQ9	76:226	0.47	0.26	0.15	3
2114	Q2QMI0	26:226	0.43	0.26	0.15	3
2115	Q0D4B2	201:301	0.47	0.27	0.14	3
2116	Q8GUQ5	351:626	0.49	0.30	0.20	6
2117	Q8GUQ5	451:626	0.47	0.31	0.22	3
2118	Q8GUQ5	451:726	0.46	0.28	0.18	4
2119	Q2QY53	126:226	0.46	0.25	0.17	3
2120	Q2RAX3	126:226	0.46	0.25	0.17	3
2121	Q75GK4	1:226	0.46	0.25	0.16	3

2122	P16243	176:376	0.49	0.28	0.13	4
2123	Q41807	151:401	0.49	0.26	0.13	3
2124	Q69Q47	51:226	0.49	0.27	0.14	3
2125	P46420	1:201	0.48	0.25	0.13	3
2126	Q6Z9F4	51:226	0.47	0.27	0.13	3
2127	P16025	1026:1226	0.50	0.26	0.14	3
2128	P16025	926:1151	0.45	0.26	0.13	2
2129	P49174	1:76	0.47	0.29	0.14	0
2130	P48186	1:176	0.49	0.25	0.13	1
2131	P93648	276:401	0.50	0.26	0.16	2
2132	P49037	551:626	0.49	0.26	0.15	1
2133	Q2MIA9	201:276	0.48	0.28	0.15	1
2134	P16024	201:276	0.48	0.28	0.15	1
2135	P16024	201:376	0.44	0.26	0.13	2
2136	P49037	1:101	0.49	0.27	0.14	1
2137	Q84N48	376:451	0.49	0.27	0.13	2
2138	Q94IW5	251:351	0.45	0.27	0.14	1
2139	Q75LD5	576:726	0.44	0.25	0.13	1
2140	Q84ZX8	1:76	0.47	0.25	0.17	0
2141	Q336R3	26:101	0.43	0.26	0.20	3
2142	P93231	576:851	0.48	0.26	0.14	6
2143	P93648	276:551	0.48	0.25	0.13	4
2144	P16024	201:476	0.47	0.28	0.13	3
2145	Q2NM15	26:251	0.47	0.26	0.16	3
2146	P93231	576:751	0.50	0.25	0.14	3
2147	C7E5V8	26:251	0.47	0.26	0.16	3
2148	C7E5V7	26:251	0.48	0.27	0.17	3
2149	P30792	126:226	0.49	0.28	0.15	0
2150	Q5VS72	151:276	0.46	0.25	0.14	1
2151	Q9XGC9	426:501	0.45	0.27	0.16	0
2152	P61242	1626:1776	0.47	0.28	0.14	3
2153	Q9XGD6	126:251	0.46	0.27	0.14	2
2154	B6SJQ0	1:176	0.40	0.26	0.16	4
2155	P93207	1:126	0.42	0.25	0.14	2
2156	Q653U3	801:876	0.44	0.26	0.14	1

2157	P51059	351:576	0.44	0.25	0.15	4
2158	P07920	76:226	0.48	0.25	0.15	2
2159	P16024	301:451	0.48	0.28	0.13	2
2160	P29390	176:251	0.50	0.25	0.14	1
2161	Q5VQ78	576:676	0.47	0.25	0.14	0
2162	P16025	926:1026	0.46	0.27	0.13	1
2163	P51059	476:576	0.46	0.25	0.15	1
2164	P17847	326:451	0.38	0.25	0.16	1
2165	P05116	76:226	0.47	0.25	0.15	2
2166	P24157	76:226	0.47	0.25	0.15	2
2167	Q9XGC9	301:401	0.48	0.25	0.15	1
2168	P04711	351:551	0.45	0.25	0.13	3
2169	Q84ZW8	376:551	0.50	0.26	0.14	5
2170	Q6H6V4	801:876	0.45	0.26	0.13	1
2171	Q9XGD6	26:251	0.48	0.25	0.14	2
2172	Q41342	301:401	0.49	0.27	0.15	0
2173	Q42883	451:626	0.45	0.25	0.14	6
2174	Q2MI98	26:201	0.45	0.25	0.13	1
2175	Q7XTS4	251:426	0.49	0.26	0.13	3
2176	Q5Z987	1276:1451	0.47	0.25	0.14	8
2177	Q6AVM3	276:351	0.47	0.26	0.16	2

Table 7B

Seq ID No	SolvScore	AggScore	Allergenicity	Toxicity	Antinutricity	Human Homology
2103	-17.26	0.66	0.55	0.00	0.27	0.46
2104	-14.60	0.68	0.49	0.25	0.26	0.23
2105	-21.22	0.41	0.46	0.00	0.00	0.36
2106	-19.98	0.48	0.44	0.20	0.23	0.35
2107	-18.81	0.59	0.44	0.00	0.00	0.40
2108	-15.83	0.61	0.43	0.29	0.27	0.40
2109	-20.27	0.45	0.42	0.00	0.25	0.55
2110	-21.01	0.39	0.42	0.00	0.00	0.51

2111	-19.90	0.44	0.42	0.25	0.00	0.59
2112	-13.77	0.63	0.41	0.00	0.19	0.28
2113	-18.33	0.59	0.40	0.27	0.23	0.53
2114	-19.91	0.56	0.40	0.25	0.25	0.44
2115	-17.67	0.47	0.39	0.00	0.24	0.59
2116	-12.97	0.46	0.39	0.00	0.24	0.32
2117	-12.09	0.48	0.39	0.00	0.24	0.35
2118	-13.41	0.44	0.39	0.00	0.22	0.31
2119	-17.69	0.50	0.38	0.00	0.00	0.55
2120	-17.69	0.50	0.38	0.00	0.00	0.55
2121	-18.70	0.55	0.38	0.21	0.00	0.42
2122	-18.11	0.64	0.38	0.00	0.24	0.61
2123	-16.10	0.45	0.38	0.00	0.00	0.78
2124	-19.89	0.47	0.37	0.24	0.23	0.48
2125	-18.94	0.60	0.37	0.24	0.25	0.28
2126	-21.69	0.54	0.37	0.19	0.25	0.52
2127	-17.96	0.48	0.36	0.24	0.00	0.00
2128	-19.80	0.48	0.36	0.20	0.00	0.00
2129	-10.98	0.80	0.36	0.31	0.28	0.34
2130	-20.67	0.47	0.35	0.00	0.23	0.00
2131	-29.02	0.26	0.33	0.26	0.24	0.60
2132	-28.96	0.53	0.26	0.00	0.27	0.26
2133	-28.54	0.45	0.28	0.23	0.26	0.30
2134	-28.35	0.49	0.25	0.27	0.00	0.23
2135	-27.16	0.36	0.31	0.00	0.24	0.28
2136	-25.78	0.45	0.33	0.00	0.25	0.30
2137	-25.22	0.53	0.27	0.19	0.00	0.33
2138	-24.85	0.53	0.30	0.00	0.26	0.29
2139	-24.69	0.52	0.33	0.20	0.00	0.00
2140	-24.65	0.46	0.24	0.00	0.30	0.27
2141	-24.35	0.46	0.24	0.29	0.27	0.27
2142	-24.29	0.47	0.30	0.00	0.00	0.40
2143	-24.22	0.34	0.33	0.22	0.00	0.67
2144	-23.92	0.43	0.31	0.21	0.25	0.27
2145	-23.69	0.40	0.32	0.00	0.00	0.00

2146	-23.69	0.50	0.30	0.00	0.20	0.43
2147	-23.61	0.41	0.32	0.00	0.00	0.23
2148	-23.59	0.42	0.33	0.00	0.00	0.00
2149	-23.57	0.39	0.31	0.00	0.27	0.00
2150	-23.48	0.33	0.30	0.00	0.24	0.34
2151	-23.44	0.29	0.30	0.00	0.25	0.26
2152	-23.42	0.51	0.30	0.00	0.23	0.27
2153	-23.41	0.52	0.29	0.27	0.00	0.40
2154	-23.34	0.47	0.32	0.00	0.26	0.00
2155	-23.10	0.47	0.34	0.20	0.22	0.54
2156	-23.09	0.45	0.28	0.25	0.28	0.00
2157	-23.07	0.47	0.32	0.00	0.21	0.00
2158	-23.01	0.33	0.31	0.00	0.25	0.24
2159	-22.95	0.47	0.31	0.24	0.21	0.32
2160	-22.81	0.26	0.26	0.00	0.00	0.42
2161	-22.75	0.46	0.33	0.00	0.21	0.53
2162	-22.74	0.44	0.27	0.27	0.28	0.00
2163	-22.72	0.54	0.30	0.00	0.28	0.24
2164	-22.69	0.36	0.30	0.24	0.00	0.32
2165	-22.64	0.34	0.31	0.25	0.00	0.00
2166	-22.64	0.34	0.31	0.25	0.00	0.00
2167	-22.52	0.32	0.29	0.00	0.00	0.47
2168	-22.29	0.48	0.31	0.00	0.25	0.00
2169	-22.23	0.51	0.32	0.19	0.22	0.00
2170	-22.16	0.48	0.29	0.25	0.27	0.22
2171	-22.13	0.49	0.32	0.00	0.00	0.38
2172	-22.05	0.63	0.34	0.00	0.00	0.00
2173	-21.94	0.45	0.34	0.00	0.26	0.37
2174	-21.89	0.34	0.29	0.00	0.21	0.00
2175	-21.84	0.41	0.33	0.00	0.25	0.28
2176	-21.74	0.50	0.32	0.00	0.25	0.30
2177	-21.74	0.50	0.32	0.30	0.28	0.38

Example 6: Protein Expression

[00277] Genes encoding nutritive proteins disclosed herein were codon optimized for expression in *Escherichia coli* and synthesized by either Life Technologies/GeneArt or DNA 2.0. Genes were designed to contain one of two amino-terminal tags to facilitate purification:

5 [00278] MGSHHHHHHHH (SEQ ID NO: 2615)

[00279] MGSSHHHHHHSSGLVPRGSH (SEQ ID NO: 2614)

[00280] These gene constructs were inserted into the pET15b plasmid vector (Novagen) using *NcoI*-*Bam*HI restriction sites (in case of the first tag) or using the *NdeI*-*Bam*HI restriction sites (in the case of the second tag). All restriction enzymes were
 10 purchased from New England Biolabs. Plasmids were transformed into *Escherichia coli* T7 Express (New England Biolabs) and selected on lysogeny broth (LB) plates containing 100 mg/l carbenicillin. A single colony was picked, grown to $OD_{600nm} \approx 0.6$ in LB with 100 mg/l carbenicillin, and stored as a glycerol stock (in LB with 10% glycerol (v/v)) at $-80^{\circ}C$, to serve as a master cell stock.

15 [0042] 2ml LB with 100 mg/l carbenicillin (in a 14mm×100mm culture tube) was inoculated with a stab from the glycerol stock and grown overnight at $37^{\circ}C$ and 250rpm. The next day, 2ml LB with 100 mg/l carbenicillin (in a 14mm×100mm culture tube) was inoculated with the overnight culture to $OD_{600nm} = 0.05$ and grown at $30^{\circ}C$ or $37^{\circ}C$ and 250rpm. At $OD_{600nm} \approx 0.8$, heterologous gene-expression was initiated with 1mM isopropyl
 20 β -D-1-thiogalactopyranoside (IPTG) and grown for another 2 hr (when grown at $37^{\circ}C$) or 4 hr (when grown at $30^{\circ}C$) until harvest. Upon harvesting, OD_{600nm} was measured, a 1ml aliquot was centrifuged, and the supernatant was decanted. Cells were re-suspended to $OD_{600nm} = 1.50$ for SDS-PAGE analysis to evaluate expression level. 10 μ l of resuspended culture was loaded onto either: 1) a Novex® NuPAGE® 12% Bis-Tris gel (Life
 25 Technologies), or 2) a Novex® 16% Tricine gel (Life Technologies), and run using standard manufacturer's protocols. Gels were stained using SimplyBlue™ SafeStain (Life Technologies) using the standard manufacturer's protocol and imaged using the Molecular Imager® Gel Doc™ XR+ System (Bio-Rad). Over-expressed heterologous protein was identified by comparison against a molecular weight marker and control cultures.

30 [00281] Using this method, recombinant expression of the proteins listed in Tables 8A and 8B was observed.

Table 8A

Seq ID No	UniProt	FragEnds	EAA	BCAA	L	C
2519	P15989	388:487	0.52	0.36	0.15	0
2520	P15989	341:442	0.48	0.36	0.16	0
2521	-	-	0.50	0.41	0.16	1
2522	P10587	1287:1386	0.49	0.26	0.17	0
2523	Q27991	1353:1452	0.46	0.23	0.17	0
2524	-	-	0.64	0.33	0.21	0
2525	P15989	398:447	0.57	0.41	0.18	0
2526	P02662	2:51	0.59	0.31	0.18	1
2527	P02662	3:52	0.59	0.33	0.18	1
2528	P02662	4:53	0.57	0.31	0.16	1
2529	P02662	5:54	0.55	0.29	0.14	1
2530	P02662	6:55	0.55	0.29	0.16	1
2531	P02662	79:128	0.41	0.28	0.12	0
2532	P02662	86:135	0.41	0.27	0.13	0
2533	Q9FRT9	1:90	0.32	0.11	0.07	10
2534	P09643	1:322	0.44	0.20	0.08	10
2535	Q9HD67	472:521	0.49	0.29	0.20	1
2536	Q02440	461:511	0.50	0.23	0.13	1
2537	Q13402	452:509	0.52	0.24	0.11	1
2538	Q02440	413:512	0.52	0.22	0.09	2
2539	Q28970	427:527	0.51	0.21	0.10	1
2540	Q90584	436:486	0.60	0.41	0.32	0
2541	P22281	82:134	0.58	0.46	0.24	1
2542	Q17R14	270:321	0.64	0.39	0.20	0
2543	Q27991	1396:1446	0.49	0.31	0.23	0
2544	P12106	170:220	0.70	0.32	0.14	1
2545	P32191	112:163	0.58	0.31	0.15	1
2546	P19524	1398:1449	0.56	0.25	0.18	2
2547	Q03262	225:277	0.65	0.30	0.13	1
2548	P12863	82:132	0.51	0.33	0.17	1
2549	P12106	159:209	0.67	0.29	0.14	1
2550	A6QR56	589:691	0.47	0.34	0.21	2

2551	P32492	1218:1319	0.67	0.25	0.14	1
2552	P79114	688:788	0.48	0.26	0.15	2
2553	Q5MIB5	492:592	0.53	0.27	0.14	2
2554	P04119	28:129	0.51	0.26	0.17	2
2555	P06642	14:115	0.55	0.27	0.14	2
2556	Q2XQV4	108:213	0.49	0.26	0.15	2
2557	P32492	1086:1287	0.58	0.29	0.15	1
2558	Q76FS2	59:260	0.46	0.23	0.12	7
2559	Q36967	1:105	0.65	0.46	0.26	0
2560	Q31721	1:58	0.63	0.38	0.19	2
2561	Q5ZMN0	44:93	0.53	0.36	0.26	0
2562	Q5ZMN0	46:95	0.54	0.36	0.26	0
2563	Q5ZMN0	47:96	0.52	0.36	0.26	0
2564	Q5ZMN0	1:146	0.53	0.30	0.21	2
2565	Q5ZMN0	1:147	0.52	0.30	0.21	2
2566	Q5ZMN0	1:148	0.53	0.30	0.21	2
2567	Q5ZMN0	1:149	0.52	0.29	0.21	2
2568	Q5ZMN0	1:150	0.52	0.29	0.21	2
2569	Q5ZMN0	1:151	0.52	0.29	0.20	2
2570	Q5ZMN0	1:152	0.51	0.29	0.20	2
2571	Q5ZMN0	1:153	0.51	0.29	0.20	2
2572	Q5ZMN0	1:154	0.51	0.28	0.20	2
2573	Q5ZMN0	1:161	0.49	0.27	0.19	2
2574	Q9JLT0	127:231	0.48	0.21	0.15	0
2575	Q27991	141:190	0.51	0.28	0.23	0
2576	Q27991	136:185	0.51	0.28	0.21	0
2577	Q27991	116:185	0.51	0.27	0.21	0
2578	Q27991	146:200	0.51	0.29	0.21	0
2579	Q27991	146:210	0.52	0.27	0.20	0
2580	Q27991	136:190	0.50	0.27	0.21	0
2581	Q27991	146:195	0.50	0.30	0.21	0
2582	Q27991	126:190	0.52	0.26	0.19	0
2583	Q27991	141:200	0.51	0.28	0.21	0
2584	Q27991	161:210	0.50	0.24	0.19	0
2585	Q27991	126:185	0.53	0.27	0.19	0

2586	Q27991	111:210	0.50	0.26	0.19	0
2587	Q27991	116:215	0.50	0.26	0.18	0
2588	Q27991	126:225	0.46	0.22	0.15	0
2589	Q27991	126:237	0.45	0.21	0.15	0
2590	Q9JLT0	194:244	0.45	0.20	0.14	0
2591	Q61879	154:252	0.41	0.19	0.14	0
2592	P15989	99:208	0.52	0.37	0.17	0
2593	P15989	99:203	0.51	0.37	0.16	0
2594	P15989	49:166	0.44	0.28	0.15	0
2595	Q90339	201:265	0.45	0.21	0.18	0
2596	Q9BE41	216:265	0.48	0.21	0.18	0
2597	Q9TV62	241:290	0.48	0.17	0.15	0
2598	Q5SX39	236:285	0.45	0.19	0.17	0
2599	Q9TV61	151:265	0.52	0.21	0.16	0
2600	Q27991	20:289	0.38	0.20	0.15	0
2601	Q0WVK7	53:105	0.57	0.27	0.12	2
2602	Q94A52	149:261	0.54	0.26	0.12	2
2603	P38111	1093:1165	0.59	0.30	0.13	3
2604	P38111	1093:1182	0.57	0.27	0.13	3
2605	P38111	1093:1162	0.57	0.27	0.13	3
2606	P38111	1092:1166	0.59	0.29	0.13	3
2607	P38111	1093:1168	0.58	0.29	0.13	3
2608	P38111	1091:1164	0.59	0.30	0.13	3
2609	P38111	1089:1164	0.58	0.29	0.13	3

Table 8B

Seq ID No	SolvScore	AggScore	Allergenicity	Toxicity	Antinutricity	Human Homology
2519	-15.79	0.80	0.31	0.00	1.00	0.67
2520	-16.50	0.84	0.29	0.00	1.00	0.62
2521	-21.97	1.00	0.30	0.00	0.25	0.39
2522	-28.44	0.16	0.36	0.00	0.00	0.84
2523	-36.33	0.16	0.33	0.00	0.00	0.87

2524	-27.36	0.49	0.34	0.00	0.30	0.41
2525	-17.59	0.99	0.20	0.00	1.00	0.64
2526	-17.98	0.90	0.63	0.00	0.00	0.44
2527	-16.59	0.95	0.63	0.00	0.32	0.44
2528	-16.79	0.87	0.63	0.00	0.33	0.44
2529	-18.37	0.77	0.63	0.00	0.30	0.42
2530	-18.37	0.71	0.63	0.00	0.32	0.40
2531	-24.84	0.25	0.63	0.26	0.00	0.35
2532	-26.10	0.22	0.63	0.26	0.00	0.33
2533	-15.45	0.39	0.32	1.00	0.34	0.34
2534	-19.21	0.44	0.99	0.00	0.00	0.96
2535	-25.30	0.46	0.22	0.33	0.34	1.00
2536	-22.49	0.43	0.21	0.31	0.35	0.94
2537	-22.06	0.51	0.21	0.28	0.27	1.00
2538	-21.01	0.41	0.31	0.00	0.28	0.94
2539	-23.16	0.43	0.28	0.00	0.00	0.98
2540	-15.02	1.17	0.22	0.34	0.35	0.75
2541	-10.60	1.38	0.22	0.00	0.34	0.28
2542	-18.91	0.89	0.20	0.00	0.32	0.94
2543	-31.57	0.29	0.21	0.00	0.31	0.88
2544	-17.13	0.77	0.20	0.31	0.28	0.61
2545	-16.98	0.76	0.19	0.25	0.17	0.52
2546	-20.09	0.24	0.21	0.29	0.30	0.43
2547	-19.93	0.52	0.22	0.32	0.32	0.33
2548	-16.57	0.79	0.58	0.33	0.24	0.59
2549	-16.05	0.65	0.20	0.28	0.31	0.65
2550	-17.15	0.83	0.30	0.30	0.00	0.84
2551	-21.64	0.55	0.26	0.26	0.26	0.00
2552	-24.45	0.54	0.32	0.24	0.25	0.91
2553	-23.71	0.37	0.30	0.27	0.29	0.93
2554	-22.23	0.52	0.74	0.00	0.19	0.44
2555	-18.41	0.58	0.29	0.29	0.25	0.78
2556	-17.59	0.58	0.60	0.00	0.23	0.98
2557	-19.98	0.57	0.31	0.00	0.24	0.00
2558	-17.02	0.48	0.53	0.00	0.22	0.88

2559	-5.92	1.63	0.30	0.00	0.27	0.61
2560	-6.10	1.53	0.21	0.00	0.26	0.40
2561	-18.69	0.54	0.18	0.24	0.35	0.84
2562	-17.31	0.54	0.20	0.24	0.33	0.84
2563	-17.40	0.47	0.20	0.22	0.34	0.84
2564	-22.65	0.39	0.32	0.25	0.25	0.76
2565	-22.50	0.39	0.32	0.25	0.25	0.76
2566	-22.35	0.39	0.32	0.25	0.26	0.76
2567	-22.74	0.39	0.32	0.00	0.25	0.76
2568	-22.59	0.39	0.32	0.00	0.25	0.75
2569	-22.97	0.38	0.32	0.24	0.25	0.76
2570	-23.34	0.38	0.32	0.24	0.25	0.75
2571	-23.25	0.38	0.32	0.24	0.25	0.75
2572	-23.61	0.37	0.32	0.00	0.25	0.75
2573	-24.11	0.36	0.32	0.23	0.26	0.75
2574	-33.59	0.15	0.34	0.25	0.00	1.00
2575	-36.26	0.21	0.21	0.29	0.33	0.92
2576	-34.27	0.27	0.22	0.25	0.00	0.90
2577	-32.73	0.22	0.25	0.31	0.00	0.87
2578	-34.50	0.23	0.21	0.00	0.00	0.89
2579	-34.08	0.25	0.26	0.00	0.00	0.91
2580	-34.67	0.22	0.23	0.25	0.00	0.91
2581	-33.39	0.29	0.20	0.00	0.31	0.88
2582	-37.57	0.19	0.25	0.31	0.00	0.92
2583	-35.42	0.21	0.24	0.21	0.00	0.90
2584	-33.68	0.26	0.23	0.00	0.00	0.92
2585	-37.47	0.23	0.25	0.00	0.00	0.92
2586	-33.38	0.20	0.31	0.00	0.00	0.87
2587	-32.78	0.18	0.33	0.27	0.29	0.88
2588	-36.89	0.16	0.35	0.00	0.00	0.92
2589	-37.66	0.15	0.39	0.00	0.00	0.93
2590	-29.21	0.16	0.25	0.00	0.27	1.00
2591	-30.24	0.12	0.33	0.00	0.00	0.99
2592	-16.02	0.94	0.32	0.00	1.00	0.63
2593	-16.69	0.94	0.30	0.00	1.00	0.63

2594	-17.69	0.65	0.31	0.00	1.00	0.62
2595	-34.37	0.07	0.29	0.00	0.00	0.98
2596	-38.56	0.08	0.24	0.00	0.00	0.98
2597	-41.59	0.04	0.26	0.00	0.00	0.98
2598	-40.29	0.04	0.23	0.28	0.00	0.98
2599	-35.70	0.11	0.36	0.26	0.22	0.99
2600	-34.97	0.13	0.40	0.23	0.22	0.93
2601	-26.91	0.45	0.18	0.30	0.22	0.31
2602	-25.52	0.46	0.29	0.00	0.25	0.81
2603	-23.00	0.80	0.27	0.00	0.24	0.26
2604	-20.82	0.80	0.27	0.00	0.25	0.27
2605	-23.98	0.70	0.25	0.27	0.25	0.27
2606	-22.45	0.79	0.27	0.27	0.25	0.25
2607	-22.10	0.80	0.27	0.28	0.24	0.25
2608	-22.75	0.77	0.28	0.31	0.25	0.25
2609	-23.28	0.71	0.28	0.28	0.25	0.24

Example 7: Scaled Up Production of Recombinant Nutritive Proteins

[00282] A representative protocol for producing quantities of nutritive proteins as described in this disclosure is as follows

- [00283] 5ml LB with 100 mg/l carbenicillin (in a 50ml baffled Pyrex shake flask) is
- 5 inoculated with a stab from the glycerol stock of a recombinant *E. coli* strain comprising a recombinant gene encoding a nutritive protein and grown until late exponential phase (OD_{600nm} ≈ 2) at 37°C and 250rpm. A 2.5l Ultra Yield Flask (Thomson Instrument Company) is inoculated with 500ml sterile water and enough EnBase EnPresso™ tablets (BioSilta) to formulate 500ml growth medium. This medium is supplemented with 100 mg/l
- 10 carbenicillin, 0.001% Industrol 204 antifoam, and 0.6 U/l EnzI'm (BioSilta). The shake flask is inoculated to OD_{600nm} = 0.05 and grown 16hr at 30°C and 250rpm. At this point, OD_{600nm} ≈ 10 had been reached, the growth medium is further supplemented with EnPresso™ Booster tablets (BioSilta), 1.2 U/l EnzI'm, and 1mM IPTG to induce
- 15 heterologous protein production. After another 8-24hr of shaking at 30°C and 250rpm, the flask is harvested by centrifugation at 10,000rpm, the supernatant is decanted, and the wet cell weight is measured. At this point, approximately 20gWCW (grams wet cell weight)/l medium is recovered.

[00284] The harvested cells from each shake-flask fermentation are suspended in 25 mL of IMAC Equilibration Solution (30 mM Imidazole, 50 mM Phosphate, 0.5 M NaCl, pH 7.5). The suspended cells are then lysed by sonication at 90 Watts for 90 seconds, on ice. The lysed cells are centrifuged at 15,500 RCF for 60 minutes, and decanted. The cell debris is discarded, and the supernatants are 0.2 μ m filtered. Filters are then flushed with an additional 10 mL of IMAC Equilibration Solution. These filtered protein solutions are then purified by immobilized metal affinity chromatography (IMAC).

[00285] IMAC resin (GE Healthcare, IMAC Sepharose 6 Fast Flow) is charged with nickel and equilibrated. 30 mL of each protein solution is loaded onto a 5 mL IMAC column, and washed with additional equilibration solution to remove unbound impurities. The protein of interest is then eluted with 15 mL of 0.5 M NaCl, 0.2 M Imidazole, pH 7.5. The purified proteins are shown to be 90% pure, by SDS-PAGE. Approximately 20 to 60 mg of each protein is recovered in the IMAC elution fractions. Each IMAC elution fraction is buffer exchanged by dialysis into a formulation solution (20 mM HEPES, pH 7.5). After buffer exchange, these protein solutions are recovered for all downstream processing.

Example 8: Prediction of Soluble Expression of Nutritive Proteins

[00286] Open reading frames encoding a set of 292 nutritive proteins were cloned and introduced into E. coli to assess recombinant protein expression using the method of Example 6. In the system used, 163 proteins were identified as expressed while 129 were not. Of the 163 proteins that expressed, 125 were tested for soluble expression. It was found that 75 were solubly expressed while 50 were not.

[00287] Figure 1 shows a two dimensional histogram of protein expression in the E. coli expression screen. Figure 1 shows the relative likelihood (on a log scale) of a protein being expressed as a function of solvation score (y-axis) and aggregation score (x-axis). A darker mark on the histogram indicates a higher number of proteins expressed, while a lighter mark indicates a fewer number of proteins expressed. Figure 1 shows that those proteins that were successfully expressed tend to cluster in the top left region of the plot, where the solvation score is more negative (≤ -20) and the aggregation score is smaller (≤ 0.75). There were few examples of proteins that were successfully expressed with less negative solvation scores (≥ -15) and large aggregation scores (≥ 1). This result suggests that nutritive proteins with solvation scores of -20 or less and aggregation scores of 0.75 or less are more likely to be expressed in this system.

[00288] Figure 2 shows a two dimensional histogram of the number of soluble protein expression in the E. coli expression screen. Figure 2 shows the relative likelihood (on a log scale) of a protein being solubly expressed as a function of solvation score (y-axis) and aggregation score (x-axis). Again, a darker mark on the histogram indicates a higher number of proteins expressed, while a lighter mark indicates a fewer number of proteins expressed. Figure 1 shows that those proteins that were expressed solubly tended to cluster in the top left region of the plot, where the solvation score is more negative (≤ -20) and the aggregation score is smaller (≤ 0.5). There were few examples of proteins that were expressed solubly with less negative solvation scores (≥ -15) and large aggregation scores (≥ 0.75). This result suggests that nutritive proteins with solvation scores of -20 or less and aggregation scores of 0.5 or less are more likely to be solubly expressed in this system.

Example 9: Solubility Screening

[00289] The solubility of nine nutritive proteins produced as described Examples 6 and 7 was examined by centrifuge concentration followed by protein concentration assays.

Samples in 20 mM HEPES pH 7.5 were tested for protein concentration according to the protocol for Coomassie Plus (Bradford) Protein Assay (Thermo Scientific) and absorbance at 280 nm (if applicable). Based on these measurements 10 mg of protein was added to an Amicon Ultra 3 kDa centrifugal filter (Millipore). Samples were concentrated by centrifugation at 10,000 Xg for 30 minutes. The final concentrated samples were examined for precipitated protein and color, and then tested for protein concentration as described above. The results are shown in Table 9.

Table 9

Seq ID No	Appearance	Concentration (g/L)
2580	Clear Faint Yellow	44
2582	Clear Faint Yellow	166
2587	Clear Colorless	107
2595	Clear Colorless	60
2596	Clear Colorless	29
2598	Clear Colorless	151
2599	Clear Colorless	207
2600	Clear Yellow	95

2603	Clear Yellow	191

[00290] The solubilities of these nutritive proteins were found to be significantly higher than concentrations typically found for whey (12.5 g/L) and soy (10 g/L) (Pelegrine, D. H. G. & Gasparetto, C. A., 2005. Whey proteins solubility as function of temperature and pH. *LWT - Food Science and Technology*, p. 77–80; Lee, K. H., Ryu, H. S. & Rhee, K. C., 2003. Protein solubility characteristics of commercial soy protein products. *Journal of the American Oil Chemists' Society*, pp. 85-90). This demonstrates the usefulness of the nutritive proteins disclosed herein. For example, the solubility of nutritive proteins may improve compliant delivery of high quality protein in as small of a volume as possible while avoiding the “chalkyness” that often characterizes proteins delivered in this manner. This may, for example, be useful to deliver proteins to the elderly or other subjects.

Example 10: Stability Screening

[00291] Thermal stability of nutritive proteins provides insight regarding whether the protein is likely to have a useful shelf life. Samples of proteins produced as described in Examples 6 and 7 were screened in parallel using a rapid thermal stability screening method. In this method proteins were heated slowly from 25°C to 95°C in two representative formulations in the presence of a hydrophobic dye (Enzo Life Sciences, ProteoStat® Thermal shift stability assay kit) that binds to aggregated proteins that form as the protein denatures with increasing temperature (Niesen, F. H., Berglund, H. & Vadadi, M., 2007. The use of differential scanning fluorimetry to detect ligand interactions that promote protein stability. *Nature Protocols*, Volume 2, pp. 2212-2221.). Upon binding, the dye's fluorescence increases significantly, which is then recorded by the rtPCR instrument and represented as the protein's melting curve (Lavinder, J. J., Hari, S. B., Sullivan, B. J. & Magilery, T. J., 2009. High-Throughput Thermal Scanning: A General, Rapid Dye-Binding Thermal Shift Screen for Protein Engineering. *Journal of the American Chemical Society*, pp. 3794-3795.). After the thermal shift is complete samples were examined for insoluble precipitates and further analyzed by analytical size exclusion chromatography (SEC).

[0043] Protein solutions (12.5 mg/ml) were prepared in both PBS and 20 mM HEPES pH 7.7 buffers, each containing 1X ProteoStat TS Detection Reagent. Samples of each solution were heated slowly from 25°C – 95°C, 0.5°C/30 seconds using a real-time PCR (rtPCR) thermocycler while monitoring the fluorescence of the dye. From this thermal scan

the temperature of aggregation was determined (T_{agg}) from the temperature with the strongest slope if an increase in fluorescence was observed. To supplement the assay, samples were taken before and after the thermal shift and analyzed by SEC (GE Healthcare - Superdex 75 5/150) which can detect large soluble aggregates. The results for seven nutritive proteins of this disclosure and a whey standard are presented in Table 10. The presence of soluble aggregates detected by SEC is noted by a “yes” if observed or “no” if not observed, and the “n/a” entries for the whey standard indicate the production of insoluble precipitates such that no SEC analysis was performed.

Table 10

Seq ID No	HEPES - T_{agg}	PBS - T_{agg}	HEPES - SEC Agg?	PBS - SEC Agg?
2582	95	95	No	No
2587	95	95	No	No
2596	45	95	No	No
2598	95	95	No	No
2599	95	95	No	No
2600	95	95	Yes	Yes
2603	95	95	Yes	Yes
whey	79	81.5	n/a	n/a

[00292] As shown in Table 10, SEQ ID NOS: 2582, 2587, 2596, 2598, and 2599 had much higher HEPES T_{agg} than whey (in fact, the proteins did not form any aggregates at 95°C, which was the upper limit of the assay), and thus are expected to be more stable than whey. The SEQ ID NOS: 2600 and 2603 proteins had higher HEPES T_{agg} and PBS T_{agg} values than whey, but both formed soluble aggregates in solution while whey formed insoluble aggregates that precipitated from solution. Thus, even in an aggregated state, these two nutritive proteins would be expected to remain in solution for a greater period of time than whey.

Example 11: Digestibility Screening – Determination of Digestion Half-Life

[00293] The goal of screening for protein digestibility is to eliminate potentially unsafe allergenic proteins and to determine the relative completeness of digestion as a predictor of peptide bioavailability. This screening method utilizes a physiologically relevant *in vitro* digestion reaction that includes both phases of protein digestion, simulated gastric digestion and simulated intestinal digestion (Moreno, J. F. et al., 2005. Stability of the major allergen

Brazil nut 2S albumin (Ber e 1) to physiologically relevant in vitro gastrointestinal digestion. FEBS Journal, pp. 341-352.). Samples can be taken throughout the reaction and analyzed for intact protein and peptide fragments using chip electrophoresis and LC-QTOF-MS. Proteins with allergenic properties can be assessed by identifying proteins or large fragments of proteins that are resistant to digestive proteases and thus have a higher risk of causing an allergenic reaction (Goodman, R. E. et al., 2008. Allergenicity assessment of genetically modified crops - what makes sense?. Nature Biotechnology, pp. 73-81.). Digestibility is measured by determining how efficiently the protein is broken down into peptides (Daniel, H., 2003. Molecular and Integrative Physiology of Intestinal Peptide Transport. Annual Review of Physiology, Volume 66, pp. 361-384.).

[0044] The method used an automated assay for in vitro digestions of proteins wherein assay conditions and protease concentrations are physiologically relevant (Moreno, F. J., Mackie, A. R. & Clare Mills, E. N., 2005. Phospholipid interactions protect the milk allergen α -Lactalbumin from proteolysis during in vitro digestion. Journal of agricultural and food chemistry, pp. 9810-9816; Martos, G., Contreras, P., Molina, E. & Lopez-Fandino, R., 2010. Egg White Ovalbumin Digestion Mimicking Physiological Conditions. Journal of Agricultural and food chemistry, pp. 5640-5648; Moreno, J. F. et al., 2005. Stability of the major allergen Brazil nut 2S albumin (Ber e 1) to physiologically relevant in vitro gastrointestinal digestion. FEBS Journal, pp. 341-352.). The first phase of digestion is in simulated gastric fluid (SGF) and formulated at pH 1.5 and with a pepsin:substrate ratio of (1:10 w/w). The second phase of digestion is in simulated intestinal fluid (SIF) is formulated with bile salts at pH 6.5 and with an trypsin:chymotrypsin:substrate ratio of (1:4:400 w/w). The protein is treated for 120 mins in the simulated gastric fluid, which is how long it takes for 90% of a liquid meal to pass from the stomach to the small intestine (Kong, F. & Singh, R. P., 2008. Disintegration of Solid Foods in Human Stomach. *Journal of Food Science*, pp. 67-80), and then treated with simulated intestinal fluid for 120 mins. Sample time points are taken throughout both reactions and quenched for analysis. Bovine serum albumin, which is readily digested by pepsin, is the positive control for the SGF solution, and beta-lactoglobulin, which is naturally resistant to pepsin but digested in SIF, is the positive control for SIF solution. Intact protein and large fragments were detected using electrophoresis. For chip electrophoresis, a Caliper Labchip GXII equipped with a HT Low MW Protein Assay Kit was used to monitor the size and amount of intact protein as well as any digestion fragments larger than 4 kDa. By monitoring the amount of intact protein observed over time,

the half-life ($\tau_{1/2}$) of digestion was calculated for SGF and, if intact protein is detected after SGF digestion, in SIF.

[0045] This method was used to analyze the digestion half-lives of thirteen nutritive proteins of this disclosure (SEQ ID NOS: 2547, 2575, 2578, 2580, 2582, 2587, 2595, 2596, 2598, 2599, 2600, 2602, and 2603) produced as described in Examples 6 and 7, as well as native and recombinant ovalbumin (OVA and rOVA, respectively; SEQ ID NO: 2610) and beta-lactoglobulin (BLG and rBLG, respectively; SEQ ID NO: 2611) proteins and a whey standard. The results of these experiments are summarized in Table 11. An “n/a” entry in the Simulated Intestinal Fluid field indicates that no intact protein was detected after SGF digestion.

Table 11

Seq ID No.	Digestion $\tau_{1/2}$ (min.)	
	Simulated Gastric Fluid	Simulated Intestinal Fluid
2547	0.3	n/a
2575	0.3	n/a
2578	2	n/a
2580	6	n/a
2582	0.5	n/a
2587	0.7	n/a
2595	10	n/a
2596	0.6	n/a
2598	0.7	n/a
2599	0.3	n/a
2600	29	1
2602	1	n/a
2603	6	n/a
BLG (2611)	77	4
rBLG (2611)	50	0.7
OVA (2610)	18	1
rOVA (2610)	5	n/a
whey	99	4

[0046] The results shown in Table 11 indicate that twelve of the thirteen nutritive proteins of this disclosure were all completely digested by SGF and have SGF half lives of ten minutes or less. By comparison whey is not completely digested by SGF and has an SGF half life of 99 minutes and a SIF half life of 4 minutes. This study suggests that the nutritive proteins of this disclosure are likely to be readily digested and not likely to elicit an allergic response when ingested.

[00294] The results in Table 11 also show that the recombinant beta-lactoglobulin and ovalbumin produced according to this disclosure were both more readily digested than their naturally-occurring counterparts. The speed in which a protein is broken down can be controlled by selecting for properties that improve or limit accessibility of the gastrointestinal proteases. This capability can be demonstrated for two typical protein properties, glycosylation and disulfide cross-linking. Like many naturally occurring proteins, naturally occurring OVA and BLG are glycosylated by their host organisms. In contrast, the recombinant proteins produced according to the present disclosure are not glycosylated because the host organism (*E. coli* in this case) does not glycosylate. The lack of glycosylation in recombinant nutritive proteins according to this disclosure may result in proteins that are more readily digested. Furthermore, BLG has four disulfide bonds that are known to slow down or interfere with digestion. When these disulfide bonds are disrupted, the rate of digestion increases (Reddy, I. M., Kella, N. K. D. & Kinsella, J. E., 1988. Structural and conformational Basis of the Resistance of b-Lactoglobulin to Peptic and Chymotryptic Digestion. *J. Agric. Food Chem.*, Volume 36, pp. 737-741). A lack or disruption of disulfide bond formation in recombinant nutritive proteins according to this disclosure may result in proteins that are more readily digested.

Example 12: Digestibility Screening – Analysis of Digestion Products

[00295] Two nutritive proteins produced as described in Examples 6 and 7 (SEQ ID NOS: 2612 and 2613) were subjected to SGF and SIF digestion as described in Example 11. Both proteins were completely digested in SGF, and the SGF half lives are shown in Table 12.

Table 12

	Digestion $\tau_{1/2}$ (min.)	
Seq ID No	Simulated Gastric Fluid	Simulated Intestinal Fluid
2612	0.7	n/a
2613	6	n/a

[00296] To detect and identify peptides that were present after SGF and SIF digestion, samples of the SGF and SIF digests were analyzed by LC/Q-TOF MS/MS. Samples from the SGF digests were directly analyzed by LC/Q-TOF MS/MS, while SIF protein digestions required purification by SCX to remove bile acids before detection and identification by LC/Q-TOF MS/MS. Peptides were extracted from the chromatograms and identified using Bioconfirm Software (Agilent). The sequence assignment of peptides were based on accurate mass match (± 10 ppm) and further confirmed by MS/MS fragmentation. The results are shown in Tables 13 and 14 below.

Table 13**(SEQ ID NO: 2612)**

SGF Peptides 120 min	SEQ ID NO	SIF Peptides 120 min	SEQ ID NO
LL		SE	
LAL		PSE	
HVL		HVL	
LEL		FKV	
LALA	2616	HQI	
LLLD	2617	PSEA	2618
IAEF	2619	REV	
IQQF	2620	FDK	
YDKL	2621	AEFK	2622
SNLTE	2623	LKHV	2624
ELLEA	2625	SSSEL	2626
EELAL	2627	FKVF	2628
DDLLL	2629	AELKH	2630
LAYDK	2631	LKHVL	2632
TKTRL	2633	FKEAF	2634
DLDHQ	2635	NGSISS	2636

GTLENL	2637	SLGLSPS	2638
EKLTD	2639	GEKLTD	2640
AEVDDM	2641	ELATVM	2642
LDDLLL	2643	GSGEINI	2644
LDLDHQ	2645	RSLGLSP	2646
DLKKKL	2647	ELKHVL	2648
KTKTRL	2649	KLTD	2650
SQRLEE	2651	FKVFDK	2652
AEVDDML	2653	AEVDDML	2654
QQELDDL	2655	DAEVDDM	2656
LEKTKTR	2657	AELKHVL	2658
LEKTKTR	2659	HVLTSIGE	2660
GTLENLEE	2661	SIGEKLTD	2662
QQELDDL	2663	RSLGLSPSE	2664
KLEKTKTRLQ	2665	VLTSIGEKL	2666
SRQLKSNSEQ	2667	TSIGEKLTD	2668
EKTKTRLQQEL	2669	HVLTSIGEKL	2670
YDKLEKTKTRL	2671	AELKHVLTS	2672
LAYDKLEKTKTRL	2673	RSLGLSPSEA	2674
EELKKKLLKDLEL	2675	SSNLTEEQIA	2676
EELKKKLLKDLELL	2677	RSLGLSPSEAE	2678
AELKHVLTSIGEKLTD	2679	KVFDKNGDGLISA	2680
MGSHHHHHHHSSNL	2681	FDKDNNGSISSSEL	2682
LREVSDGSGEINIQQF	2683	REVSDGSGEINIQQ	2684
AAELKHVLTSIGEKLTD	2685	DVDGNHQIEFSEF	2686
AELKHVLTSIGEKLTD	2687	LREVSDGSGEINIQQ	2688
AYDKLEKTKTRLQQEL	2689	REVSDGSGEINIQQF	2690
AAELKHVLTSIGEKLTD	2691	LREVSDGSGEINIQQFAALLS	2692
LENLEELKKKLLKDLEL	2693		
KLEKTKTRLQQELDDL	2694		
DKLEKTKTRLQQELDDL	2695		
LAYDKLEKTKTRLQQELDDL	2696		
LALAYDKLEKTKTRLQQELDDL	2697		

Table 14
(SEQ ID NO: 2613)

SGF Peptides 120 min	SEQ ID NO	SIF Peptides 120 min	SEQ ID NO
GVL		TKH	
ALL		INDI	2698
LVL		HLVL	2699
IGVL	2700	TIKF	2701
TIKF	2702	IGVLD	2703
TIKF	2704	RNLD	2705
EVYDL	2706	IGVLDV	2707
LNDSVQ	2708	QTIKF	2709
IWVIND	2710	VQTIKF	2711
DLNDSVQ	2712	SVQTIKF	2713
SVQTIKF	2714	KCAKCISMIGVL	2715
HHLVLGALLD	2716	EKCAKCISMIGV	2717
HHHHHHLVL	2718	HEFKRTTYSE	2719
HHHHHHHHLVL	2720	SHKFRNLDKDL	2721
DVTKHEFKRTTY	2722	ISMIGVLDVTKHE	2723
SHHHHHHHHHLVL	2724		
TKHEFKRTTYSEN	2725		
GSHHHHHHHHHLVLG	2726		
MGSHHHHHHHHHLVL	2727		
KRTTYSENEVYDLN	2728		

5 [00297] As can be seen in Tables 13 and 14, each protein was digested into multiples smaller peptide fragments ranging in size from 2 to 22 amino acids (SEQ ID NO: 2612) or 2 to 13 amino acids (SEQ ID NO: 2613). None of these peptide fragments was found to be homologous to any known allergen.

10 [00298] While the present invention has been described with reference to the specific embodiments thereof, it should be understood by those skilled in the art that various changes may be made and equivalents may be substituted without departing from the true spirit and scope of the invention. In addition, many modifications may be made to adapt a particular

situation, material, composition of matter, process, process step or steps, to the objective, spirit and scope of the present invention. All such modifications are intended to be within the scope of the claims appended hereto.

CLAIMS

1. A method of maintaining or increasing at least one of muscle mass, muscle strength, and muscle functional performance in a subject, the method comprising providing to the subject a sufficient amount of a nutritive composition comprising an isolated nutritive protein fragment comprising a polypeptide sequence that is at least about 80% homologous to a fragment of a naturally-occurring protein sequence over the total length of the isolated nutritive protein fragment, wherein the isolated nutritive protein fragment is at least 25 amino acids in length, wherein the isolated nutritive protein fragment is less than or equal to 150 amino acids in length, wherein the polypeptide sequence comprises a ratio of essential amino acid residues to total amino acid residues of at least 40%, a ratio of branch chain amino acid residues to total amino acid residues of at least 18% and a ratio of Leu residues to total amino acid residues of at least 8%, wherein the isolated nutritive protein fragment has an aqueous solubility at pH 7 of at least 50 g/L, and wherein the isolated nutritive protein fragment is present in the composition in an amount of at least about 1 gram.
2. The method of claim 1, wherein the isolated nutritive protein fragment has a simulated gastric digestion half-life of less than 10 minutes.
3. The method of claim 1 or 2, wherein the polypeptide sequence comprises 0, 1, 2, or 3 cysteine residues, or wherein the isolated nutritive protein fragment comprises no disulfide bonds.
4. The method of any one of claims 1 to 3, wherein the isolated nutritive protein fragment does not comprise N-linked glycosylation and/or does not comprise O-linked glycosylation.
5. The method of any one of claims 1 to 4, wherein the polypeptide sequence has a calculated solvation score of -20 or less.
6. The method of any one of claims 1 to 5, wherein the polypeptide sequence comprises an amino acid sequence selected from:

- i. an amino acid sequence selected from a SEQ ID;
- ii. a modified derivative of an amino acid sequence selected from the SEQ ID list; and
- iii. a mutein of an amino acid sequence selected from the SEQ ID list,

wherein the SEQ ID list is SEQ ID NOs 4-8, 12-13, 15-18, 20-27, 30, 32-37, 40-42, 45-51, 53, 56-57, 59, 63-69, 71, 74-77, 79, 81, 83, 85, 87, 90, 93-96, 98, 101-102, 106-108, 110-112, 114-115, 117-123, 128-130, 134-137, 139-141, 145-147, 151, 153, 155, 157-159, 161-162, 168-169, 174-175, 177-182, 188-189, 194, 196-197, 199-202, 204-205, 207, 209, 211-212, 214-215, 218-219, 221-222, 225-226, 228, 231-234, 237, 239, 241-247, 249-251, 255, 259-260, 268, 270-271, 274-278, 280, 282-285, 287-288, 290, 292-294, 299, 301, 304-306, 308-310, 313, 315-323, 326-329, 331, 333-338, 341, 348-349, 351, 354, 356, 359-360, 363-369, 372-375, 378-379, 381-386, 388, 393-398, 401, 404-405, 407-408, 410-411, 413-417, 420, 422, 426-429, 431-433, 436, 438-439, 441, 444, 446, 448-449, 451, 453-457, 459, 462-468, 471-473, 477, 479, 481-483, 485-489, 492-493, 495, 497, 499, 501-504, 508, 511, 515-516, 522-523, 527-528, 530, 533-537, 539-541, 543-549, 551-552, 554-557, 559-560, 565-566, 568, 570, 574-576, 578-580, 582-584, 586-591, 594, 597, 603-607, 610-612, 614-615, 617-618, 620-622, 624, 626-629, 634-635, 639, 641, 643, 645, 651-652, 654-655, 657, 659, 663-666, 675, 677-678, 680-681, 684-686, 688-689, 692, 694-696, 701, 706-708, 712-714, 717-718, 721-723, 725, 729-731, 733, 735-736, 738, 740-741, 744, 746-748, 750-751, 753, 755, 757-759, 762-764, 766-767, 775-776, 780-781, 784-785, 787, 800-807, 809, 812-820, 835, 838-839, 844, 847-848, 850-851, 854, 857, 862-863, 866, 868, 871-873, 875-876, 878-880, 882, 884-885, 887, 889, 891-892, 894, 898, 901-910, 912, 915-920, 924-928, 930, 935, 937-938, 941-943, 945-948, 950, 956-960, 964-967, 969-970, 972-973, 975, 977-978, 981-982, 985-988, 990, 992-997, 999-1011, 1014-1021, 1024-1025, 1027-1028, 1030, 1032-1050, 1052-1053, 1055-1077, 1079-1080, 1082-1096, 1098-1106, 1108-1112, 1114-1115, 1117-1121, 1123-1180, 1182-1190, 1192-1205, 1207-1232, 1234-1239, 1241-1244, 1246-1259, 1261-1274, 1276, 1278-1282, 1284-1285, 1287-1324, 1326-1342,

1344-1346, 1348-1360, 1362-1374, 1376-1414, 2519-2532, 2535-2556, 2559-2568, 2574-2596, 2598-2599, 2601-2609, and 2612-2613.

7. The method of claim 1 to 6, wherein the polypeptide sequence further comprises a polypeptide tag, optionally wherein the tag comprises a polyhistidine-tag.

8. The method of any one of claims 1 to 7, wherein the polypeptide sequence comprises at least one of each essential amino acid.

9. The method of any one of claims 1 to 8, wherein the nutritive composition further comprises a protein, a polypeptide, a peptide, a free amino acid, a carbohydrate, a fat, a mineral or mineral source, a vitamin, a supplement, an organism, a pharmaceutical, and/or an excipient, optionally wherein the free amino acid is selected from the group consisting of essential amino acids, non-essential amino acids, branch chain amino acids, non-standard amino acids and modified amino acids.

10. The method of any one of claims 1 to 9, further comprising providing a second isolated nutritive protein or fragment thereof comprising a second polypeptide sequence that is at least about 80% homologous to a fragment of a second naturally-occurring protein sequence over the total length of the fragment of the second isolated protein fragment, wherein the second polypeptide sequence comprises a ratio of essential amino acid residues to total amino acid residues of at least 40% and at least one of: a ratio of branch chain amino acid residues to total amino acid residues of at least 18% and a ratio of Leu residues to total amino acid residues of at least 8.

11. A method of treating at least one of cachexia, sarcopenia and frailty in a subject, the method comprising providing to the subject a sufficient amount of a nutritive composition comprising an isolated nutritive protein fragment comprising a polypeptide sequence that is at least about 80% homologous to a fragment of a naturally-occurring protein sequence over the total length of the isolated nutritive protein fragment, wherein the polypeptide sequence is at least 25 amino acids in length, wherein the isolated nutritive protein fragment is less than or equal to 150 amino acids in length,

wherein the polypeptide sequence comprises a ratio of essential amino acid residues to total amino acid residues of at least 40% and at least one of: a ratio of branch chain amino acid residues to total amino acid residues of at least 18% and a ratio of Leu residues to total amino acid residues of at least 8%, wherein the isolated nutritive protein fragment has an aqueous solubility at pH 7 of at least 50 g/L, and wherein the isolated nutritive protein fragment is present in the composition in an amount of at least about 1 gram.

12. The method of claim 11, wherein the isolated nutritive protein fragment has a simulated gastric digestion half-life of less than 10 minutes and/or wherein the polypeptide sequence has a calculated solvation score of -20 or less.

13. The method of claim 11 or 12, wherein the polypeptide sequence comprises 0, 1, 2, or 3 cysteine residues, or wherein the isolated nutritive protein fragment comprises no disulfide bonds.

14. The method of any one of claims 11 to 13, wherein the isolated nutritive protein fragment does not comprise N-linked glycosylation and/or does not comprise O-linked glycosylation.

15. The method of any one of claims 11 to 14, wherein the nutritive composition further comprises a protein, a polypeptide, a peptide, a free amino acid, a carbohydrate, a fat, a mineral or mineral source, a vitamin, a supplement, an organism, a pharmaceutical, and/or an excipient, optionally wherein the free amino acid is selected from the group consisting of essential amino acids, non-essential amino acids, branch chain amino acids, non-standard amino acids and modified amino acids

16. The method of any one of claims 11 to 15, wherein the composition is provided to the subject orally.

17. The method of any one of claims 11 to 16, wherein the polypeptide sequence comprises a ratio of essential amino acid residues to total amino acid residues of greater than 49% and at least one of: a ratio of branch chain amino acid residues to

total amino acid residues of greater than 24% and a ratio of Leu residues to total amino acid residues of greater than 11%.

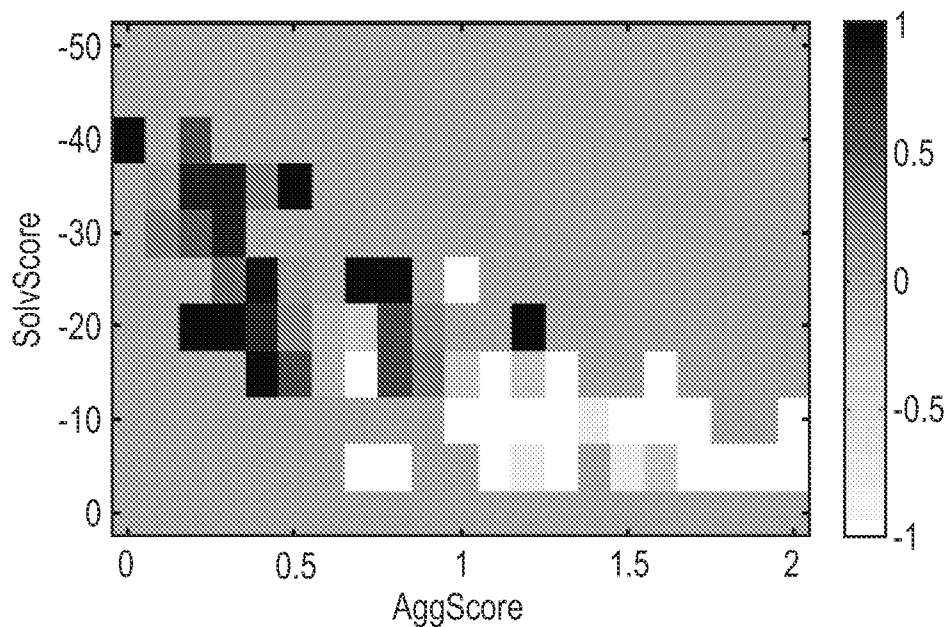
18. The method of any one of claims 1 to 17, wherein the composition is provided to the subject orally.

19. The method of any one of claims 1 to 18, wherein the polypeptide sequence comprises a ratio of essential amino acid residues to total amino acid residues of greater than 49% and at least one of: a ratio of branch chain amino acid residues to total amino acid residues of greater than 24% and a ratio of Leu residues to total amino acid residues of greater than 11%.

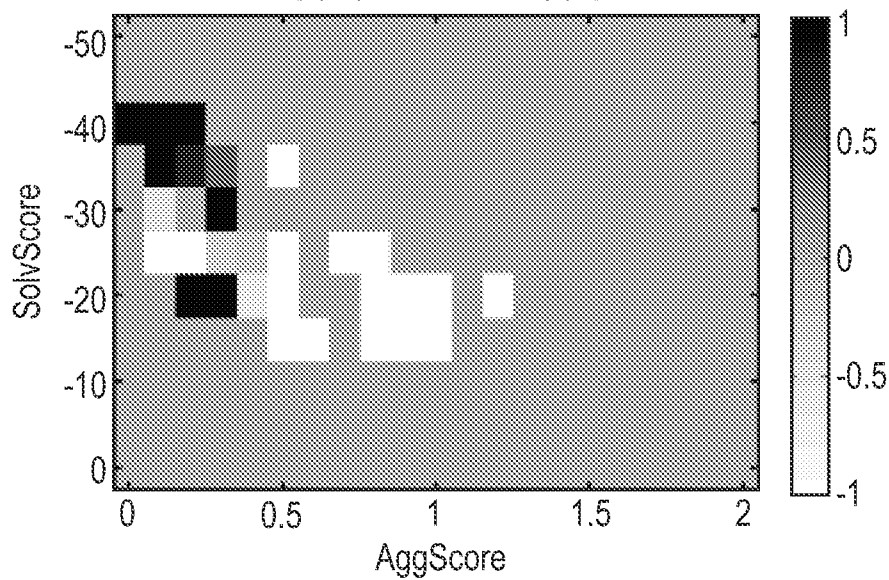
20. The method of any one of claims 1 to 19, wherein the polypeptide sequence has less than 50% global homology to a known allergen.

1/1

WHOLE PROTEINS/FRAGMENTS - RELATIVE LOG LIKELIHOOD OF EXPRESSION

**FIG. 1**

WHOLE PROTEINS/FRAGMENTS - RELATIVE LOG LIKELIHOOD OF SOLUBLE EXPRESSION

**FIG. 2**

1005_005_PCT_SL17083606
SEQUENCE LISTING

<110> PRONUTRIA, INC.

<120> NUTRITIVE FRAGMENTS, PROTEINS AND METHODS

<130> 1005.005-PCT

<140>

<141>

<150> 61/615,819

<151> 2012-03-26

<160> 2728

<170> PatentIn version 3.5

<210> 1

<211> 201

<212> PRT

<213> Sus scrofa

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Leu Phe Thr Asn Gly Lys Glu Arg Leu Thr Leu Glu Phe Ser Glu Asp
1 5 10 15

Cys Leu Tyr Leu Asn Ile Tyr Thr Pro Ala Asp Leu Thr Lys Arg Gly
20 25 30

Arg Leu Pro Val Met Val Trp Ile His Gly Gly Gly Leu Val Leu Gly
35 40 45

Gly Ala Pro Met Tyr Asp Gly Val Val Leu Ala Ala His Glu Asn Val
50 55 60

Val Val Val Ala Ile Gln Tyr Arg Leu Gly Ile Trp Gly Phe Phe Ser
65 70 75 80

Thr Gly Asp Glu His Ser Arg Gly Asn Trp Gly His Leu Asp Gln Val
85 90 95

Ala Ala Leu His Trp Val Gln Glu Asn Ile Ala Asn Phe Gly Gly Asp
100 105 110

Pro Gly Ser Val Thr Ile Phe Gly Glu Ser Ala Gly Gly Glu Ser Val
115 120 125

Ser Val Leu Val Leu Ser Pro Leu Ala Lys Asn Leu Phe His Arg Ala
130 135 140

Ile Ser Glu Ser Gly Val Ala Leu Thr Val Ala Leu Val Arg Lys Asp
145 150 155 160

Met Lys Ala Ala Ala Lys Gln Ile Ala Val Leu Ala Gly Cys Lys Thr
165 170 175

Thr Thr Ser Ala Val Phe Val His Cys Leu Arg Gln Lys Ser Glu Asp
180 185 190

Glu Leu Leu Asp Leu Thr Leu Lys Met
195 200

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<211> 176
<212> PRT
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Val Ile Ile Pro Leu Thr Lys Val Lys Ser Ile Arg Glu Asn Leu Arg
20 25 30

Glu Lys Asp Leu Leu Leu Asn Phe Leu Lys Glu His Pro Tyr Asn Met
35 40 45

Ile Gln Lys Phe Gly Leu Lys Gly Ser Leu Cys Ser Pro Lys Ile Ser
50 55 60

Cys Leu Arg Leu Trp Asn Tyr Leu Asp Met Val Tyr Val Gly Asn Ile
65 70 75 80

Thr Ile Gly Thr Pro Pro Gln Leu Phe Ser Val Ile Phe Asp Thr Ala
85 90 95

Ser Ser Asp Leu Trp Val Pro Ser Asn Gln Cys His Ser Arg Ala Cys
100 105 110

Val Thr His Arg Ser Phe Asn Pro Thr Leu Ser Ser Thr Phe Gln Ser
115 120 125

Ser Asn Arg Thr Val Lys Leu Ala Pro His Ser Gly Leu Val Ser Gly
130 135 140

Leu Leu Gly Tyr Asp Thr Val Gln Ile Gly Arg Phe Lys Ser Glu Asn
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Gln Ala Phe Gly Leu Ser Gln Ser Glu Pro Val Lys Glu Leu Glu Asn
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Trp Val Gln Glu Asn Ile Ala Asn Phe Gly Gly Asp Pro Gly Ser Val
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Thr Ile Phe Gly Glu Ser Ala Gly Gly Glu Ser Val Ser Val Leu Val
20 25 30

Leu Ser Pro Leu Ala Lys Asn Leu Phe His Arg Ala Ile Ser Glu Ser
35 40 45

Gly Val Ala Leu Thr Val Ala Leu Val Arg Lys Asp Met Lys Ala Ala
50 55 60

Ala Lys Gln Ile Ala Val Leu Ala Gly Cys Lys Thr Thr Thr Ser Ala
65 70 75 80

Val Phe Val His Cys Leu Arg Gln Lys Ser Glu Asp Glu Leu Leu Asp
85 90 95

Leu Thr Leu Lys Met Lys Phe Leu Thr Leu Asp Phe His Gly Asp Gln
100 105 110

Arg Glu Ser His Pro Phe Leu Pro Thr Val Val Asp Gly Val Leu Leu
115 120 125

Pro Lys Met Pro Glu Glu Ile Leu Ala Glu Lys Asp Phe Asn Thr Val
130 135 140

Pro Tyr Ile Val Gly Ile Asn Lys Gln Glu Phe Gly Trp Leu Leu Pro
145 150 155 160

Thr Met Met Gly Phe Pro Leu Ser Glu Gly Lys Leu Asp Gln Lys Thr
165 170 175

Ala Thr Ser Leu Leu Trp Lys Ser Tyr Pro Ile Ala Asn Ile Pro Glu
180 185 190

Glu Leu Thr Pro Val Ala Thr Asp Lys Tyr Leu Gly Gly Thr Asp Asp
195 200 205

Pro Val Lys Lys Lys Asp Leu Phe Leu Asp Leu Met Gly Asp Val Val
210 215 220

Phe Gly
225

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<212> PRT
<213> Sus scrofa

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Met Lys Trp Leu Val Ile Leu Gly Leu Val Ala Leu Ser Glu Cys Leu
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Val Ile Ile Pro Leu Thr Lys Val Lys Ser Ile Arg Glu Asn Leu Arg
20 25 30

Glu Lys Asp Leu Leu Leu Asn Phe Leu Lys Glu His Pro Tyr Asn Met
35 40 45

Ile Gln Lys Phe Gly Leu Lys Gly Ser Leu Cys Ser Pro Lys Ile Ser
50 55 60

Cys Leu Arg Leu Trp Asn Tyr Leu Asp Met Val Tyr
65 70 75

<210> 5
<211> 76
<212> PRT
<213> Sus scrofa

<400> 5
Met Leu Asn Leu Leu Val Leu Ala Leu Pro Leu Leu Val Ser Leu Val
1 5 10 15

His Thr Ala Pro Ala Pro Gly Gln Ala Leu Glu Arg Ala Gly Ile Val
20 25 30

Gly Gly Lys Glu Ala Pro Gly His Lys Trp Pro Trp Gln Val Ser Leu
35 40 45

Arg Cys Leu Asp Gln Tyr Trp Lys His Phe Cys Gly Gly Ser Leu Ile
50 55 60

His Pro Gln Trp Val Leu Thr Ala Ala His Cys Phe
65 70 75

<210> 6
<211> 76
<212> PRT
<213> Sus scrofa

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Met Lys Trp Leu Val Ile Leu Gly Leu Val Ala Leu Ser Asp Cys Leu
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Val Met Ile Pro Leu Thr Lys Val Lys Ser Val Arg Glu Ser Leu Arg
20 25 30

Glu Lys Gly Leu Leu Lys Asn Phe Leu Lys Glu His Pro Tyr Asn Met
35 40 45

Ile Gln Asn Leu Leu Ser Lys Asn Ser Ser His Val Gln Lys Phe Ser
50 55 60

Tyr Gln Pro Leu Arg Asn Tyr Leu Asp Met Val Tyr
65 70 75

<210> 7
<211> 76
<212> PRT
<213> Sus scrofa

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Leu Phe Thr Asn Gly Lys Glu Arg Leu Thr Leu Glu Phe Ser Glu Asp
1 5 10 15

Cys Leu Tyr Leu Asn Ile Tyr Thr Pro Ala Asp Leu Thr Lys Arg Gly
20 25 30

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Arg Leu Pro Val Met Val Trp Ile His Gly Gly Gly Leu Val Leu Gly
35 40 45

Gly Ala Pro Met Tyr Asp Gly Val Val Leu Ala Ala His Glu Asn Val
50 55 60

Val Val Val Ala Ile Gln Tyr Arg Leu Gly Ile Trp
65 70 75

<210> 8
<211> 126
<212> PRT
<213> Sus scrofa

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Glu Trp Val Ser Thr Arg Phe Arg Ala Ile Lys Ser Ile Ala Val Gly
1 5 10 15

Phe Phe Tyr Thr Phe Gly Gln Phe Ile Leu Pro Gly Leu Ala Tyr Ala
20 25 30

Ile Pro Gln Trp Arg Trp Leu Gln Leu Thr Val Ser Val Pro Phe Leu
35 40 45

Thr Phe Phe Leu Leu Ser Trp Trp Leu Pro Glu Ser Ile Arg Trp Met
50 55 60

Val Leu Ser Gly Lys Ser Ser Lys Ala Leu Lys Thr Leu Arg Gln Val
65 70 75 80

Ala Ile Phe Asn Gly Lys Lys Glu Glu Gly Glu Lys Leu Ser Leu Glu
85 90 95

Glu Leu Lys Leu Asn Leu Gln Lys Glu Ile Ser Leu Ala Lys Ala Arg
100 105 110

His Gly Ile Ala Asp Leu Phe Arg Thr Pro Val Leu Arg Arg
115 120 125

<210> 9
<211> 226
<212> PRT
<213> Sus scrofa

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Glu Trp Val Ser Thr Arg Phe Arg Ala Ile Lys Ser Ile Ala Val Gly
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Phe Phe Tyr Thr Phe Gly Gln Phe Ile Leu Pro Gly Leu Ala Tyr Ala
20 25 30

Ile Pro Gln Trp Arg Trp Leu Gln Leu Thr Val Ser Val Pro Phe Leu
35 40 45

Thr Phe Phe Leu Leu Ser Trp Trp Leu Pro Glu Ser Ile Arg Trp Met
50 55 60

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Val Leu Ser Gly Lys Ser Ser Lys Ala Leu Lys Thr Leu Arg Gln Val
65 70 75 80

Ala Ile Phe Asn Gly Lys Lys Glu Glu Gly Glu Lys Leu Ser Leu Glu
85 90 95

Glu Leu Lys Leu Asn Leu Gln Lys Glu Ile Ser Leu Ala Lys Ala Arg
100 105 110

His Gly Ile Ala Asp Leu Phe Arg Thr Pro Val Leu Arg Arg Val Thr
115 120 125

Leu Cys Leu Ser Leu Ala Trp Phe Ala Thr Gly Phe Ala Tyr Tyr Ser
130 135 140

Leu Ala Met Gly Val Glu Glu Phe Gly Val Asn Leu Tyr Val Leu Gln
145 150 155 160

Leu Ile Phe Gly Gly Val Asp Val Pro Ala Lys Phe Ile Thr Met Leu
165 170 175

Ser Ile Ser Tyr Leu Gly Arg His Ile Thr Glu Gly Ile Val Leu Leu
180 185 190

Leu Ala Gly Gly Cys Ile Leu Ala Leu Ile Phe Val Pro Leu Asp Leu
195 200 205

Met Thr Leu Arg Thr Val Leu Ala Val Phe Gly Lys Gly Cys Leu Ser
210 215 220

Gly Ser
225

<210> 10
<211> 226
<212> PRT
<213> Sus scrofa

<400> 10
Tyr Asn Ile Val Asp Arg Asp Ser Ile Val Thr Glu Trp Asp Leu Val
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Cys Ser Ser Ser Lys Leu Lys Glu Met Ala Gln Ser Val Phe Met Ala
20 25 30

Gly Ile Leu Val Gly Gly Leu Val Leu Gly Ala Leu Ser Asp Arg Phe
35 40 45

Gly Arg Lys Pro Ile Leu Ile Phe Ser Tyr Leu Leu Leu Gly Ala Ser
50 55 60

Gly Ser Gly Ala Ala Phe Ser Pro Thr Phe Ser Ile Tyr Ala Val Phe
65 70 75 80

Arg Phe Leu Cys Gly Phe Ser Ile Ser Gly Ile Ser Leu Ser Thr Ala
85 90 95

Ile Leu Asn Val Glu Trp Val Ser Thr Arg Phe Arg Ala Ile Lys Ser
100 105 110

Ile Ala Val Gly Phe Phe Tyr Thr Phe Gly Gln Phe Ile Leu Pro Gly
115 120 125

Leu Ala Tyr Ala Ile Pro Gln Trp Arg Trp Leu Gln Leu Thr Val Ser
130 135 140

Val Pro Phe Leu Thr Phe Phe Leu Leu Ser Trp Trp Leu Pro Glu Ser
145 150 155 160

Ile Arg Trp Met Val Leu Ser Gly Lys Ser Ser Lys Ala Leu Lys Thr
165 170 175

Leu Arg Gln Val Ala Ile Phe Asn Gly Lys Lys Glu Glu Gly Glu Lys
180 185 190

Leu Ser Leu Glu Glu Leu Lys Leu Asn Leu Gln Lys Glu Ile Ser Leu
195 200 205

Ala Lys Ala Arg His Gly Ile Ala Asp Leu Phe Arg Thr Pro Val Leu
210 215 220

Arg Arg
225

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<212> PRT
<213> Malus domestica

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Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu Leu Asp Arg Glu
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Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg His Val Arg Met
35 40 45

Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His Thr Ile Leu Lys
50 55 60

Thr Thr Leu Val Glu Leu Gly Arg Thr Leu Ala Leu Glu Glu Cys Ala
65 70 75 80

Leu Trp Met Pro Thr Arg Thr Gly Leu Glu Leu Gln Leu Ser Tyr Thr
85 90 95

Leu Arg Gln Gln Asn Pro Val Gly Tyr Thr Val Pro Ile His Leu Pro

100

105

110

Val Ile Asn Gln Val Phe Ser Ser Asn Arg Ala Val Lys Ile Ser Ala
115 120 125

Asn Ser Pro Val Ala Lys Leu Arg Gln Leu Ala Gly Arg His Ile Pro
130 135 140

Gly Glu Val Val Ala Val Arg Val Pro Leu Leu His Leu Ser Asn Phe
145 150 155 160

Gln Ile Asn Asp Trp Pro Glu Leu Ser Thr Lys Arg Tyr Ala Leu Met
165 170 175

Val Leu Met Leu Pro Ser Asp Ser Ala Arg Gln Trp His Val His Glu
180 185 190

Leu Glu Leu Val Glu Val Val Ala Asp
195 200

<210> 12
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<212> PRT
<213> Prunus persica

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Thr Ala Leu Met Leu Val His Ile Ile Pro Asp Leu Leu Ser Val Lys
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Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu Leu Asp Arg Glu
20 25 30

Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg His Val Arg Met
35 40 45

Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His Thr Ile Leu Lys
50 55 60

Thr Thr Leu Val Glu Leu Gly Arg Thr Leu Ala Leu Glu Glu Cys Ala
65 70 75 80

Leu Trp Met Pro Thr Arg Thr Gly Leu Glu Leu Gln Leu Ser Tyr Thr
85 90 95

Leu Arg Gln Gln Asn
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<210> 13
<211> 101
<212> PRT
<213> Malus domestica

<400> 13
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Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu Leu Asp Arg Glu
20 25 30

Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg His Val Arg Met
35 40 45

Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His Thr Ile Leu Lys
50 55 60

Thr Thr Leu Val Glu Leu Gly Arg Thr Leu Ala Leu Glu Glu Cys Ala
65 70 75 80

Leu Trp Met Pro Thr Arg Thr Gly Leu Glu Leu Gln Leu Ser Tyr Thr
85 90 95

Leu Arg Gln Gln Asn
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<210> 14
<211> 201
<212> PRT
<213> Prunus persica

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Thr Ala Leu Met Leu Val His Ile Ile Pro Asp Leu Leu Ser Val Lys
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Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu Leu Asp Arg Glu
20 25 30

Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg His Val Arg Met
35 40 45

Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His Thr Ile Leu Lys
50 55 60

Thr Thr Leu Val Glu Leu Gly Arg Thr Leu Ala Leu Glu Glu Cys Ala
65 70 75 80

Leu Trp Met Pro Thr Arg Thr Gly Leu Glu Leu Gln Leu Ser Tyr Thr
85 90 95

Leu Arg Gln Gln Asn Pro Val Gly Tyr Thr Val Pro Ile His Leu Pro
100 105 110

Val Ile Asn Gln Val Phe Ser Ser Asn Arg Ala Leu Lys Ile Ser Pro
115 120 125

Asn Ser Pro Val Ala Arg Met Arg Pro Leu Ala Gly Lys His Met Pro
130 135 140

Gly Glu Val Val Ala Val Arg Val Pro Leu Leu His Leu Ser Asn Phe
145 150 155 160

Gln Ile Asn Asp Trp Pro Glu Leu Ser Thr Lys Arg Tyr Ala Leu Met

165

170

175

Val Leu Met Leu Pro Ser Asp Ser Ala Arg Gln Trp His Val His Glu
 180 185 190

Leu Glu Leu Val Glu Val Val Ala Asp
 195 200

<210> 15
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 <212> PRT
 <213> Sus scrofa

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 Lys Ala Val Val Pro Glu Met Glu Lys Arg Gly Gly Gly Ser Val Leu
 1 5 10 15

Ile Val Ser Ser Val Gly Ala Tyr His Pro Phe Pro Asn Leu Gly Pro
 20 25 30

Tyr Asn Val Ser Lys Thr Ala Leu Leu Gly Leu Thr Lys Asn Leu Ala
 35 40 45

Val Glu Leu Ala Pro Arg Asn Ile Arg Val Asn Cys Leu Ala Pro Gly
 50 55 60

Leu Ile Lys Thr Asn Phe Ser Gln Val Leu Trp Met
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<210> 16
 <211> 101
 <212> PRT
 <213> Sus scrofa

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Phe Leu His Ser Gln Gly Ile Val His Leu Asp Leu Lys Pro Ala Asn
 20 25 30

Ile Leu Ile Ser Glu Gln Asp Val Cys Lys Ile Ser Asp Phe Gly Cys
 35 40 45

Ser Glu Arg Leu Glu Asp Leu Arg Phe Arg Pro Arg His His Leu Gly
 50 55 60

Gly Thr Tyr Thr His Arg Ala Pro Glu Leu Leu Lys Gly Glu Pro Val
 65 70 75 80

Thr Pro Lys Ala Asp Ile Tyr Ser Phe Ala Ile Thr Leu Trp Gln Met
 85 90 95

Thr Thr Arg Gln Val
 100

<210> 17
 <211> 76
 <212> PRT
 <213> Sus scrofa

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Ile Leu Gly Pro Leu Leu Tyr Gly Glu Val Gly Asp Thr Leu Leu Ile
 20 25 30

Ile Phe Lys Asn Lys Ala Ser Arg Pro Tyr Asn Ile Tyr Pro His Gly
 35 40 45

Ile Thr Asp Val Ser Ala Leu His Pro Gly Arg Leu Leu Lys Gly Trp
 50 55 60

Lys His Leu Lys Asp Met Pro Ile Leu Pro Gly Glu
 65 70 75

<210> 18
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 <212> PRT
 <213> Sus scrofa

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 <222> (94)..(94)
 <223> Any amino acid

<220>
 <221> MOD_RES
 <222> (99)..(99)
 <223> Any amino acid

<400> 18
 Glu Leu Lys Leu Ile Gly Glu Tyr Gly Leu Arg Asn Lys Arg Glu Val
 1 5 10 15

Trp Arg Val Lys Phe Thr Leu Ala Lys Ile Arg Lys Ala Ala Arg Glu
 20 25 30

Leu Leu Thr Leu Asp Glu Lys Asp Pro Arg Arg Leu Phe Glu Gly Asn
 35 40 45

Ala Leu Leu Arg Arg Leu Val Arg Ile Gly Val Leu Asp Glu Gly Lys
 50 55 60

Met Lys Leu Asp Tyr Ile Leu Gly Leu Lys Ile Glu Asp Phe Leu Glu
 65 70 75 80

Arg Arg Leu Gln Thr Gln Val Phe Lys Leu Gly Leu Ala Xaa Ser Ile
 85 90 95

His His Xaa Arg Val
 100

<210> 19
 <211> 151
 <212> PRT
 <213> Sus scrofa

<400> 19
 Glu Leu Arg Ala Met Met Glu Lys Leu Val Lys Ser Ile Ser Gln Leu
 1 5 10 15

Lys Asp Gln Gln Asp Ile Phe Cys Phe Arg Tyr Lys Ile Lys Ala Ser
 20 25 30

Ala Lys Thr His Ser Leu Asp Pro His Arg Thr Arg Gln Glu Gln Val
 35 40 45

Leu Gln Glu Thr Leu Asn Glu Leu Asp Lys Arg Arg Lys Glu Val Leu
 50 55 60

Asp Ala Ser Lys Ala Leu Leu Gly Arg Leu Thr Thr Leu Ile Glu Leu
 65 70 75 80

Leu Leu Pro Lys Leu Glu Glu Trp Lys Val Gln Gln Gln Lys Ala Cys
 85 90 95

Ile Gly Ala Pro Met Asp Gly Glu Leu Glu Gln Leu Glu Lys Trp Phe
 100 105 110

Thr Ala Glu Ala Lys Leu Leu Phe His Leu Arg Gln Leu Leu Lys Glu
 115 120 125

Leu Lys Gly Leu Ser Ser Val Val Lys Tyr Asp Glu Asp Leu Leu Phe
 130 135 140

Lys Gly Val Asp Leu Leu Lys
 145 150

<210> 20
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 20
 Lys Lys Lys Phe Pro Phe Gly Tyr Ile Lys Glu Leu Lys Cys Arg Val
 1 5 10 15

Leu Glu Leu Pro Tyr Gln Gly Lys Asp Leu Ser Met Val Ile Leu Leu
 20 25 30

Pro Asp Ser Ile Glu Asp Glu Ser Thr Gly Leu Arg Lys Ile Glu Gln
 35 40 45

His Leu Thr Leu Glu Lys Leu Asn Glu Trp Thr Lys Pro Asp Asn Leu
 50 55 60

Glu Leu Leu Glu Val Asn Val His Leu Pro Arg Phe
 65 70 75

<210> 21
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 21
 Ala Leu Leu Leu Lys Pro Asp Ile Phe Phe Lys Ile Pro Trp Leu Tyr
 1 5 10 15
 Arg Lys Tyr Glu Lys Ser Val Lys Asp Leu Lys Glu Asp Met Glu Ile
 20 25 30
 Leu Ile Glu Lys Lys Arg Arg Arg Ile Phe Thr Ala Glu Lys Leu Glu
 35 40 45
 Asp Cys Met Asp Phe Ala Thr Glu Leu Ile Leu Ala Glu Lys Arg Gly
 50 55 60
 Glu Leu Thr Lys Glu Asn Val Asn Gln Cys Ile Leu Glu Met Leu Ile
 65 70 75 80
 Ala Ala Pro Asp Thr Met Ser Val Thr Val Phe Phe Met Leu Phe Leu
 85 90 95
 Ile Ala Lys His Pro
 100

<210> 22
 <211> 126
 <212> PRT
 <213> Sus scrofa

<400> 22
 Leu Leu Leu Leu Leu Leu Leu Leu Pro Ala Pro Glu Leu Gly Pro Arg
 1 5 10 15
 Glu Ala Arg Ala Glu Glu Thr Asp Trp Val Arg Leu Pro Ser Lys Cys
 20 25 30
 Glu Val Cys Lys Tyr Val Ala Val Glu Leu Lys Ser Ala Phe Glu Glu
 35 40 45
 Thr Gly Lys Thr Lys Glu Val Ile Asp Thr Gly Tyr Gly Ile Leu Asp
 50 55 60
 Arg Lys Ala Ser Gly Val Lys Tyr Thr Lys Ser Asp Leu Arg Leu Ile
 65 70 75 80
 Glu Val Thr Glu Thr Ile Cys Lys Arg Leu Leu Asp Tyr Ser Leu His
 85 90 95
 Lys Glu Arg Thr Gly Ser Asn Arg Phe Ala Lys Gly Met Ser Glu Thr
 100 105 110
 Phe Glu Thr Leu His Asn Leu Val His Lys Gly Val Lys Val
 115 120 125

<210> 23
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 23
 Ser Asn Leu Asp Ser Glu Val Val Trp Gly Lys Ala Thr Gln Lys Glu
 1 5 10 15
 Ile Glu Lys Gln Lys Phe His Leu Lys Ser Ile Ser Glu Ile Gly Glu
 20 25 30
 Ala Leu Lys Met Val Leu Gly Lys Lys Glu Thr Leu Val Glu Asp Lys
 35 40 45
 Leu Ser Leu Leu Asn Ser Asn Trp Ile Ala Val Thr Ser Arg Ala Glu
 50 55 60
 Glu Trp Leu Asn Leu Leu Leu Glu Tyr Gln Lys His
 65 70 75

<210> 24
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 24
 Lys Lys Leu Ser Ala Gln Leu Met Glu His Cys Gln Lys Leu Glu Glu
 1 5 10 15
 Gln Ile Ala Lys Leu Arg Lys Leu Gln Asn His Ile Lys Thr Leu Lys
 20 25 30
 Asn Trp Met Ala Glu Val Asp Ile Phe Leu Lys Glu Glu Trp Pro Ala
 35 40 45
 Leu Gly Asp Ser Glu Ile Leu Arg Lys Gln Leu Lys Gln Cys Arg Leu
 50 55 60
 Leu Val Ser Asp Ile Gln Thr Ile Gln Pro Ser Leu
 65 70 75

<210> 25
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 25
 Leu Arg Thr Arg Ala Ile Lys Met Leu Val Leu Asp Glu Ala Asp Glu
 1 5 10 15
 Met Leu Asn Lys Gly Phe Lys Glu Gln Ile Tyr Asp Val Tyr Arg Tyr
 20 25 30
 Leu Pro Pro Ala Thr Gln Val Val Leu Ile Ser Ala Thr Leu Pro His
 35 40 45

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Glu Ile Leu Glu Met Thr Asn Lys Phe Met Thr Asp Pro Ile Arg Ile
50 55 60

Leu Val Lys Arg Asp Glu Leu Thr Leu Glu Gly Ile Lys Gln Phe Phe
65 70 75 80

Val Ala Val Glu Arg Glu Glu Trp Lys Phe Asp Thr Leu Cys Asp Leu
85 90 95

Tyr Asp Thr Leu Thr
100

<210> 26
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 26
Met Ala Glu Arg Val Leu Thr Arg Val His Ser Leu Arg Glu Arg Leu
1 5 10 15

Asp Ala Thr Leu Ala Ala His Arg Asn Glu Ile Leu Leu Phe Leu Ser
20 25 30

Arg Ile Glu Ser His Gly Lys Gly Ile Leu Lys Pro His Gln Leu Leu
35 40 45

Ala Glu Phe Glu Ser Ile His Lys Glu Asp Lys Asp Lys Leu Asn Asp
50 55 60

His Ala Phe Glu Glu Val Leu Lys Ser Thr Gln Glu Ala Ile Val Leu
65 70 75 80

Pro Pro Trp Val Ala Leu Ala Ile Arg Leu Arg Pro Gly Val Trp Glu
85 90 95

Tyr Val Arg Val Asn
100

<210> 27
<211> 101
<212> PRT
<213> Sus scrofa

<400> 27
Ala Leu Leu Leu Lys Pro Glu Phe Phe Phe Lys Phe Ser Trp Leu Tyr
1 5 10 15

Lys Lys His Lys Glu Ser Val Lys Asp Leu Lys Glu Asn Met Glu Ile
20 25 30

Leu Ile Glu Lys Lys Arg Cys Ser Ile Ile Thr Ala Glu Lys Leu Glu
35 40 45

Asp Cys Met Asp Phe Ala Thr Glu Leu Ile Leu Ala Glu Lys Arg Gly
50 55 60

Glu Leu Thr Lys Glu Asn Val Asn Gln Cys Ile Leu Glu Met Leu Ile
65 70 75 80

Ala Ala Pro Asp Thr Leu Ser Val Thr Val Phe Phe Met Leu Phe Leu
85 90 95

Ile Ala Lys His Pro
100

<210> 28
<211> 151
<212> PRT
<213> Sus scrofa

<400> 28
Met Ala Ser Leu Leu Lys Val Asp Gln Glu Val Lys Leu Lys Val Asp
1 5 10 15

Ser Phe Arg Glu Arg Ile Thr Ser Glu Ala Glu Asp Leu Val Ala Asn
20 25 30

Phe Phe Pro Lys Lys Leu Leu Glu Leu Asp Ser Phe Leu Lys Glu Pro
35 40 45

Ile Leu Asn Ile His Asp Leu Thr Gln Ile His Ser Asp Met Asn Leu
50 55 60

Pro Val Pro Asp Pro Ile Leu Leu Thr Asn Ser His Asp Gly Leu Asp
65 70 75 80

Gly Pro Thr Tyr Lys Lys Arg Arg Leu Asp Glu Cys Glu Glu Ala Phe
85 90 95

Gln Gly Thr Lys Val Phe Val Met Pro Asn Gly Met Leu Lys Ser Asn
100 105 110

Gln Gln Leu Val Asp Ile Ile Glu Lys Val Lys Pro Glu Ile Arg Leu
115 120 125

Leu Ile Glu Lys Cys Asn Thr Val Lys Met Trp Val Gln Leu Leu Ile
130 135 140

Pro Arg Ile Glu Asp Gly Asn
145 150

<210> 29
<211> 201
<212> PRT
<213> Salmo salar

<400> 29
Asn Gln Leu Leu Gly Arg Lys Val Phe Ala Val Ser Lys Lys Val His
1 5 10 15

Thr Thr Arg Ala Arg Ala Leu Gly Val Leu Thr Glu Asp Asp Thr Gln
Page 16

20

25

30

Ile Ile Leu Leu Asp Thr Pro Gly Leu Thr Thr Pro Thr Lys Val Lys
35 40 45

Arg His Gln Leu Glu Lys Ser Leu Leu Glu Asp Pro Trp Asn Thr Val
50 55 60

Lys Glu Ala Gly Leu Val Val Val Met Val Asp Val Ser Asp Lys Trp
65 70 75 80

Ala Cys Asn Lys Leu Asp Phe Glu Val Leu Lys Cys Leu Thr Gln His
85 90 95

Pro Asp Val Pro Ala Val Leu Val Leu Asn Lys Val Asp Leu Leu Lys
100 105 110

Ser Lys Ser Arg Leu Leu Glu Ile Thr Ala Asp Leu Thr Cys Gly Val
115 120 125

Val Asn Gly Arg Lys Leu Gln Val Arg Arg Val Ile Lys Pro Pro Trp
130 135 140

Ala Glu Arg Arg Thr Asp Arg Glu Ala Arg Thr Ser Gly Ser Gly Asp
145 150 155 160

Glu Glu Lys Pro Gly Gly Asp Val Ala Asp Gly Glu Gly Ser Glu Ala
165 170 175

Leu Ser Gly Leu Ser Lys Glu Gln Leu Arg Ala Leu Lys Thr Gln Gln
180 185 190

Gly Trp Ala His Phe Lys Asp Val Phe
195 200

<210> 30
<211> 76
<212> PRT
<213> Sus scrofa

<400> 30
Thr Asp Leu Pro Leu Cys Leu Gln Leu Asn Ile Met Gln Arg Leu Ser
1 5 10 15

Asp Gly Arg Asp Leu Val Ser Leu Gly Gln Val Ala Pro Asp Leu His
20 25 30

Val Leu Ser Glu Asp Arg Leu Leu Trp Lys Lys Leu Cys Gln Tyr His
35 40 45

Phe Ser Glu Arg Gln Ile Arg Lys Arg Leu Ile Leu Ser Asp Lys Gly
50 55 60

Gln Leu Asp Trp Lys Lys Met Tyr Phe Lys Leu Val
65 70 75

<210> 31
 <211> 201
 <212> PRT
 <213> Sus scrofa

<400> 31
 Thr Ala Ile Lys Ala Ala Ala Gln Cys Tyr Ile Asp Leu Ile Ile Lys
 1 5 10 15
 Glu Ser Asp Asn Asn Val Lys Leu Ile Val Leu Asp Arg Leu Ile Glu
 20 25 30
 Leu Lys Glu His Pro Ala His Glu Arg Val Leu Gln Asp Leu Val Met
 35 40 45
 Asp Ile Leu Arg Val Leu Ser Thr Pro Asp Leu Glu Val Arg Lys Lys
 50 55 60
 Thr Leu Gln Leu Ala Leu Asp Leu Val Ser Ser Arg Asn Val Glu Glu
 65 70 75 80
 Leu Val Ile Val Leu Lys Lys Glu Val Ile Lys Thr Asn Asn Val Ser
 85 90 95
 Glu His Glu Asp Thr Asp Lys Tyr Arg Gln Leu Leu Val Arg Thr Leu
 100 105 110
 His Ser Cys Ser Val Arg Phe Pro Asp Met Ala Ala Asn Val Ile Pro
 115 120 125
 Val Leu Met Glu Phe Leu Ser Asp Ser Asn Glu Ala Ala Ala Ala Asp
 130 135 140
 Val Leu Glu Phe Val Arg Glu Ala Ile Gln Arg Phe Asp Asn Leu Arg
 145 150 155 160
 Met Leu Ile Val Glu Lys Met Leu Glu Val Phe His Ala Ile Lys Ser
 165 170 175
 Val Lys Ile Tyr Arg Gly Ala Leu Trp Ile Leu Gly Glu Tyr Cys Ser
 180 185 190
 Thr Lys Glu Asp Ile Gln Ser Val Met
 195 200

<210> 32
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 32
 Met Asp Gly Glu Leu Glu Gln Leu Glu Lys Trp Phe Thr Ala Glu Ala
 1 5 10 15
 Lys Leu Leu Phe His Leu Arg Gln Leu Leu Lys Glu Leu Lys Gly Leu
 Page 18

20

25

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Ser Ser Val Val Lys Tyr Asp Glu Asp Leu Leu Phe Lys Gly Val Asp
35 40 45

Leu Leu Lys Ala Gln Val Thr Glu Leu Leu Gln Arg Leu Leu His Arg
50 55 60

Ala Phe Ile Val Glu Thr Gln Pro Cys Met Pro Gln
65 70 75

<210> 33
<211> 126
<212> PRT
<213> Salmo salar

<400> 33
Leu Asp Ser Gln Phe Ser Tyr Gln His Ala Ile Glu Glu Ser Val Val
1 5 10 15

Leu Ile Tyr Asp Pro Ile Lys Thr Ala Gln Gly Ser Leu Ser Leu Lys
20 25 30

Ala Tyr Arg Leu Thr Pro Lys Leu Met Glu Ile Cys Lys Glu Lys Asp
35 40 45

Phe Ser Ala Glu Gly Leu Lys Lys Ala Met Ile Gly Phe Glu His Met
50 55 60

Phe Glu Glu Val Pro Ile Val Ile Lys Asn Ser His Leu Ile Asn Val
65 70 75 80

Leu Met Trp Glu Leu Glu Glu Lys Cys Thr Val Ala Asp Lys His Glu
85 90 95

Leu Leu Asn Leu Ser Ser Ser Asn His Leu Glu Lys Ser Leu Gln Leu
100 105 110

Leu Met Asp Arg Val Asp Asp Met Ser Gln Asp Ile Val Lys
115 120 125

<210> 34
<211> 101
<212> PRT
<213> Sus scrofa

<400> 34
Leu Leu Ala Lys Leu Arg Lys Asp Ile Arg Pro Glu Cys Arg Glu Asp
1 5 10 15

Phe Val Leu Ala Ile Thr Gly Lys Lys Ala Pro Gly Cys Val Leu Ser
20 25 30

Asn Pro Asp Gln Lys Gly Lys Met Arg Arg Ile Asp Cys Leu Arg Gln
35 40 45

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Ala Asp Lys Val Trp Arg Leu Asp Leu Val Met Val Ile Leu Phe Lys
50 55 60

Gly Ile Pro Leu Glu Ser Thr Asp Gly Glu Arg Leu Val Lys Ala Ala
65 70 75 80

Gln Cys Gly His Pro Val Leu Cys Val Gln Pro His His Ile Gly Val
85 90 95

Ala Val Lys Glu Leu
100

<210> 35
<211> 126
<212> PRT
<213> Solanum tuberosum

<400> 35
Val Ser Val Ala Glu Asp Glu Leu Met Arg Ile Leu Ile Leu Val Arg
1 5 10 15

Asn Phe Leu Pro Gly His His Gln Val Ile Asn Gly Glu Trp Asn Val
20 25 30

Ala Ala Ile Ala His Arg Ala Tyr Asp Leu Glu Gly Lys Thr Val Gly
35 40 45

Thr Val Gly Ala Gly Arg Ile Gly Arg Leu Leu Leu Gln Arg Leu Lys
50 55 60

Pro Phe Asn Cys Asn Leu Leu Tyr His Asp Arg Leu Lys Met Asp Ser
65 70 75 80

Glu Leu Glu Asn Gln Ile Gly Ala Lys Phe Glu Glu Asp Leu Asp Lys
85 90 95

Met Leu Ser Lys Cys Asp Ile Val Val Ile Asn Thr Pro Leu Thr Glu
100 105 110

Lys Thr Lys Gly Met Phe Asp Lys Glu Arg Ile Ala Lys Leu
115 120 125

<210> 36
<211> 126
<212> PRT
<213> Sus scrofa

<400> 36
Leu Phe Arg Cys Glu Leu Ser Val Glu Lys Ser Thr Val Leu Gln Ser
1 5 10 15

Glu Leu Glu Ser Cys Lys Glu Leu Gln Glu Leu Glu Pro Glu Asn Lys
20 25 30

Trp Cys Leu Leu Thr Ile Ile Leu Leu Met Arg Ala Leu Asp Pro Leu
35 40 45

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Leu Tyr Glu Lys Glu Thr Leu Gln Tyr Phe Gln Thr Leu Lys Ala Val
50 55 60

Asp Pro Met Arg Ala Ala Tyr Leu Asp Asp Leu Arg Ser Lys Phe Leu
65 70 75 80

Leu Glu Asn Ser Val Leu Lys Met Glu Tyr Ala Asp Val Arg Val Leu
85 90 95

His Leu Gly His Lys Asp Leu Thr Val Leu Cys His Leu Glu Gln Leu
100 105 110

Leu Leu Val Thr His Leu Asp Leu Ser His Asn Arg Leu Arg
115 120 125

<210> 37
<211> 126
<212> PRT
<213> Sus scrofa

<400> 37
Leu Leu Gln Glu Arg Ala Asn Lys Leu Val Lys Tyr Leu Met Leu Lys
1 5 10 15

Asp Tyr Thr Lys Val Pro Ile Lys Arg Ser Glu Met Leu Arg Asp Ile
20 25 30

Ile Arg Glu Tyr Thr Asp Val Tyr Pro Glu Ile Ile Glu Arg Ala Cys
35 40 45

Phe Val Leu Glu Lys Lys Phe Gly Ile Gln Leu Lys Glu Ile Asp Lys
50 55 60

Glu Glu His Leu Tyr Ile Leu Ile Ser Thr Pro Glu Ser Leu Ala Gly
65 70 75 80

Ile Leu Gly Thr Thr Lys Asp Thr Pro Lys Leu Gly Leu Leu Leu Val
85 90 95

Ile Leu Gly Val Ile Phe Met Asn Gly Asn Arg Ala Ser Glu Ala Val
100 105 110

Leu Trp Glu Ala Leu Arg Lys Met Gly Leu Arg Pro Gly Val
115 120 125

<210> 38
<211> 201
<212> PRT
<213> Sus scrofa

<400> 38
Ile Arg Leu Leu Met Asp Gly Glu Glu Pro Leu Pro Met Leu Pro Ser
1 5 10 15

Tyr Lys Asn Phe Lys Gly Thr Ile Glu Glu Leu Ala Pro Asn Gln Tyr
20 25 30

Val Ile Ser Gly Glu Val Ala Ile Leu Asn Ser Thr Thr Ile Glu Ile
35 40 45

Ser Glu Leu Pro Ile Arg Thr Trp Thr Gln Thr Tyr Lys Glu Gln Val
50 55 60

Leu Glu Pro Met Leu Asn Gly Thr Glu Lys Thr Pro Pro Leu Ile Thr
65 70 75 80

Asp Tyr Arg Glu Tyr His Thr Asp Thr Thr Val Lys Phe Val Val Lys
85 90 95

Met Thr Glu Glu Lys Leu Ala Glu Ala Glu Arg Val Gly Leu His Lys
100 105 110

Val Phe Lys Leu Gln Thr Ser Leu Thr Cys Asn Ser Met Val Leu Phe
115 120 125

Asp His Val Gly Cys Leu Lys Lys Tyr Asp Thr Val Leu Asp Ile Leu
130 135 140

Arg Asp Phe Phe Glu Leu Arg Leu Lys Tyr Tyr Gly Leu Arg Lys Glu
145 150 155 160

Trp Leu Leu Gly Met Leu Gly Ala Glu Ser Ala Lys Leu Asn Asn Gln
165 170 175

Ala Arg Phe Ile Leu Glu Lys Ile Asp Gly Lys Ile Ile Ile Glu Asn
180 185 190

Lys Pro Lys Lys Glu Leu Ile Lys Val
195 200

<210> 39
<211> 176
<212> PRT
<213> Sus scrofa

<400> 39
Pro Met Pro Val Leu Tyr Gly Val Phe Leu Tyr Met Gly Val Ala Ser
1 5 10 15

Leu Asn Gly Val Gln Phe Met Asp Arg Leu Lys Leu Leu Leu Met Pro
20 25 30

Leu Lys His Gln Pro Asp Phe Ile Tyr Leu Arg His Val Pro Leu Arg
35 40 45

Arg Val His Leu Phe Thr Phe Leu Gln Val Leu Cys Leu Ala Leu Leu
50 55 60

Trp Ile Leu Lys Ser Thr Val Ala Ala Ile Ile Phe Pro Val Met Ile
65 70 75 80

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Leu Ala Leu Val Ala Val Arg Lys Gly Met Asp Tyr Leu Phe Ser Gln
85 90 95

His Asp Leu Ser Phe Leu Asp Asp Val Ile Pro Glu Lys Asp Lys Lys
100 105 110

Lys Lys Glu Asp Glu Lys Lys Lys Lys Lys Lys Gly Ser Leu Asp
115 120 125

Ser Asp Ser Asp Asp Ser Asp Cys Pro Tyr Ser Glu Lys Val Pro Ser
130 135 140

Ile Lys Ile Pro Met Asp Ile Met Glu Gln Gln Pro Phe Leu Ser Asp
145 150 155 160

Ser Lys Pro Ser Asp Arg Glu Arg Ser Pro Thr Phe Leu Glu Arg His
165 170 175

<210> 40
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 40
Glu Glu Phe Pro Glu Lys Val Ala Val Gln Met Asn Asp Thr His Pro
1 5 10 15

Thr Leu Cys Ile Pro Glu Leu Met Arg Ile Leu Ile Asp Leu Lys Gly
20 25 30

Leu Asn Trp Asn Glu Ala Trp Asn Ile Thr Gln Arg Thr Val Ala Tyr
35 40 45

Thr Asn His Thr Val Leu Pro Glu Ala Leu Glu Lys Trp Ser Tyr Glu
50 55 60

Leu Met Gln Lys Leu Leu Pro Arg His Val Glu Ile Ile Glu Ala Ile
65 70 75 80

Asp Glu Glu Leu Val His Glu Ile Val Leu Lys Tyr Gly Ser Met Asp
85 90 95

Leu Asn Lys Leu Glu
100

<210> 41
<211> 76
<212> PRT
<213> Sus scrofa

<400> 41
Ile Val Leu Val Asp Asp Ala Ser Glu Arg Asp Phe Leu Lys Arg Pro
1 5 10 15

Leu Glu Ser Tyr Val Lys Lys Leu Lys Val Pro Val His Val Ile Arg
20 25 30

Met Glu Gln Arg Ser Gly Leu Ile Arg Ala Arg Leu Lys Gly Ala Ala
35 40 45

Val Ser Lys Gly Gln Val Ile Thr Phe Leu Asp Ala His Cys Glu Cys
50 55 60

Thr Val Gly Trp Leu Glu Pro Leu Leu Ala Arg Ile
65 70 75

<210> 42
<211> 126
<212> PRT
<213> Solanum tuberosum

<400> 42
Leu Ser Pro Val Phe Ser Lys His Gln Thr Asp Leu Glu Lys Asp Tyr
1 5 10 15

Val Glu Ser Asp Thr Lys Lys Gly Gln Asn Lys Lys Gln Tyr Lys Ser
20 25 30

Asn Thr Glu Ala Glu Leu Asp Leu Phe Leu Lys Arg Tyr Leu Leu Phe
35 40 45

Gln Leu Arg Trp Asn Asp Ala Leu Asn Lys Arg Met Leu Glu Asn Ile
50 55 60

Lys Val Tyr Cys Leu Leu Leu Arg Leu Ile Asn Pro Thr Lys Ile Thr
65 70 75 80

Ile Ser Ser Ile Gln Arg Arg Glu Met Ser Leu Asp Ile Met Leu Ile
85 90 95

Gln Ala Asn Leu Pro Leu Thr Asp Leu Met Lys Lys Gly Val Leu Ile
100 105 110

Ile Glu Pro Ile Arg Leu Ser Val Lys His Asn Gly Gln Phe
115 120 125

<210> 43
<211> 151
<212> PRT
<213> Salmo salar

<400> 43
Met Val Gln Met Leu Ile Asp Asp Thr Ser Ser Glu Ile Leu Asp Glu
1 5 10 15

Leu Tyr Arg Ile Ser Lys Glu His Ser Gly Asn Arg Thr Glu Ala Gln
20 25 30

Lys Val Val Lys Asp Leu Val Lys Val Val Val Lys Val Gly Val Leu
35 40 45

Phe Arg His Asn Arg Phe Ser Lys Glu Glu Leu Ser Leu Ala Gln Asp
Page 24

50 55 60
 Phe Lys Lys Lys Leu His Gln Gly Val Met Thr Ala Ile Ser Phe Gln
 65 70 75 80
 Glu Val Glu Phe Thr Phe Asp Lys Ala Val Met Thr Glu Leu Leu Thr
 85 90 95
 Asp Cys Arg Asp Ile Leu Leu Lys Leu Val Glu Lys His Leu Thr Leu
 100 105 110
 Lys Ser Phe Gly Arg Ile Arg His Val Phe Asn His Tyr Ser Asp Pro
 115 120 125
 Asp Leu Leu Thr Asn Leu Tyr Thr Pro Gly Gly Pro Leu Trp Pro Asn
 130 135 140
 Leu Thr Lys Ile Cys Asn Gly
 145 150
 <210> 44
 <211> 201
 <212> PRT
 <213> Sus scrofa
 <400> 44
 Cys Arg Leu Arg Lys Cys Tyr Glu Val Gly Met Val Lys Cys Gly Ser
 1 5 10 15
 Arg Arg Glu Arg Cys Gly Tyr Arg Ile Val Arg Lys Gln Arg Asn Ser
 20 25 30
 Glu Gly His Leu His Cys Leu Ser Arg Ala Lys Lys Asn Gly Asp His
 35 40 45
 Thr Thr Arg Val Lys Glu Leu Leu Leu Ser Thr Leu Ser Pro Glu Gln
 50 55 60
 Leu Val Leu Thr Leu Leu Glu Ala Glu Pro Pro His Val Leu Val Ser
 65 70 75 80
 Arg Pro Ser Thr Pro Phe Thr Glu Ala Ser Met Met Met Ser Leu Thr
 85 90 95
 Lys Leu Ala Asp Lys Glu Leu Val His Met Ile Ser Trp Ala Lys Lys
 100 105 110
 Ile Pro Gly Phe Met Glu Leu Ser Leu Tyr Asp Gln Val Arg Leu Leu
 115 120 125
 Glu Ser Cys Trp Leu Glu Val Leu Met Val Gly Leu Met Trp Arg Ser
 130 135 140
 Ile Asp His Pro Gly Lys Leu Ile Phe Ala Pro Asp Leu Val Leu Asp
 145 150 155 160

Arg Asp Glu Gly Lys Cys Val Glu Gly Ile Leu Glu Ile Phe Asp Met
165 170 175

Leu Leu Ala Thr Thr Ser Arg Phe Arg Glu Leu Lys Leu Gln His Lys
180 185 190

Glu Tyr Leu Cys Val Lys Ala Met Ile
195 200

<210> 45
<211> 76
<212> PRT
<213> Sus scrofa

<400> 45
Phe Gly Leu Thr Val Ile Leu Phe Leu Leu Ile Phe Ser Lys Gln Gln
1 5 10 15

Arg Ile Lys Met Leu Ile Leu Pro Pro Val Pro Val Pro Lys Ile Lys
20 25 30

Gly Ile Asp Pro Asp Leu Leu Lys Glu Gly Lys Leu Glu Glu Val Asn
35 40 45

Thr Ile Leu Ala Ile His Asp Asn Tyr Lys His Glu Phe Tyr Ser Asp
50 55 60

Asp Ser Trp Val Glu Phe Ile Glu Leu Asp Ile Asp
65 70 75

<210> 46
<211> 101
<212> PRT
<213> Capra hircus

<400> 46
Leu Leu Arg Ile Ser Leu Leu Leu Ile Gln Ser Trp Leu Gly Pro Leu
1 5 10 15

Gln Phe Leu Ser Arg Val Phe Thr Asn Ser Leu Val Phe Gly Thr Ser
20 25 30

Asp Arg Val Tyr Glu Lys Leu Lys Asp Leu Glu Glu Gly Ile Leu Ala
35 40 45

Leu Met Arg Glu Leu Glu Asp Val Thr Pro Arg Ala Gly Gln Ile Leu
50 55 60

Lys Gln Thr Tyr Asp Lys Phe Asp Thr Asn Met Arg Ser Asp Asp Ala
65 70 75 80

Leu Leu Lys Asn Tyr Gly Leu Leu Ser Cys Phe Arg Lys Asp Leu His
85 90 95

Lys Thr Glu Thr Tyr

100

<210> 47
 <211> 76
 <212> PRT
 <213> Solanum tuberosum

<400> 47
 Ala Leu Ser Lys Ile Lys Leu Tyr Ala Lys Glu Lys Glu Glu Gln Ile
 1 5 10 15

Asp Asp Pro Ile Leu Asn Lys Lys Ile Phe Lys Val Asp Asp Gly Glu
 20 25 30

Leu Leu Val Leu Val Ala Lys Ser Ser Gly Lys Thr Lys Val His Leu
 35 40 45

Ala Thr Asp Leu Asn Gln Pro Ile Thr Leu His Trp Ala Leu Ser Lys
 50 55 60

Ser Pro Gly Glu Trp Met Val Pro Pro Ser Ser Ile
 65 70 75

<210> 48
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 48
 Lys Leu Ala Glu Ala Glu Arg Val Gly Leu His Lys Val Phe Lys Leu
 1 5 10 15

Gln Thr Ser Leu Thr Cys Asn Ser Met Val Leu Phe Asp His Val Gly
 20 25 30

Cys Leu Lys Lys Tyr Asp Thr Val Leu Asp Ile Leu Arg Asp Phe Phe
 35 40 45

Glu Leu Arg Leu Lys Tyr Tyr Gly Leu Arg Lys Glu Trp Leu Leu Gly
 50 55 60

Met Leu Gly Ala Glu Ser Ala Lys Leu Asn Asn Gln
 65 70 75

<210> 49
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 49
 Lys Glu Leu Val His Met Ile Ser Trp Ala Lys Lys Ile Pro Gly Phe
 1 5 10 15

Met Glu Leu Ser Leu Tyr Asp Gln Val Arg Leu Leu Glu Ser Cys Trp
 20 25 30

Leu Glu Val Leu Met Val Gly Leu Met Trp Arg Ser Ile Asp His Pro
 35 40 45

Gly Lys Leu Ile Phe Ala Pro Asp Leu Val Leu Asp Arg Asp Glu Gly
50 55 60

Lys Cys Val Glu Gly Ile Leu Glu Ile Phe Asp Met Leu Leu Ala Thr
65 70 75 80

Thr Ser Arg Phe Arg Glu Leu Lys Leu Gln His Lys Glu Tyr Leu Cys
85 90 95

Val Lys Ala Met Ile
100

<210> 50
<211> 101
<212> PRT
<213> Sus scrofa

<400> 50
Ile Val Glu Leu Lys His Glu Ile His Val Trp Arg Leu Thr Ala Gln
1 5 10 15

Arg Ile Ser Pro Ala Ser Arg Glu Glu Thr Ala Val Arg Gly Leu Leu
20 25 30

Leu Glu Lys Val Leu Ser Leu Glu Arg Leu Leu Ala Arg Arg Leu His
35 40 45

Ser Phe His Arg Gln Ile Ser Gln Glu Asp Lys Asn Trp Glu Thr Asn
50 55 60

Ile Gln Glu Leu Gln Lys Lys His Arg Ile Ser Asp Arg Thr Leu Leu
65 70 75 80

Thr Lys Cys Val Thr Val Leu Gly Leu Val Ile Phe Met Phe Phe Leu
85 90 95

Asn Ser Phe Val Pro
100

<210> 51
<211> 101
<212> PRT
<213> Sus scrofa

<400> 51
Lys Leu Glu Gln Leu Gln Gly Ile Ile Thr Ala Thr Ser Ala Asn Val
1 5 10 15

Glu Leu Val Leu Glu Thr Leu Ala Glu Met Asp Gly Leu Glu Ala Phe
20 25 30

Leu Ala Lys Asp Arg His Ala Asp Pro Asp Phe Thr Lys Lys Leu Trp
35 40 45

Ala Tyr Leu Thr Ile Asn Gln Leu Leu Asp Glu Arg Ser Arg Ala Pro
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50

55

60

Ser Ala Ala Val Lys Lys Lys Ile Thr Lys Ser Ile Leu Gln Met Ser
65 70 75 80

Leu Asp His His Ile Val Thr Pro Leu Thr Ala Met Val Val Glu Asn
85 90 95

Glu Ala Gly Asp Glu
100

<210> 52

<211> 176

<212> PRT

<213> Sus scrofa

<400> 52

Arg Leu Lys Glu Lys Lys Leu Val Lys Glu Val Ile Ala Val Ser Cys
1 5 10 15

Gly Pro Ala Gln Cys Gln Glu Thr Ile Arg Thr Ala Leu Ala Met Gly
20 25 30

Ala Asp Arg Gly Ile His Val Glu Val Pro Ala Ala Glu Ala His His
35 40 45

Leu Gly Pro Leu Gln Val Ala Arg Val Leu Ala Lys Leu Ala Gln Lys
50 55 60

Glu Lys Val Asp Leu Val Leu Leu Gly Lys Gln Ala Ile Asp Asp Asp
65 70 75 80

Cys Asn Gln Thr Gly Gln Met Thr Ala Gly Phe Leu Asp Trp Pro Gln
85 90 95

Gly Thr Phe Ala Ser Gln Val Thr Leu Glu Gly Asp Lys Val Lys Val
100 105 110

Glu Arg Glu Ile Asp Gly Gly Leu Glu Thr Leu Arg Leu Lys Leu Pro
115 120 125

Ala Val Val Thr Ala Asp Leu Arg Leu Asn Glu Pro Arg Tyr Ala Thr
130 135 140

Leu Pro Asn Ile Met Lys Ala Lys Lys Lys Lys Ile Glu Val Ile Lys
145 150 155 160

Ala Gly Asp Leu Gly Val Asp Leu Thr Ser Lys Leu Ser Val Val Ser
165 170 175

<210> 53

<211> 76

<212> PRT

<213> Solanum tuberosum

<400> 53

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Ile Pro Glu Val Gln Gln Leu Ile Ala Glu Leu Asn Glu Ile Leu Ala
1 5 10 15

His Asp Val Val Asp Glu Ala Gly Val Trp Lys Lys Lys Leu Thr Pro
20 25 30

Gln Cys Leu Glu Leu Phe Glu Leu Leu Pro Leu Ala Ile Gln Glu Gln
35 40 45

Leu Leu Leu Glu Arg Asp Pro His Gly Asn Val Gln Val Ala Lys Ile
50 55 60

Glu Thr Glu Lys Met Leu Ile Gln Met Val Glu Thr
65 70 75

<210> 54
<211> 201
<212> PRT
<213> Sus scrofa

<400> 54
Gly Met Tyr Glu Lys Gly Ile Ile Phe Asn Asn Asp Pro Ala Leu Trp
1 5 10 15

Lys Ala Val Arg Thr Tyr Phe Met Lys Ala Leu Ser Gly Pro Gly Leu
20 25 30

Val Arg Met Val Thr Val Cys Ala Asp Ser Ile Thr Lys His Leu Asp
35 40 45

Lys Leu Glu Glu Val Arg Asn Asp Leu Gly Tyr Val Asp Val Leu Thr
50 55 60

Leu Met Arg Arg Ile Met Leu Asp Thr Ser Asn Asn Leu Phe Leu Gly
65 70 75 80

Ile Pro Leu Asp Glu Lys Ala Ile Val Cys Lys Ile Gln Gly Tyr Phe
85 90 95

Asp Ala Trp Gln Ala Leu Leu Leu Lys Pro Glu Phe Phe Phe Lys Phe
100 105 110

Ser Trp Leu Tyr Lys Lys His Lys Glu Ser Val Lys Asp Leu Lys Glu
115 120 125

Asn Met Glu Ile Leu Ile Glu Lys Lys Arg Cys Ser Ile Ile Thr Ala
130 135 140

Glu Lys Leu Glu Asp Cys Met Asp Phe Ala Thr Glu Leu Ile Leu Ala
145 150 155 160

Glu Lys Arg Gly Glu Leu Thr Lys Glu Asn Val Asn Gln Cys Ile Leu
165 170 175

Glu Met Leu Ile Ala Ala Pro Asp Thr Leu Ser Val Thr Val Phe Phe

180

185

190

Met Leu Phe Leu Ile Ala Lys His Pro
 195 200

<210> 55
 <211> 151
 <212> PRT
 <213> Solanum tuberosum

<400> 55
 Glu Ile Leu Leu Phe Leu Ser Arg Ile Glu Ser His Gly Lys Gly Ile
 1 5 10 15

Leu Lys Pro His Glu Leu Leu Ala Glu Phe Asp Ala Ile Arg Gln Asp
 20 25 30

Asp Lys Asn Lys Leu Asn Glu His Ala Phe Glu Glu Leu Leu Lys Ser
 35 40 45

Thr Gln Glu Ala Ile Val Leu Pro Pro Trp Val Ala Leu Ala Ile Arg
 50 55 60

Leu Arg Pro Gly Val Trp Glu Tyr Ile Arg Val Asn Val Asn Ala Leu
 65 70 75 80

Val Val Glu Glu Leu Ser Val Pro Glu Tyr Leu Gln Phe Lys Glu Glu
 85 90 95

Leu Val Asp Gly Ala Ser Asn Gly Asn Phe Val Leu Glu Leu Asp Phe
 100 105 110

Glu Pro Phe Thr Ala Ser Phe Pro Lys Pro Thr Leu Thr Lys Ser Ile
 115 120 125

Gly Asn Gly Val Glu Phe Leu Asn Arg His Leu Ser Ala Lys Met Phe
 130 135 140

His Asp Lys Glu Ser Met Thr
 145 150

<210> 56
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 56
 Leu Thr Met Gln Leu Leu Asp Cys Asn Phe Ser Asp Glu Asn Val Arg
 1 5 10 15

Ala Ile Ala Val Gln Lys Leu Glu Ser Leu Glu Asp Asp Asp Val Leu
 20 25 30

His Tyr Leu Leu Gln Leu Val Gln Ala Val Lys Phe Glu Pro Tyr His
 35 40 45

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Asp Ser Ala Leu Ala Arg Phe Leu Leu Lys Arg Gly Leu Arg Asn Lys
 50 55 60

Arg Ile Gly His Phe Leu Phe Trp Phe Leu Arg Ser
 65 70 75

<210> 57
 <211> 76
 <212> PRT
 <213> Capra hircus

<400> 57
 Thr Leu Val Gln Arg Asp Gly Arg Asn Arg Tyr Asp Val His Val Asp
 1 5 10 15

Asp Met Leu Glu Cys Val Lys Gly Pro Asn Ile Ala Ala Ile Val Gly
 20 25 30

Gly Thr Val Gly Gly Val Val Leu Val Gly Ile Leu Leu Leu Val Ile
 35 40 45

Trp Lys Ala Leu Thr His Leu Ser Asp Leu Arg Glu Tyr His Arg Phe
 50 55 60

Glu Lys Glu Lys Leu Lys Ser Gln Trp Asn Asn Asp
 65 70 75

<210> 58
 <211> 176
 <212> PRT
 <213> Sus scrofa

<400> 58
 Ile Val Ser Met Pro Asp Gly Asp Lys Val Asp Leu Glu Ala Phe Ser
 1 5 10 15

Glu Phe Thr Lys Ile Ile Thr Pro Ala Ile Thr Arg Val Val Asp Phe
 20 25 30

Ala Lys Lys Leu Pro Met Phe Ser Glu Leu Pro Cys Glu Asp Gln Ile
 35 40 45

Ile Leu Leu Lys Gly Cys Cys Met Glu Ile Met Ser Leu Arg Ala Ala
 50 55 60

Val Arg Tyr Asp Pro Glu Ser Asp Thr Leu Thr Leu Ser Gly Glu Met
 65 70 75 80

Ala Val Lys Arg Glu Gln Leu Lys Asn Gly Gly Leu Gly Val Val Ser
 85 90 95

Asp Ala Ile Phe Glu Leu Gly Lys Ser Leu Ser Ala Phe Asn Leu Asp
 100 105 110

Asp Thr Glu Val Ala Leu Leu Gln Ala Val Leu Leu Met Ser Thr Asp
 115 120 125

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Arg Ser Gly Leu Leu Cys Val Asp Lys Ile Glu Lys Ser Gln Glu Ala
130 135 140

Tyr Leu Leu Ala Phe Glu His Tyr Val Asn His Arg Lys His Asn Ile
145 150 155 160

Pro His Phe Trp Pro Lys Leu Leu Met Lys Glu Arg Glu Val Gln Ser
165 170 175

<210> 59
<211> 101
<212> PRT
<213> Sus scrofa

<400> 59
Asp Tyr Arg Thr Arg Val Ser Gly Val Thr Pro Gln His Met Val Gly
1 5 10 15

Ala Thr Pro Phe Ala Val Ala Arg Leu Glu Ile Leu Gln Leu Leu Lys
20 25 30

Gly Lys Leu Val Val Gly His Asp Leu Lys His Asp Phe Gln Ala Leu
35 40 45

Lys Glu Asp Met Asn Arg Tyr Thr Ile Tyr Asp Thr Ser Thr Asp Met
50 55 60

Leu Leu Trp Arg Glu Ala Lys Leu Asp His Cys Arg Arg Val Ser Leu
65 70 75 80

Arg Val Leu Cys Glu Arg Leu Leu His Lys Ser Ile Gln Asn Ser Leu
85 90 95

Leu Gly His Ser Ser
100

<210> 60
<211> 201
<212> PRT
<213> Sus scrofa

<400> 60
Met Thr Ala Ala Glu Asn Val Cys Tyr Thr Leu Ile Asn Val Pro Met
1 5 10 15

Asp Ser Glu Pro Pro Ser Glu Ile Ser Leu Lys Asn Asp Leu Glu Lys
20 25 30

Gly Asp Val Lys Ser Lys Thr Glu Ala Leu Lys Lys Val Ile Ile Met
35 40 45

Ile Leu Asn Gly Glu Lys Leu Pro Gly Leu Leu Met Thr Ile Ile Arg
50 55 60

Phe Val Leu Pro Leu Gln Asp His Thr Ile Lys Lys Leu Leu Leu Val
65 70 75 80

Phe Trp Glu Ile Val Pro Lys Thr Thr Pro Asp Gly Arg Leu Leu His
 85 90 95
 Glu Met Ile Leu Val Cys Asp Ala Tyr Arg Lys Asp Leu Gln His Pro
 100 105 110
 Asn Glu Phe Ile Arg Gly Ser Thr Leu Arg Phe Leu Cys Lys Leu Lys
 115 120 125
 Glu Ala Glu Leu Leu Glu Pro Leu Met Pro Ala Ile Arg Ala Cys Leu
 130 135 140
 Glu His Arg His Ser Tyr Val Arg Arg Asn Ala Val Leu Ala Ile Tyr
 145 150 155 160
 Thr Ile Tyr Arg Asn Phe Glu His Leu Ile Pro Asp Ala Pro Glu Leu
 165 170 175
 Ile His Asp Phe Leu Val Asn Glu Lys Asp Ala Ser Cys Lys Arg Asn
 180 185 190
 Ala Phe Met Met Leu Ile His Ala Asp
 195 200

 <210> 61
 <211> 151
 <212> PRT
 <213> Sus scrofa

 <400> 61
 Leu Ile Leu Asn Asn Leu Asp Asn Phe Lys Gln Phe Asp Lys Ile Phe
 1 5 10 15

 Pro Ala Leu Val Ala Gly Phe Pro Ile His Val Phe Lys Thr Gly His
 20 25 30

 Tyr Ala Arg Glu Lys Leu Ala Glu Gly Leu Arg Leu Gln Lys Leu Arg
 35 40 45

 Lys Arg Asp His Ile Ser Glu Leu Val Arg Phe Leu Asn Asp Thr Leu
 50 55 60

 Ser Thr Leu Asp Asp Ala Glu Lys Ala Lys Ser Leu Leu Ala Val Leu
 65 70 75 80

 Trp Ala Ser Gln Ala Asn Thr Ile Pro Ala Thr Phe Trp Cys Leu Phe
 85 90 95

 Gln Thr Ile Arg Ser Pro Glu Ala Met Lys Ala Ala Ser Glu Glu Val
 100 105 110

 Asn Lys Thr Leu Glu Lys Ala Gly Gln Lys Ile Ser Leu Asp Asp Lys
 115 120 125

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Pro Ile Tyr Leu Asn Gln Ile Glu Leu Asp Ser Met Pro Val Leu Asp
130 135 140

Ser Ile Ile Lys Glu Ser Leu
145 150

<210> 62
<211> 151
<212> PRT
<213> Sus scrofa

<400> 62
Met Ile Glu Val Pro Thr Thr Thr Asp Ser Gln Lys Leu Leu His Gln
1 5 10 15

Leu Asn Ala Leu Leu Glu Gln Glu Ser Arg Cys Gln Pro Lys Val Cys
20 25 30

Gly Leu Arg Leu Ile Glu Ser Ala His Asp Asn Gly Leu Arg Met Thr
35 40 45

Ala Arg Leu Arg Asp Phe Glu Val Lys Asp Leu Leu Ser Leu Thr Gln
50 55 60

Phe Phe Gly Phe Asp Thr Glu Thr Phe Ser Leu Ala Val Asn Leu Leu
65 70 75 80

Asp Arg Phe Leu Ser Lys Met Lys Val Gln Pro Lys His Leu Gly Cys
85 90 95

Val Gly Leu Ser Cys Phe Tyr Leu Ala Val Lys Ser Leu Glu Glu Glu
100 105 110

Arg Asn Val Pro Leu Ala Thr Asp Leu Ile Arg Ile Ser Gln Tyr Arg
115 120 125

Phe Thr Val Ser Asp Leu Met Arg Met Glu Lys Ile Val Leu Glu Lys
130 135 140

Val Cys Trp Lys Val Lys Ala
145 150

<210> 63
<211> 76
<212> PRT
<213> Agaricus bisporus

<400> 63
Met His Asp Glu Asp Gln Tyr Leu His Leu Ile Arg Arg Val Leu Asp
1 5 10 15

Thr Gly Asp Leu Arg Pro Asp Arg Thr Gly Thr Gly Thr Ile Ser Leu
20 25 30

Phe Ala Pro Pro Asn Leu Arg Phe Ser Leu Arg Glu Ser Thr Val Pro
35 40 45

Leu Leu Thr Thr Lys Arg Thr Phe Leu Arg Gly Ile Val Glu Glu Leu
50 55 60

Leu Trp Phe Thr Asn Gly Leu Thr Asp Ser Lys Ile
65 70 75

<210> 64
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 64
Ile Glu Ile Trp Thr Asn Gly Ser Leu Thr Pro Lys Glu Ala Leu His
1 5 10 15

Asp Ala Ser Arg Asn Leu Ile Asp Leu Phe Ile Pro Phe Leu His Met
20 25 30

Glu Glu Asp Asn Leu Tyr Leu Gln Asp Asn Gln His Thr Val Pro Leu
35 40 45

Ser Pro Phe Thr Phe His Asp Lys Leu Ala Lys Leu Ile Lys Asn Lys
50 55 60

Lys Lys Ile Ala Leu Lys Ser Ile Phe Ile Asp Gln
65 70 75

<210> 65
<211> 126
<212> PRT
<213> Solanum tuberosum

<400> 65
Pro Leu Ile Leu Ser Leu Asp Ile Tyr Val Pro Arg Asp Glu Arg Phe
1 5 10 15

Gly His Leu Lys Met Ser Asp Phe Leu Thr Tyr Ala Leu Lys Ser Ile
20 25 30

Val Gln Phe Ile Leu Pro Glu Leu His Ala Leu Phe Asp Gly Thr Pro
35 40 45

Asn Glu Phe Asp Ser Phe Glu Asp Val Leu Arg Leu Tyr Glu Gly Gly
50 55 60

Ile Lys Leu Pro Gln Gly Pro Leu Phe Lys Ala Leu Thr Ala Ala Ile
65 70 75 80

Pro Leu Glu Met Ile Arg Glu Leu Leu Arg Thr Asp Gly Glu Gly Ile
85 90 95

Leu Arg Phe Pro Thr Pro Leu Val Ile Lys Asp Ser Lys Thr Ala Trp
100 105 110

Arg Thr Asp Glu Glu Phe Ala Arg Glu Met Leu Ala Gly Val

115

120

125

<210> 66
 <211> 126
 <212> PRT
 <213> Salmo salar

<400> 66
 Met Val Leu Glu Thr Ile Ser Arg Ile Ile Lys Ile Gln Leu Pro Ala
 1 5 10 15
 Tyr Leu Lys Lys Leu Pro Leu Pro Glu Thr Ile Gly Gly Phe Ala Arg
 20 25 30
 Leu Thr Val Ser Glu Trp Leu Arg Leu Leu Pro Leu Leu Gly Ile Leu
 35 40 45
 Ala Leu Leu Gly Tyr Leu Thr Ile Arg Pro Phe Leu Pro Lys Lys Lys
 50 55 60
 Lys Gln Lys Asp Ser Leu Ile Asn Leu Lys Ile Gln Lys Glu Asn Pro
 65 70 75 80
 Lys Val Val Asn Glu Ile Asp Ile Glu Asp Leu Lys Arg Thr Asn Val
 85 90 95
 Cys Tyr Cys Arg Cys Trp Arg Ser Lys Thr Phe Pro Val Cys Asp Lys
 100 105 110
 Ser His Ile Lys His Asn Glu Leu Thr Gly Asp Asn Val Gly
 115 120 125

<210> 67
 <211> 76
 <212> PRT
 <213> Salmo salar

<400> 67
 Asn Gln Leu Leu Gly Arg Lys Val Phe Ala Val Ser Lys Lys Val His
 1 5 10 15
 Thr Thr Arg Ala Arg Ala Leu Gly Val Leu Thr Glu Asp Asp Thr Gln
 20 25 30
 Ile Ile Leu Leu Asp Thr Pro Gly Leu Thr Thr Pro Thr Lys Val Lys
 35 40 45
 Arg His Gln Leu Glu Lys Ser Leu Leu Glu Asp Pro Trp Asn Thr Val
 50 55 60
 Lys Glu Ala Gly Leu Val Val Val Met Val Asp Val
 65 70 75

<210> 68
 <211> 126
 <212> PRT
 <213> Sus scrofa

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<400> 68

Gly Gln Asn Ser Ser Thr Glu Gly Leu Ser Leu Ser Trp Val Asp Phe
1 5 10 15

Ile Lys Arg Glu Ser Pro Pro Gly Lys Leu Pro Phe Trp Thr Trp Leu
20 25 30

Asp Lys Ile Leu Asp Leu Val His Asp His Leu Lys Asp Leu Trp Lys
35 40 45

Asp Gly His Ile Met Gly Phe Val Ser Arg Ser Glu Glu Arg Arg Leu
50 55 60

Leu Lys Lys Thr Ile Ser Gly Thr Phe Leu Leu Arg Phe Ser Glu Thr
65 70 75 80

Leu Glu Gly Gly Ile Thr Cys Ser Trp Val Glu His Gln Asp Asp Asp
85 90 95

Lys Val Leu Ile Tyr Ser Leu Gln Pro Phe Thr Lys Glu Val Leu Gln
100 105 110

Ser Leu Pro Leu Thr Lys Ile Ile Ser Gln Tyr Gln Leu Leu
115 120 125

<210> 69

<211> 76

<212> PRT

<213> Sus scrofa

<400> 69

Arg Val Thr Val Val Val Gly Ala Ser Gln Asp Ile Ile Pro Gln Leu
1 5 10 15

Lys Lys Lys Tyr Asp Val Asp Thr Leu Asp Met Val Phe Leu Asp His
20 25 30

Trp Lys Asp Arg Tyr Leu Pro Asp Thr Leu Leu Leu Glu Glu Cys Gly
35 40 45

Leu Leu Arg Lys Gly Thr Val Leu Leu Ala Asp Asn Val Ile Cys Pro
50 55 60

Gly Ala Pro Asp Phe Leu Ala His Val Arg Gly Cys
65 70 75

<210> 70

<211> 226

<212> PRT

<213> Solanum tuberosum

<400> 70

Asn Phe Leu Gly Cys Ala Glu Asn Ala Leu Gly Ile Arg Glu Trp Leu
1 5 10 15

Glu Ser Lys Gly His Gln Tyr Ile Val Thr Pro Asp Lys Glu Gly Pro

20

25

30

Asp Cys Glu Leu Glu Lys His Ile Pro Asp Leu His Val Leu Ile Ser
 35 40 45

Thr Pro Phe His Pro Ala Tyr Val Thr Ala Glu Arg Ile Lys Lys Ala
 50 55 60

Lys Asn Leu Gln Leu Leu Leu Thr Ala Gly Ile Gly Ser Asp His Val
 65 70 75 80

Asp Leu Lys Ala Ala Ala Ala Ala Gly Leu Thr Val Ala Glu Val Thr
 85 90 95

Gly Ser Asn Thr Val Ser Val Ala Glu Asp Glu Leu Met Arg Ile Leu
 100 105 110

Ile Leu Val Arg Asn Phe Leu Pro Gly His His Gln Val Ile Asn Gly
 115 120 125

Glu Trp Asn Val Ala Ala Ile Ala His Arg Ala Tyr Asp Leu Glu Gly
 130 135 140

Lys Thr Val Gly Thr Val Gly Ala Gly Arg Ile Gly Arg Leu Leu Leu
 145 150 155 160

Gln Arg Leu Lys Pro Phe Asn Cys Asn Leu Leu Tyr His Asp Arg Leu
 165 170 175

Lys Met Asp Ser Glu Leu Glu Asn Gln Ile Gly Ala Lys Phe Glu Glu
 180 185 190

Asp Leu Asp Lys Met Leu Ser Lys Cys Asp Ile Val Val Ile Asn Thr
 195 200 205

Pro Leu Thr Glu Lys Thr Lys Gly Met Phe Asp Lys Glu Arg Ile Ala
 210 215 220

Lys Leu
 225

<210> 71
 <211> 76
 <212> PRT
 <213> Solanum tuberosum

<400> 71
 Met Glu Ser Lys Phe Ala His Ile Ile Val Phe Phe Leu Leu Ala Thr
 1 5 10 15

Ser Phe Glu Thr Leu Leu Ala Arg Lys Glu Ser Asp Gly Pro Glu Val
 20 25 30

Ile Glu Leu Gln Lys Glu Phe Glu Cys Asn Gly Lys Gln Arg Trp Pro
 35 40 45

Glu Leu Ile Gly Val Pro Thr Lys Leu Ala Lys Gly Ile Ile Glu Lys
 50 55 60

Glu Asn Ser Leu Ile Thr Asn Val Gln Ile Leu Leu
 65 70 75

<210> 72
 <211> 251
 <212> PRT
 <213> Sus scrofa

<400> 72
 Leu Leu Ala Glu Glu Leu Pro Leu Arg Gln Gly Thr Leu Lys Gln Leu
 1 5 10 15

Asn Glu Thr Gly Gly Thr Val Leu Val Ser Ala Pro Ile Ser Pro Glu
 20 25 30

Glu Gln Asp Lys Ile Glu Asn Lys Leu Lys Gln Thr Asn Leu Gln Trp
 35 40 45

Ile Lys Val Ser Arg Ile Leu Pro Glu Lys Gln Gly Glu Ile Glu Ala
 50 55 60

His Ile Lys Asp Leu Gly Gln Phe Glu Glu Gln Leu Asn His Leu Leu
 65 70 75 80

Val Trp Leu Ser Pro Ile Lys Asn Gln Leu Glu Ile Tyr Asn Gln Pro
 85 90 95

Asn Gln Thr Gly Pro Phe Asp Ile Lys Glu Thr Glu Val Ala Val Gln
 100 105 110

Ala Lys Gln Leu Asp Val Glu Gly Ile Leu Ser Lys Gly Gln His Leu
 115 120 125

Tyr Lys Glu Lys Pro Ala Thr Gln Pro Val Lys Arg Lys Leu Glu Asp
 130 135 140

Leu Ser Ser Glu Trp Lys Ala Val Thr His Leu Leu Gln Glu Leu Arg
 145 150 155 160

Ala Lys Trp Pro Gly Pro Thr Pro Gly Leu Thr Thr Ile Glu Ala Pro
 165 170 175

Thr Ser Gln Thr Val Thr Leu Val Thr Gln Pro Thr Val Thr Lys Glu
 180 185 190

Thr Ala Ile Ser Lys Pro Glu Met Pro Ser Ser Leu Leu Leu Glu Val
 195 200 205

Pro Ala Leu Ala Asp Phe Asn Arg Ala Trp Thr Glu Leu Thr Asp Trp
 210 215 220

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Leu Ser Leu Leu Asp Arg Val Ile Lys Ser Gln Arg Val Met Val Gly
225 230 235 240

Asp Leu Glu Asp Ile Asn Glu Met Ile Ile Lys
245 250

<210> 73
<211> 151
<212> PRT
<213> Solanum tuberosum

<400> 73
Ser Gly Glu Met Val Ile Asn Met Glu Trp Gly Asn Phe Arg Ser Ser
1 5 10 15

His Leu Pro Leu Thr Glu Tyr Asp His Ala Leu Asp Asn Glu Ser Leu
20 25 30

Asn Pro Ala Glu Gln Ile Phe Glu Lys Met Thr Ser Gly Met Tyr Leu
35 40 45

Gly Glu Ile Leu Arg Arg Val Leu Thr Arg Val Ala Glu Glu Val Leu
50 55 60

Ala Phe Leu Ala Met Arg Ser Leu Gln Ser Leu Lys Asp Ser Phe Val
65 70 75 80

Leu Arg Thr Pro Asp Met Ser Ala Met His His Asp Thr Ser Pro Asp
85 90 95

Leu Lys Val Val Gly Glu Lys Leu Lys Asp Ile Leu Glu Ile Ser Asn
100 105 110

Thr Ser Leu Lys Thr Arg Lys Leu Val Leu Ser Leu Cys Asn Ile Val
115 120 125

Ala Thr Arg Gly Ala Arg Leu Asp Ala Ala Gly Val Leu Gly Ile Leu
130 135 140

Lys Lys Met Gly Arg Asp Thr
145 150

<210> 74
<211> 101
<212> PRT
<213> Sus scrofa

<400> 74
Met Trp Gly Leu Leu Ile Phe Ser Val Leu Leu Gly Gly Val Leu Ala
1 5 10 15

Lys Glu Asp Phe Val Gly His Gln Val Leu Arg Ile Ser Val Asp Asp
20 25 30

Glu Ala Gln Val Gln Lys Val Lys Glu Leu Glu Asp Leu Glu His Leu
35 40 45

Gln Leu Asp Phe Trp Arg Gly Pro Ala Arg Pro Gly Phe Pro Ile Asp
50 55 60

Val Arg Val Pro Phe Pro Ser Ile Gln Ala Val Lys Val Phe Leu Glu
65 70 75 80

Ala His Gly Ile Arg Tyr Thr Ile Met Ile Glu Asp Val Gln Leu Leu
85 90 95

Leu Asp Glu Glu Gln
100

<210> 75
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 75
Ile Lys Asn Leu Arg Met Leu Gln Glu Met Tyr Asn Ala Trp Pro Phe
1 5 10 15

Phe Arg Val Thr Ile Asp Leu Val Glu Met Val Phe Ala Lys Gly Asp
20 25 30

Pro Gly Ile Ala Ala Leu Phe Asp Lys Leu Leu Val Ser Glu Asp Leu
35 40 45

Trp Ser Phe Gly Glu Leu Leu Arg Ser Lys Tyr Glu Glu Thr Lys Ser
50 55 60

Leu Leu Leu Gln Ile Ala Gly His Lys Asp Leu Leu
65 70 75

<210> 76
<211> 76
<212> PRT
<213> Capra hircus

<400> 76
Met Ala Ala Pro Leu Ser Val Glu Val Glu Phe Gly Gly Gly Ala Glu
1 5 10 15

Leu Leu Phe Asp Gly Val Lys Lys His Gln Val Thr Leu Pro Gly Gln
20 25 30

Glu Glu Pro Trp Asp Ile Arg Ser Leu Leu Val Trp Ile Lys Lys Asn
35 40 45

Leu Leu Lys Glu Arg Pro Glu Leu Phe Ile Gln Gly Asp Ser Val Arg
50 55 60

Pro Gly Ile Leu Val Leu Val Asn Asp Ala Asp Trp
65 70 75

<210> 77

<211> 126

<212> PRT

<213> Solanum tuberosum

<400> 77

Pro Asp Glu Leu Asn Leu Asp Leu Ile Arg Ser Ala Lys Val Phe His
 1 5 10 15

Tyr Gly Ser Ile Ser Leu Ile Val Glu Pro Cys Arg Ser Ala His Leu
 20 25 30

Lys Ala Met Glu Val Ala Lys Glu Ala Gly Ala Leu Leu Ser Tyr Asp
 35 40 45

Pro Asn Leu Arg Leu Pro Leu Trp Ser Ser Glu Ala Glu Ala Arg Lys
 50 55 60

Ala Ile Lys Val Ser Asp Val Glu Leu Glu Phe Leu Thr Gly Ser Asp
 65 70 75 80

Lys Ile Asp Asp Glu Ser Ala Met Ser Leu Trp His Pro Asn Leu Lys
 85 90 95

Leu Leu Leu Val Thr Leu Gly Glu Lys Gly Cys Asn Tyr Tyr Thr Lys
 100 105 110

Lys Phe His Gly Ser Val Gly Gly Phe His Val Lys Thr Val
 115 120 125

<210> 78

<211> 151

<212> PRT

<213> Sus scrofa

<400> 78

Lys Met Tyr Leu Met Leu Asp Asn Lys Arg Lys Glu Val Val His Lys
 1 5 10 15

Ile Ile Glu Leu Leu Asn Val Thr Glu Leu Thr Gln Lys Ala Leu Ile
 20 25 30

Asn Asp Glu Leu Val Glu Trp Lys Arg Arg Gln Gln Ser Ala Cys Ile
 35 40 45

Gly Gly Pro Pro Asn Ala Cys Leu Asp Gln Leu Gln Asn Trp Phe Thr
 50 55 60

Ile Val Ala Glu Ser Leu Gln Gln Val Arg Gln Gln Leu Lys Lys Leu
 65 70 75 80

Glu Glu Leu Glu Gln Lys Tyr Thr Tyr Glu His Asp Pro Ile Thr Lys
 85 90 95

Asn Lys Gln Ala Leu Trp Asp Arg Thr Phe Ser Leu Phe Gln Gln Leu
 100 105 110

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Ile Gln Ser Ser Phe Val Val Glu Arg Gln Pro Cys Met Pro Thr His
115 120 125

Pro Gln Arg Pro Leu Val Leu Lys Thr Gly Val Gln Phe Thr Val Lys
130 135 140

Leu Arg Leu Leu Val Lys Leu
145 150

<210> 79
<211> 76
<212> PRT
<213> Salmo salar

<400> 79
Ala Phe Pro Thr Glu Gln Leu Asn Glu Val Gly Glu Leu Leu Gln Thr
1 5 10 15

Arg Gly His Glu Val Gly Val Thr Thr Gly Arg Lys Arg Arg Cys Gly
20 25 30

Trp Leu Asp Leu Val Ile Leu Arg Tyr Ala Asn Met Ile Asn Gly Phe
35 40 45

Thr Ala Phe Ala Leu Thr Lys Leu Asp Ile Leu Asp Val Met Asp Glu
50 55 60

Ile Lys Val Gly Val Ser Tyr Lys Leu Lys Gly Lys
65 70 75

<210> 80
<211> 176
<212> PRT
<213> Malus domestica

<400> 80
Met Ser Thr Val Thr Leu Ser Ser Gly Tyr Glu Met Pro Val Ile Gly
1 5 10 15

Leu Gly Leu Trp Arg Leu Glu Lys Asp Glu Leu Lys Glu Val Ile Leu
20 25 30

Asn Ala Ile Lys Ile Gly Tyr Arg His Phe Asp Cys Ala Ala His Tyr
35 40 45

Lys Ser Glu Ala Asp Val Gly Glu Ala Leu Ala Glu Ala Phe Lys Thr
50 55 60

Gly Leu Val Lys Arg Glu Glu Leu Phe Ile Thr Thr Lys Ile Trp Asn
65 70 75 80

Ser Asp His Gly His Val Val Glu Ala Cys Lys Asn Ser Leu Glu Lys
85 90 95

Leu Gln Ile Asp Tyr Leu Asp Leu Tyr Leu Val His Tyr Pro Met Pro
100 105 110

Thr Lys His Asn Ala Ile Gly Lys Thr Ala Ser Leu Leu Gly Glu Asp
 115 120 125

Lys Val Leu Asp Ile Asp Val Thr Ile Ser Leu Gln Gln Thr Trp Glu
 130 135 140

Gly Met Glu Lys Thr Val Ser Leu Gly Leu Val Arg Ser Ile Gly Leu
 145 150 155 160

Ser Asn Tyr Glu Leu Phe Leu Thr Arg Asp Cys Leu Ala Tyr Ser Lys
 165 170 175

<210> 81
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 81
 Val Ser Tyr Tyr Thr Ser Phe Val Val Lys Asp Glu Leu Trp Leu Val
 1 5 10 15

Met Lys Leu Leu Ser Gly Gly Ser Val Leu Asp Ile Ile Lys His Ile
 20 25 30

Val Ala Lys Gly Glu His Lys Ser Gly Val Leu Asp Glu Ala Thr Ile
 35 40 45

Ala Thr Ile Leu Arg Glu Val Leu Glu Gly Leu Glu Tyr Leu His Lys
 50 55 60

Asn Gly Gln Ile His Arg Asp Val Lys Ala Gly Asn
 65 70 75

<210> 82
 <211> 276
 <212> PRT
 <213> Sus scrofa

<400> 82
 Leu Asp Glu Lys Ser Gly Ser Phe Val Ser Asp Leu Ser Ser Tyr Cys
 1 5 10 15

Asn Lys Glu Val Tyr Asn Lys Glu Asn Leu Phe Asn Ser Leu Asn Tyr
 20 25 30

Asp Val Ala Ala Lys Lys Arg Lys Lys Asp Met Leu Asn Ser Lys Thr
 35 40 45

Lys Thr Gln Tyr Phe His Gln Glu Lys Trp Ile Tyr Val His Lys Gly
 50 55 60

Ser Thr Lys Glu Arg His Gly Tyr Cys Thr Leu Gly Glu Ala Phe Asn
 65 70 75 80

Arg Leu Asp Phe Ser Thr Ala Ile Leu Asp Ser Arg Arg Phe Asn Tyr
 85 90 95

Val Val Arg Leu Leu Glu Leu Ile Ala Lys Ser Gln Leu Thr Ser Leu
100 105 110

Ser Gly Ile Ala Gln Lys Asn Phe Met Asn Ile Leu Glu Lys Val Val
115 120 125

Leu Lys Val Leu Glu Asp Gln Gln Asn Ile Arg Leu Ile Arg Glu Leu
130 135 140

Leu Gln Thr Leu Tyr Thr Ser Leu Cys Thr Leu Val Gln Arg Val Gly
145 150 155 160

Lys Ser Val Leu Val Gly Asn Ile Asn Met Trp Val Tyr Arg Met Glu
165 170 175

Thr Ile Leu His Trp Gln Gln Gln Leu Asn Asn Ile Gln Ile Thr Arg
180 185 190

Pro Ala Phe Lys Gly Leu Thr Phe Thr Asp Leu Pro Leu Cys Leu Gln
195 200 205

Leu Asn Ile Met Gln Arg Leu Ser Asp Gly Arg Asp Leu Val Ser Leu
210 215 220

Gly Gln Val Ala Pro Asp Leu His Val Leu Ser Glu Asp Arg Leu Leu
225 230 235 240

Trp Lys Lys Leu Cys Gln Tyr His Phe Ser Glu Arg Gln Ile Arg Lys
245 250 255

Arg Leu Ile Leu Ser Asp Lys Gly Gln Leu Asp Trp Lys Lys Met Tyr
260 265 270

Phe Lys Leu Val
275

<210> 83
<211> 126
<212> PRT
<213> Salmo salar

<400> 83
Met Val Leu Glu Thr Ile Ser Lys Ile Ile Lys Thr Gln Leu Pro Ala
1 5 10 15

Tyr Leu Lys Lys Phe Pro Leu Pro Glu Thr Ile Gly Gly Phe Ala Arg
20 25 30

Leu Thr Val Leu Asp Trp Leu Arg Leu Leu Pro Leu Leu Gly Ile Leu
35 40 45

Ala Leu Leu Gly Tyr Leu Thr Ile Arg Pro Phe Leu Pro Lys Lys Lys
50 55 60

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Lys Gln Lys Asp Ser Leu Ile Asn Leu Lys Ile Gln Lys Glu Asn Pro
65 70 75 80

Lys Val Val Asn Glu Ile Asp Ile Glu Asp Leu Lys Ser Thr Asn Val
85 90 95

Cys Tyr Cys Arg Cys Trp Arg Ser Lys Thr Phe Pro Val Cys Asp Lys
100 105 110

Ser His Ile Lys His Asn Glu Leu Thr Gly Asp Asn Val Gly
115 120 125

<210> 84
<211> 176
<212> PRT
<213> Meleagris gallopavo

<400> 84
Met Ala Thr Glu Gly Asp Lys Leu Leu Gly Gly Arg Phe Val Gly Ser
1 5 10 15

Val AspPro Ile Met Glu Ile Leu Ser Ser Ser Ile Ser Thr Glu Gln
20 25 30

Arg Leu Thr Glu Val Asp Ile Gln Ala Ser Met Ala Tyr Ala Lys Ala
35 40 45

Leu Glu Lys Ala Ser Ile Leu Thr Lys Thr Glu Leu Glu Lys Ile Leu
50 55 60

Ser Gly Leu Glu Lys Ile Ser Glu Glu Ser Ser Lys Gly Val Leu Val
65 70 75 80

Met Thr Gln Ser Asp Glu Asp Ile Gln Thr Ala Ile Glu Arg Arg Leu
85 90 95

Lys Glu Leu Ile Gly Asp Ile Ala Gly Lys Leu Gln Thr Gly Arg Ser
100 105 110

Arg Asn Glu Gln Val Val Thr Asp Leu Lys Leu Leu Leu Lys Ser Ser
115 120 125

Ile Ser Val Ile Ser Thr His Leu Leu Gln Leu Ile Lys Thr Leu Val
130 135 140

Glu Arg Ala Ala Ile Glu Ile Asp Ile Ile Met Pro Gly Tyr Thr His
145 150 155 160

Leu Gln Lys Ala Leu Pro Ile Arg Trp Ser Gln Phe Leu Leu Ser His
165 170 175

<210> 85
<211> 101
<212> PRT
<213> Sus scrofa

<400> 85

Ile Ser Gly Leu His Ala Ser Ile Asn Val His Leu Ser Ala Arg Tyr
 1 5 10 15

Leu Leu Gln Asp Thr Trp Leu Glu Lys Lys Trp Gly His Asn Ile Thr
 20 25 30

Glu Phe Gln Gln Arg Phe Asp Gly Ile Leu Thr Glu Gly Glu Gly Pro
 35 40 45

Arg Arg Leu Lys Asn Leu Tyr Phe Leu Tyr Leu Ile Glu Leu Arg Ala
 50 55 60

Leu Ser Lys Val Val Pro Phe Phe Glu Arg Pro Asp Phe Gln Leu Phe
 65 70 75 80

Thr Gly Asn Lys Val Gln Asp Ala Glu Asn Lys Met Leu Leu Leu Asp
 85 90 95

Ile Leu His Glu Ile
 100

<210> 86

<211> 276

<212> PRT

<213> Sus scrofa

<400> 86

Phe Val Val Ala Val Leu Ala Glu Glu Ile His Ala Leu Arg Leu Asn
 1 5 10 15

Phe Leu Gln Thr Ile Ala Gly Lys Ile Val Ser Lys Gln Lys Leu Glu
 20 25 30

Leu Lys Thr Thr Glu Ala Gly Pro Arg Leu Lys Ser Gly Lys Gln Val
 35 40 45

Ala Ala Ile Ile Lys Ala Val Asp Ser Lys Tyr Thr Ala Ile Pro Ile
 50 55 60

Val Gly Gln Val Phe Gln Ser Glu Cys Lys Gly Cys Ser Ser Leu Ser
 65 70 75 80

Gln His Trp Gln Ser Val Arg Lys His Leu Gln Pro Asp Asn Leu Ser
 85 90 95

Lys Thr Glu Ala Val Arg Ser Phe Leu Thr Phe Ile Gln His Leu Arg
 100 105 110

Thr Ala Lys Lys Glu Glu Ile Leu Gln Ile Leu Lys Ala Glu Asn Lys
 115 120 125

Asp Ile Leu Pro Gln Leu Val Asp Ala Val Thr Ser Ala Gln Thr Pro
 130 135 140

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Asp Ser Leu Asp Ala Ile Leu Asp Phe Leu Asp Phe Lys Ser Asp Ser
145 150 155 160

Asn Ile Ile Leu Gln Glu Arg Phe Leu Tyr Ala Cys Gly Phe Ala Ser
165 170 175

His Pro Asp Glu Glu Leu Leu Arg Ala Leu Ile Ser Lys Phe Lys Gly
180 185 190

Ser Phe Gly Ser Asn Asp Ile Arg Glu Ser Val Met Ile Ile Ile Gly
195 200 205

Ala Leu Val Arg Lys Leu Cys Gln Asn Glu Gly Cys Lys Leu Lys Ala
210 215 220

Val Val Asp Ala Lys Lys Leu Ile Leu Gly Gly Leu Glu Arg Ala Glu
225 230 235 240

Lys Lys Glu Asp Thr Met Met Tyr Leu Leu Ala Leu Lys Asn Ala Arg
245 250 255

Leu Pro Glu Gly Ile Pro Leu Leu Leu Lys Tyr Ala Glu Ala Ala Glu
260 265 270

Gly Pro Ile Ser
275

<210> 87
<211> 126
<212> PRT
<213> Capra hircus

<400> 87
Met Leu Ser Ala Glu Glu Lys Ala Ser Val Leu Ser Leu Phe Ala Lys
1 5 10 15

Val Asn Val Glu Glu Val Gly Gly Glu Ala Leu Gly Arg Leu Leu Val
20 25 30

Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu His Phe Gly Asp Leu Ser
35 40 45

Ser Ala Asp Ala Ile Leu Gly Asn Pro Lys Val Lys Ala His Gly Lys
50 55 60

Lys Val Leu Asp Thr Phe Ser Glu Gly Leu Lys Gln Leu Asp Asp Leu
65 70 75 80

Lys Gly Ala Phe Ala Ser Leu Ser Glu Leu His Cys Asp Lys Leu His
85 90 95

Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn Val Leu Val Val Val
100 105 110

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Leu Ala Arg Arg Phe Gly Gly Glu Phe Thr Pro Glu Leu Gln
 115 120 125

<210> 88
 <211> 151
 <212> PRT
 <213> Salmo salar

<400> 88
 Lys Ile Ile Thr Pro Ala Ile Thr Arg Val Val Asp Phe Ala Lys Lys
 1 5 10 15

Leu Pro Met Phe Ser Glu Leu Pro Cys Glu Asp Gln Ile Ile Leu Leu
 20 25 30

Lys Gly Cys Cys Met Glu Ile Met Ser Leu Arg Ala Ala Val Arg Tyr
 35 40 45

Asp Pro Glu Ser Glu Thr Leu Thr Leu Ser Gly Glu Met Ala Val Lys
 50 55 60

Arg Glu Gln Leu Lys Asn Gly Gly Leu Gly Val Val Ser Asp Ala Ile
 65 70 75 80

Phe Asp Leu Gly Lys Ser Leu Ala Gln Phe Asn Leu Asp Asp Ser Glu
 85 90 95

Val Ala Leu Leu Gln Ala Val Leu Leu Met Ser Ser Asp Arg Ser Gly
 100 105 110

Leu Thr Leu Val Asp Lys Ile Glu Lys Cys Gln Glu Thr Tyr Leu Leu
 115 120 125

Ala Phe Glu His Tyr Ile Asn His Arg Lys His Asn Ile Pro His Phe
 130 135 140

Trp Pro Lys Leu Leu Met Lys
 145 150

<210> 89
 <211> 276
 <212> PRT
 <213> Meleagris gallopavo

<400> 89
 Met Ala Thr Glu Gly Asp Lys Leu Leu Gly Gly Arg Phe Val Gly Ser
 1 5 10 15

Val Asp Pro Ile Met Glu Ile Leu Ser Ser Ser Ile Ser Thr Glu Gln
 20 25 30

Arg Leu Thr Glu Val Asp Ile Gln Ala Ser Met Ala Tyr Ala Lys Ala
 35 40 45

Leu Glu Lys Ala Ser Ile Leu Thr Lys Thr Glu Leu Glu Lys Ile Leu
 50 55 60

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Ser Gly Leu Glu Lys Ile Ser Glu Glu Ser Ser Lys Gly Val Leu Val
65 70 75 80

Met Thr Gln Ser Asp Glu Asp Ile Gln Thr Ala Ile Glu Arg Arg Leu
85 90 95

Lys Glu Leu Ile Gly Asp Ile Ala Gly Lys Leu Gln Thr Gly Arg Ser
100 105 110

Arg Asn Glu Gln Val Val Thr Asp Leu Lys Leu Leu Lys Ser Ser
115 120 125

Ile Ser Val Ile Ser Thr His Leu Leu Gln Leu Ile Lys Thr Leu Val
130 135 140

Glu Arg Ala Ala Ile Glu Ile Asp Ile Ile Met Pro Gly Tyr Thr His
145 150 155 160

Leu Gln Lys Ala Leu Pro Ile Arg Trp Ser Gln Phe Leu Leu Ser His
165 170 175

Ala Val Ala Leu Thr Arg Asp Ser Glu Arg Leu Gly Glu Val Lys Lys
180 185 190

Arg Ile Thr Val Leu Pro Leu Gly Ser Gly Val Leu Ala Gly Asn Pro
195 200 205

Leu Glu Ile Asp Arg Glu Leu Leu Arg Ser Glu Leu Asp Met Thr Ser
210 215 220

Ile Thr Leu Asn Ser Ile Asp Ala Ile Ser Glu Arg Asp Phe Val Val
225 230 235 240

Glu Leu Ile Ser Val Ala Thr Leu Leu Met Ile His Leu Ser Lys Leu
245 250 255

Ala Glu Asp Leu Ile Ile Phe Ser Thr Thr Glu Phe Gly Phe Val Thr
260 265 270

Leu Ser Asp Ala
275

<210> 90
<211> 101
<212> PRT
<213> Sus scrofa

<400> 90
Met Gly Arg Met His Ala Pro Gly Lys Gly Leu Ser Gln Ser Ala Leu
1 5 10 15

Pro Tyr Arg Arg Ser Val Pro Thr Trp Leu Lys Leu Thr Ser Asp Asp
20 25 30

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Val Lys Glu Gln Ile Tyr Lys Leu Ala Lys Lys Gly Leu Thr Pro Ser
35 40 45

Gln Ile Gly Val Ile Leu Arg Asp Ser His Gly Val Ala Gln Val Arg
50 55 60

Phe Val Thr Gly Asn Lys Ile Leu Arg Ile Leu Lys Ser Lys Gly Leu
65 70 75 80

Ala Pro Asp Leu Pro Glu Asp Leu Tyr His Leu Ile Lys Lys Ala Val
85 90 95

Ala Val Arg Lys His
100

<210> 91
<211> 226
<212> PRT
<213> Sus scrofa

<400> 91
Met Phe Ser Lys Lys Pro His Gly Asp Val Lys Lys Ser Thr Gln Lys
1 5 10 15

Val Leu Asp Thr Lys Lys Asp Ala Leu Thr Arg Leu Lys His Leu Arg
20 25 30

Ile Val Ile Glu Asn Ala Glu Ser Ile Asp Leu Lys Gln Phe Phe Asp
35 40 45

Gln His Phe Ser His Ile Tyr Tyr Val Phe Phe Glu Asn Phe Val Thr
50 55 60

Ile Glu Ala Ser Leu Lys Gln Lys Gly His Lys Ser Gln Arg Glu Glu
65 70 75 80

Leu Asp Ala Ile Leu Phe Ile Phe Glu Lys Ile Leu Gln Leu Leu Pro
85 90 95

Glu Arg Ile His Gln Arg Trp Gln Phe His Ser Ile Gly Leu Ile Leu
100 105 110

Lys Lys Leu Leu His Thr Gly Asn Ser Leu Lys Ile Arg Arg Glu Gly
115 120 125

Val Arg Leu Phe Leu Leu Trp Leu Gln Ala Leu Gln Asn Asn Cys Ser
130 135 140

Arg Glu Gln Leu Trp Met Phe Ser Cys Leu Ile Pro Gly Phe Ser Ala
145 150 155 160

Pro Gln Ser Glu Tyr Gly Pro Arg Thr Leu Asp Asn Leu Ile Asn Pro
165 170 175

Pro Leu Asn Leu Gln Glu Thr Gln Val Thr Ile Glu Glu Ile Thr Pro

180

185

190

Leu Val Pro Pro Gln Ser Gly Asp Lys Gly Gln Glu Asp Leu Thr Ser
 195 200 205

Tyr Phe Leu Glu Ala Leu Leu Lys Tyr Ile Val Ile Gln Val Lys Ser
 210 215 220

Leu Glu
 225

<210> 92
 <211> 176
 <212> PRT
 <213> Capra hircus

<400> 92
 Leu Tyr His Leu Leu Lys Ser Glu Lys Met Leu Leu Glu Asp Val Lys
 1 5 10 15

Ala Asn Ile Thr Glu Met Leu Ala Gly Gly Val Asp Thr Thr Ser Met
 20 25 30

Thr Leu Gln Trp His Leu Tyr Glu Met Ala Arg Ser Leu Asn Val Gln
 35 40 45

Glu Met Leu Arg Glu Glu Val Leu Asn Ala Arg Arg Gln Ala Glu Gly
 50 55 60

Asp Ile Ser Lys Met Leu Gln Met Val Pro Leu Leu Lys Ala Ser Ile
 65 70 75 80

Lys Glu Thr Leu Arg Leu His Pro Ile Ser Val Thr Leu Gln Arg Tyr
 85 90 95

Pro Glu Ser Asp Leu Val Leu Gln Asp Tyr Leu Ile Pro Ala Lys Thr
 100 105 110

Leu Val Gln Val Ala Ile Tyr Ala Met Gly Arg Asp Pro Ala Phe Phe
 115 120 125

Ser Asn Pro Asp Lys Phe Asp Pro Thr Arg Trp Leu Gly Lys Asp Lys
 130 135 140

Asp Leu Ile His Phe Arg Asn Leu Gly Phe Gly Trp Gly Val Arg Gln
 145 150 155 160

Cys Val Gly Arg Arg Ile Ala Glu Leu Glu Met Thr Leu Phe Leu Ile
 165 170 175

<210> 93
 <211> 126
 <212> PRT
 <213> Solanum tuberosum

<400> 93

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Glu Leu Ile Gly Leu Leu Arg Ala Glu Arg Met Gly Arg Ala Leu Glu
1 5 10 15

Glu Ala Ile Cys Tyr Arg Val Val Leu Leu Gly Ile Thr Arg Ala Ser
20 25 30

Leu Asn Thr Gln Ser Phe Ile Ser Glu Ala Ser Phe Gln Glu Thr Ala
35 40 45

Arg Val Leu Ala Lys Ala Ala Leu Arg Gly Arg Ile Asp Trp Leu Lys
50 55 60

Gly Leu Lys Glu Asn Val Val Leu Gly Gly Val Ile Pro Val Gly Thr
65 70 75 80

Gly Phe Lys Gly Leu Val His Pro Ser Lys Gln His Asn Asn Ile Pro
85 90 95

Leu Glu Thr Lys Lys Thr Asn Leu Phe Glu Gly Glu Met Arg Asp Ile
100 105 110

Leu Phe His His Arg Lys Leu Phe Asp Ser Cys Leu Ser Lys
115 120 125

<210> 94
<211> 76
<212> PRT
<213> Sus scrofa

<400> 94
Asp Lys Val Leu Ala Leu Ser Leu Glu Asp Glu His Leu Leu Tyr Gly
1 5 10 15

Asp Ile Ile Arg Gln Asp Phe Leu Asp Thr Tyr Asn Asn Leu Thr Leu
20 25 30

Lys Thr Ile Met Ala Phe Arg Trp Val Thr Glu Phe Cys Pro Asn Ala
35 40 45

Arg Tyr Ile Met Lys Thr Asp Thr Asp Val Phe Ile Asn Thr Gly Asn
50 55 60

Leu Val Lys Tyr Leu Leu Asn Leu Asn His Ser Glu
65 70 75

<210> 95
<211> 126
<212> PRT
<213> Sus scrofa

<400> 95
Gly Met His Glu Lys Gly Ile Ile Phe Asn Asn Asn Pro Val Leu Trp
1 5 10 15

Lys Ala Val Arg Thr Tyr Phe Met Lys Ala Leu Ser Gly Pro Gly Leu
20 25 30

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Val Arg Met Val Thr Val Cys Ala Asp Ser Ile Thr Lys His Leu Asp
35 40 45

Lys Leu Glu Glu Val Arg Asn Asp Leu Gly Tyr Val Asp Val Leu Thr
50 55 60

Leu Met Arg Arg Ile Met Leu Asp Thr Ser Asn Asn Leu Phe Leu Gly
65 70 75 80

Ile Pro Leu Asp Glu Lys Ala Ile Val Cys Lys Ile Gln Gly Tyr Phe
85 90 95

Asp Ala Trp Gln Ala Leu Leu Leu Lys Pro Asp Ile Phe Phe Lys Ile
100 105 110

Pro Trp Leu Tyr Arg Lys Tyr Glu Lys Ser Val Lys Asp Leu
115 120 125

<210> 96
<211> 126
<212> PRT
<213> Solanum tuberosum

<400> 96
Lys Gln Gln Tyr Thr Leu Cys Ser Ala Ser Leu Gln Asp Ile Ile Ala
1 5 10 15

Arg Phe Glu Lys Arg Ser Gly Asn Ala Val Asn Trp Asp Gln Phe Pro
20 25 30

Glu Lys Val Ala Val Gln Met Asn Asp Thr His Pro Thr Leu Cys Ile
35 40 45

Pro Glu Leu Leu Arg Ile Leu Met Asp Val Lys Gly Leu Ser Trp Lys
50 55 60

Gln Ala Trp Glu Ile Thr Gln Arg Thr Val Ala Tyr Thr Asn His Thr
65 70 75 80

Val Leu Pro Glu Ala Leu Glu Lys Trp Ser Phe Thr Leu Leu Gly Glu
85 90 95

Leu Leu Pro Arg His Val Glu Ile Ile Ala Met Ile Asp Glu Glu Leu
100 105 110

Leu His Thr Ile Leu Ala Glu Tyr Gly Thr Glu Asp Leu Asp
115 120 125

<210> 97
<211> 226
<212> PRT
<213> Sus scrofa

<400> 97
Asp His Lys His Lys Tyr Ile His Ile Leu Ala Tyr Ala Ala Ser Val
1 5 10 15

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Val Glu Thr Trp Lys Lys Asn Lys Arg Val Ser Ile Asn Lys Asp Glu
20 25 30

Leu Lys Ser Thr Ser Lys Ala Val Glu Thr Val His Asn Leu Cys Cys
35 40 45

Asn Glu Asn Lys Gly Ala Ser Glu Leu Val Ala Glu Leu Ser Thr Leu
50 55 60

Tyr Gln Cys Ile Arg Phe Pro Val Val Ala Met Gly Val Leu Lys Trp
65 70 75 80

Val Asp Trp Thr Val Ser Glu Pro Arg Tyr Phe Gln Leu Gln Thr Asp
85 90 95

His Thr Pro Val His Leu Ala Leu Leu Asp Glu Ile Ser Thr Cys His
100 105 110

Gln Leu Leu His Pro Gln Val Leu Gln Leu Leu Val Lys Leu Phe Glu
115 120 125

Thr Glu His Ser Gln Leu Asp Val Met Glu Gln Leu Glu Leu Lys Lys
130 135 140

Thr Leu Leu Asp Arg Met Val His Leu Leu Ser Arg Gly His Val Leu
145 150 155 160

Pro Val Val Ser Tyr Ile Arg Lys Cys Leu Glu Lys Leu Asp Thr Asp
165 170 175

Ile Ser Leu Ile Arg His Phe Val Thr Glu Val Leu Asp Val Ile Ala
180 185 190

Pro Pro Tyr Thr Ser Asp Phe Val Gln Leu Phe Leu Pro Ile Leu Glu
195 200 205

Asn Asp Ser Ile Ala Gly Thr Ile Lys Thr Glu Gly Glu His Asp Pro
210 215 220

Val Thr
225

<210> 98
<211> 76
<212> PRT
<213> Sus scrofa

<400> 98
Met Ser Gly Ala Leu Asp Val Leu Gln Met Lys Glu Glu Asp Val Leu
1 5 10 15

Lys Phe Leu Ala Ala Gly Thr His Leu Gly Gly Thr Asn Leu Asp Phe
20 25 30

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Gln Met Glu Gln Tyr Ile Tyr Lys Arg Lys Ser Asp Gly Ile Tyr Ile
35 40 45

Ile Asn Leu Lys Arg Thr Trp Glu Lys Leu Leu Leu Ala Ala Arg Ala
50 55 60

Ile Val Ala Ile Glu Asn Pro Ala Asp Val Ser Val
65 70 75

<210> 99
<211> 226
<212> PRT
<213> Sus scrofa

<400> 99
Leu Thr Met Gln Leu Leu Asp Cys Asn Phe Ser Asp Glu Asn Val Arg
1 5 10 15

Ala Ile Ala Val Gln Lys Leu Glu Ser Leu Glu Asp Asp Asp Val Leu
20 25 30

His Tyr Leu Leu Gln Leu Val Gln Ala Val Lys Phe Glu Pro Tyr His
35 40 45

Asp Ser Ala Leu Ala Arg Phe Leu Leu Lys Arg Gly Leu Arg Asn Lys
50 55 60

Arg Ile Gly His Phe Leu Phe Trp Phe Leu Arg Ser Glu Ile Ala Gln
65 70 75 80

Ser Arg His Tyr Gln Gln Arg Phe Ala Val Ile Leu Glu Ala Tyr Leu
85 90 95

Arg Gly Cys Gly Thr Ala Met Leu His Asp Phe Thr Gln Gln Val Gln
100 105 110

Val Ile Asp Met Leu Gln Lys Val Thr Ile Asp Ile Lys Ser Leu Ser
115 120 125

Ala Glu Lys Tyr Asp Val Ser Ser Gln Val Ile Ser Gln Leu Lys Gln
130 135 140

Lys Leu Glu Asn Leu Gln Asn Leu Asn Leu Pro Gln Ser Phe Arg Val
145 150 155 160

Pro Tyr Asp Pro Gly Leu Lys Ala Gly Ala Leu Val Ile Glu Lys Cys
165 170 175

Lys Val Met Ala Ser Lys Lys Lys Pro Leu Trp Leu Glu Phe Lys Cys
180 185 190

Ala Asp Pro Thr Ala Leu Ser Asn Glu Thr Ile Gly Ile Ile Phe Lys
195 200 205

His Gly Asp Asp Leu Arg Gln Asp Met Leu Ile Leu Gln Ile Leu Arg
 210 215 220

Ile Met
 225

<210> 100
 <211> 251
 <212> PRT
 <213> Sus scrofa

<400> 100
 Met Lys Gly Gly Ile Arg Lys Asp Arg Arg Gly Gly Arg Met Leu Lys
 1 5 10 15

His Lys Arg Gln Arg Asp Asp Gly Glu Gly Arg Asn Glu Ala Val Pro
 20 25 30

Pro Gly Asp Met Arg Ser Ala Asn Leu Trp Pro Ser Pro Leu Leu Ile
 35 40 45

Lys His Thr Lys Lys Asn Ser Pro Val Leu Ser Leu Thr Ala Asp Gln
 50 55 60

Met Ile Ser Ala Leu Leu Glu Ala Glu Pro Pro Ile Ile Tyr Ser Glu
 65 70 75 80

Tyr Asp Pro Thr Arg Pro Leu Ser Glu Ala Ser Met Met Gly Leu Leu
 85 90 95

Thr Asn Leu Ala Asp Arg Glu Leu Val His Met Ile Asn Trp Ala Lys
 100 105 110

Arg Val Pro Gly Phe Leu Asp Leu Ser Leu His Asp Gln Val His Leu
 115 120 125

Leu Glu Cys Ala Trp Leu Glu Ile Leu Met Ile Gly Leu Val Trp Arg
 130 135 140

Ser Met Glu His Pro Gly Lys Leu Leu Phe Ala Pro Asn Leu Leu Leu
 145 150 155 160

Asp Arg Asn Gln Gly Lys Cys Val Glu Gly Met Val Glu Ile Phe Asp
 165 170 175

Met Leu Leu Ala Thr Ser Ser Arg Phe Arg Met Met Asn Leu Gln Gly
 180 185 190

Glu Glu Phe Val Cys Leu Lys Ser Ile Ile Leu Leu Asn Ser Gly Val
 195 200 205

Tyr Thr Phe Leu Ser Ser Thr Leu Lys Ser Leu Glu Glu Lys Asp His
 210 215 220

Ile His Arg Val Leu Asp Lys Ile Thr Asp Thr Leu Ile His Leu Met

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<210> 103

<211> 201

<212> PRT

<213> Solanum tuberosum

<400> 103

Lys Ser Ile Gly Asn Gly Val Glu Phe Leu Asn Arg His Leu Ser Ala
1 5 10 15

Lys Met Phe His Asp Lys Glu Ser Met Thr Pro Leu Leu Glu Phe Leu
20 25 30

Arg Ala His His Tyr Lys Gly Lys Thr Met Met Leu Asn Asp Arg Ile
35 40 45

Gln Asn Ser Asn Thr Leu Gln Asn Val Leu Arg Lys Ala Glu Glu Tyr
50 55 60

Leu Ile Met Leu Pro Pro Glu Thr Pro Tyr Phe Glu Phe Glu His Lys
65 70 75 80

Phe Gln Glu Ile Gly Leu Glu Lys Gly Trp Gly Asp Thr Ala Glu Arg
85 90 95

Val Leu Glu Met Val Cys Met Leu Leu Asp Leu Leu Glu Ala Pro Asp
100 105 110

Ser Cys Thr Leu Glu Lys Phe Leu Gly Arg Ile Pro Met Val Phe Asn
115 120 125

Val Val Ile Leu Ser Pro His Gly Tyr Phe Ala Gln Glu Asn Val Leu
130 135 140

Gly Tyr Pro Asp Thr Gly Gly Gln Val Val Tyr Ile Leu Asp Gln Val
145 150 155 160

Pro Ala Leu Glu Arg Glu Met Leu Lys Arg Ile Lys Glu Gln Gly Leu
165 170 175

Asp Ile Ile Pro Arg Ile Leu Ile Val Thr Arg Leu Leu Pro Asp Ala
180 185 190

Val Gly Thr Thr Cys Gly Gln Arg Ile
195 200

<210> 104

<211> 151

<212> PRT

<213> Malus domestica

<400> 104

Val Tyr Pro Glu Asp Lys Arg Asp Leu Ser Ile Trp Pro Gln Thr Pro
1 5 10 15

Ala Asp Tyr Ile Glu Ala Thr Ala Glu Tyr Ala Lys Gln Leu Arg Glu
20 25 30

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Leu Ala Thr Lys Val Leu Lys Val Leu Ser Leu Gly Leu Gly Leu Asp
35 40 45

Glu Gly Arg Leu Glu Lys Glu Val Gly Gly Leu Glu Glu Leu Leu Leu
50 55 60

Gln Met Lys Ile Asn Tyr Tyr Pro Lys Cys Pro Gln Pro Glu Leu Ala
65 70 75 80

Leu Gly Val Glu Ala His Thr Asp Val Ser Ala Leu Thr Phe Ile Leu
85 90 95

His Asn Met Val Pro Gly Leu Gln Leu Phe Tyr Glu Gly Lys Trp Val
100 105 110

Thr Ala Lys Cys Val Pro Asn Ser Ile Val Met His Ile Gly Asp Thr
115 120 125

Leu Glu Ile Leu Ser Asn Gly Lys Tyr Lys Ser Ile Leu His Arg Gly
130 135 140

Met Val Asn Lys Glu Lys Val
145 150

<210> 105
<211> 251
<212> PRT
<213> Solanum tuberosum

<400> 105
Asn Val Asn Ala Leu Ile Val Glu Glu Leu Thr Val Pro Glu Phe Leu
1 5 10 15

Gln Phe Lys Glu Glu Leu Val Asn Gly Thr Ser Asn Asp Asn Phe Val
20 25 30

Leu Glu Leu Asp Phe Glu Pro Phe Thr Ala Ser Phe Pro Lys Pro Thr
35 40 45

Leu Thr Lys Ser Ile Gly Asn Gly Val Glu Phe Leu Asn Arg His Leu
50 55 60

Ser Ala Lys Met Phe His Asp Lys Glu Ser Met Thr Pro Leu Leu Glu
65 70 75 80

Phe Leu Arg Val His His Tyr Lys Gly Lys Thr Met Met Leu Asn Asp
85 90 95

Arg Ile Gln Asn Leu Tyr Thr Leu Gln Lys Val Leu Arg Lys Ala Glu
100 105 110

Glu Tyr Leu Thr Thr Leu Ser Pro Glu Thr Ser Tyr Ser Ala Phe Glu
115 120 125

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His Lys Phe Gln Glu Ile Gly Leu Glu Arg Gly Trp Gly Asp Thr Ala
130 135 140

Glu Arg Val Leu Glu Met Ile Cys Met Leu Leu Asp Leu Leu Glu Ala
145 150 155 160

Pro Asp Ser Cys Thr Leu Glu Lys Phe Leu Gly Arg Ile Pro Met Val
165 170 175

Phe Asn Val Val Ile Leu Ser Pro His Gly Tyr Phe Ala Gln Glu Asn
180 185 190

Val Leu Gly Tyr Pro Asp Thr Gly Gly Gln Val Val Tyr Ile Leu Asp
195 200 205

Gln Val Pro Ala Leu Glu Arg Glu Met Leu Lys Arg Ile Lys Glu Gln
210 215 220

Gly Leu Asp Ile Lys Pro Arg Ile Leu Ile Val Thr Arg Leu Leu Pro
225 230 235 240

Asp Ala Val Gly Thr Thr Cys Gly Gln Arg Leu
245 250

<210> 106
<211> 101
<212> PRT
<213> Sus scrofa

<400> 106
Asn Leu Arg Ala Tyr Arg Thr Phe His Val Met Leu Ala Arg Leu Leu
1 5 10 15

Glu Asp Gln Arg Glu His Phe Thr Pro Ala Glu Asp Asp Phe His Gln
20 25 30

Ala Ile His Thr Ile Val Leu Gln Val Ala Ala Phe Ala Tyr Gln Leu
35 40 45

Glu Glu Leu Met Val Leu Leu Glu His Lys Val Pro Pro Ser Glu Ala
50 55 60

Asp Gly Thr Pro Leu Ser Val Gly Gly Gly Gly Leu Phe Glu Lys Lys
65 70 75 80

Leu Trp Gly Leu Lys Val Leu Gln Glu Leu Ser Gln Trp Thr Val Arg
85 90 95

Ser Ile Arg Asp Leu
100

<210> 107
<211> 76
<212> PRT
<213> Salmo salar

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<400> 107

Ala Phe Pro Thr Glu Gln Leu Asn Glu Val Gly Glu Leu Leu Gln Thr
1 5 10 15

Arg Gly His Glu Val Gly Val Thr Thr Gly Arg Lys Arg Arg Cys Gly
20 25 30

Trp Leu Asp Leu Val Ile Leu Arg Tyr Ala Asn Met Ile Asn Gly Phe
35 40 45

Thr Ala Phe Ala Leu Thr Lys Leu Asp Ile Leu Asp Val Met Asp Glu
50 55 60

Ile Lys Val Gly Val Ser Tyr Lys Leu Asn Gly Lys
65 70 75

<210> 108

<211> 126

<212> PRT

<213> Sus scrofa

<400> 108

Met Val His Leu Ser Ala Glu Glu Lys Glu Ala Val Leu Gly Leu Trp
1 5 10 15

Gly Lys Val Asn Val Asp Glu Val Gly Gly Glu Ala Leu Gly Arg Leu
20 25 30

Leu Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser Phe Gly Asp
35 40 45

Leu Ser Asn Ala Asp Ala Val Met Gly Asn Pro Lys Val Lys Ala His
50 55 60

Gly Lys Lys Val Leu Gln Ser Phe Ser Asp Gly Leu Lys His Leu Asp
65 70 75 80

Asn Leu Lys Gly Thr Phe Ala Lys Leu Ser Glu Leu His Cys Asp Gln
85 90 95

Leu His Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn Val Ile Val
100 105 110

Val Val Leu Ala Arg Arg Leu Gly His Asp Phe Asn Pro Asn
115 120 125

<210> 109

<211> 201

<212> PRT

<213> Capra hircus

<400> 109

Ser His Leu Ile Leu His Leu Lys Gln Pro Val Leu Leu Val Asp Ile
1 5 10 15

Leu Val Asp Ile Val Ser Ser Leu Asp Cys Leu Glu Leu Arg Asp Thr
20 25 30

Asn Leu His Thr Phe His Phe Ser Glu Ala Ser Ile Ser Glu Met Asn
 35 40 45
 Thr Ser Val Lys Lys Leu Ile Phe Arg Asn Val Gln Phe Thr Asp Glu
 50 55 60
 Ser Phe Val Glu Val Val Lys Leu Phe Asn Tyr Val Ser Gly Ile Leu
 65 70 75 80
 Glu Val Glu Phe Asp Asp Cys Thr His Asp Gly Ile Gly Asp Phe Arg
 85 90 95
 Ala Leu Ser Leu Asp Arg Ile Arg His Leu Gly Asn Val Glu Thr Leu
 100 105 110
 Thr Ile Arg Lys Leu His Ile Pro Gln Phe Phe Leu Phe His Asp Leu
 115 120 125
 Ser Ser Ile Tyr Pro Leu Thr Gly Lys Val Lys Arg Val Thr Ile Glu
 130 135 140
 Ser Ser Lys Val Phe Leu Val Pro Cys Leu Leu Ser Gln His Leu Lys
 145 150 155 160
 Ser Leu Glu Tyr Leu Asp Leu Ser Glu Asn Leu Met Ser Glu Glu Thr
 165 170 175
 Leu Lys Asn Ser Ala Cys Lys Asp Ala Trp Pro Phe Leu Gln Thr Leu
 180 185 190
 Val Leu Arg Gln Asn Arg Leu Lys Ser
 195 200

 <210> 110
 <211> 76
 <212> PRT
 <213> Solanum tuberosum

 <400> 110
 Met Glu Leu Lys Phe Ala His Ile Ile Val Phe Phe Leu Leu Ala Thr
 1 5 10 15
 Ser Phe Glu Thr Leu Met Ala Arg Lys Glu Ser Asp Gly Pro Glu Val
 20 25 30
 Ile Gln Leu Leu Lys Glu Phe Gln Cys Lys Gly Lys Leu Arg Trp Pro
 35 40 45
 Glu Leu Ile Gly Val Pro Thr Lys Leu Ala Lys Gly Ile Ile Glu Lys
 50 55 60
 Glu Asn Ser Leu Ile Ser Asn Val His Ile Leu Leu
 65 70 75

<210> 111
 <211> 101
 <212> PRT
 <213> Capra hircus

<400> 111
 Asp Arg Ile Arg His Leu Gly Asn Val Glu Thr Leu Thr Ile Arg Lys
 1 5 10 15
 Leu His Ile Pro Gln Phe Phe Leu Phe His Asp Leu Ser Ser Ile Tyr
 20 25 30
 Pro Leu Thr Gly Lys Val Lys Arg Val Thr Ile Glu Ser Ser Lys Val
 35 40 45
 Phe Leu Val Pro Cys Leu Leu Ser Gln His Leu Lys Ser Leu Glu Tyr
 50 55 60
 Leu Asp Leu Ser Glu Asn Leu Met Ser Glu Glu Thr Leu Lys Asn Ser
 65 70 75 80
 Ala Cys Lys Asp Ala Trp Pro Phe Leu Gln Thr Leu Val Leu Arg Gln
 85 90 95
 Asn Arg Leu Lys Ser
 100

<210> 112
 <211> 126
 <212> PRT
 <213> Sus scrofa

<400> 112
 Gly Gly Gln Pro Leu Gln Asn Lys Val Gln Leu Lys Gly Arg Asp Leu
 1 5 10 15
 Leu Thr Leu Lys Asn Phe Thr Gly Glu Glu Ile Lys Tyr Ile Leu Trp
 20 25 30
 Leu Ser Ala Asp Leu Lys Phe Arg Ile Lys Gln Lys Gly Glu Tyr Leu
 35 40 45
 Pro Leu Leu Gln Gly Lys Ser Leu Gly Met Ile Phe Glu Lys Arg Ser
 50 55 60
 Thr Arg Thr Arg Leu Ser Thr Glu Thr Gly Phe Ala Leu Leu Gly Gly
 65 70 75 80
 His Pro Cys Phe Leu Thr Thr Gln Asp Ile His Leu Gly Val Asn Glu
 85 90 95
 Ser Leu Lys Asp Thr Ala Arg Val Leu Ser Ser Met Thr Asp Ala Val
 100 105 110
 Leu Ala Arg Val Tyr Lys Gln Ser Asp Leu Asp Ile Leu Ala
 115 120 125

<210> 113
 <211> 251
 <212> PRT
 <213> Solanum tuberosum

<400> 113

Arg Arg Arg Arg Leu Lys Val Asp Lys Ile Ser Lys Glu Glu Leu Tyr
 1 5 10 15

Glu Tyr Trp Ser Gln Ile Thr Asp Gln Ser Phe Asp Ser Arg Leu Gln
 20 25 30

Ile Phe Phe Asp Met Val Asp Lys Asn Glu Asp Gly Arg Ile Gly Glu
 35 40 45

Glu Glu Val Lys Glu Ile Ile Met Leu Ser Ala Ser Ala Asn Lys Leu
 50 55 60

Ser Arg Leu Lys Glu Gln Ala Glu Glu Tyr Ala Ala Leu Ile Met Glu
 65 70 75 80

Glu Leu Asp Pro Glu Arg Leu Gly Tyr Ile Glu Leu Trp Gln Leu Glu
 85 90 95

Thr Leu Leu Leu Gln Lys Asp Thr Tyr Leu Asn Tyr Ser Gln Ala Leu
 100 105 110

Ser Tyr Thr Ser Gln Ala Leu Ser Gln Asn Leu Gln Gly Leu Arg Lys
 115 120 125

Arg Ser Pro Ile Arg Arg Met Ser Thr Lys Leu Val Tyr Ser Leu Gln
 130 135 140

Glu Asn Trp Lys Arg Ile Trp Val Leu Val Leu Trp Ile Leu Ile Met
 145 150 155 160

Ile Gly Leu Phe Leu Trp Lys Phe Tyr Leu Tyr Lys Gln Lys Ser Ala
 165 170 175

Phe Gln Val Met Gly Tyr Cys Leu Leu Thr Ala Lys Gly Ala Ala Glu
 180 185 190

Thr Leu Lys Phe Asn Met Ala Leu Ile Leu Leu Pro Val Cys Arg Asn
 195 200 205

Thr Ile Thr Phe Leu Arg Ser Thr Lys Leu Ser Cys Phe Val Pro Phe
 210 215 220

Asp Asp Asn Ile Asn Phe His Lys Thr Val Ala Ala Ala Ile Val Thr
 225 230 235 240

Gly Ile Ile Leu His Ala Gly Asn His Leu Val
 245 250

<210> 114
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 114
 Thr Thr Arg Val Gly Ile Gly Ala Phe Pro Thr Glu Gln Asp Asn Glu
 1 5 10 15
 Ile Gly Glu Leu Leu Gln Thr Arg Gly Arg Glu Phe Gly Val Thr Thr
 20 25 30
 Gly Arg Lys Arg Arg Cys Gly Trp Leu Asp Leu Val Leu Leu Lys Tyr
 35 40 45
 Ala His Met Ile Asn Gly Phe Thr Ala Leu Ala Leu Thr Lys Leu Asp
 50 55 60
 Ile Leu Asp Met Phe Thr Glu Ile Lys Val Gly Val
 65 70 75

<210> 115
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 115
 Met Thr Ala Ala Glu Asn Val Cys Tyr Thr Leu Ile Asn Val Pro Met
 1 5 10 15
 Asp Ser Glu Pro Pro Ser Glu Ile Ser Leu Lys Asn Asp Leu Glu Lys
 20 25 30
 Gly Asp Val Lys Ser Lys Thr Glu Ala Leu Lys Lys Val Ile Ile Met
 35 40 45
 Ile Leu Asn Gly Glu Lys Leu Pro Gly Leu Leu Met Thr Ile Ile Arg
 50 55 60
 Phe Val Leu Pro Leu Gln Asp His Thr Ile Lys Lys Leu Leu Leu Val
 65 70 75 80
 Phe Trp Glu Ile Val Pro Lys Thr Thr Pro Asp Gly Arg Leu Leu His
 85 90 95
 Glu Met Ile Leu Val
 100

<210> 116
 <211> 201
 <212> PRT
 <213> Sus scrofa

<400> 116
 Gln Glu Asp Leu Glu Tyr Lys Leu Lys Gly Leu Ile Asp Leu Thr Leu
 1 5 10 15

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Asp Lys Ser Ala Lys Thr Arg Gln Ala Ala Leu Glu Gly Ile Lys Asn
20 25 30

Ala Leu Ala Ser Arg Met Leu Tyr Glu Phe Ile Leu Glu Arg Arg Met
35 40 45

Thr Leu Thr Asp Ser Ile Glu Arg Cys Leu Lys Lys Gly Lys Ser Asp
50 55 60

Glu Gln Arg Ala Ala Ala Ala Leu Ala Ser Val Leu Cys Ile Gln Leu
65 70 75 80

Gly Pro Gly Ile Glu Ser Glu Glu Val Leu Lys Thr Leu Gly Pro Val
85 90 95

Leu Lys Lys Ile Ile Cys Asp Gly Thr Ala Ser Ile Gln Ala Arg Gln
100 105 110

Thr Cys Ala Thr Cys Phe Gly Val Cys Cys Phe Ile Ala Thr Asp Asp
115 120 125

Ile Thr Glu Leu Tyr Ser Thr Leu Gln Cys Leu Glu Asn Ile Phe Thr
130 135 140

Lys Ser Tyr Leu Lys Glu Lys Asp Ser Asn Val Ile Cys Ser Thr Pro
145 150 155 160

Asn Thr Ala Leu His Ile Ser Ser Leu Leu Ala Trp Thr Leu Leu Leu
165 170 175

Thr Ile Cys Pro Leu Ser Glu Val Lys Lys Lys Leu Glu Met His Val
180 185 190

His Lys Leu Pro Ser Leu Leu Ser Ser
195 200

<210> 117

<211> 76

<212> PRT

<213> Sus scrofa

<400> 117

Cys Ser Asp Ser Lys Gln His Phe Glu Trp Leu Ile Lys Tyr Ser Pro
1 5 10 15

Leu His Asn Val Lys Leu Pro Glu Ala Asp Asp Ile Gln Tyr Pro Ser
20 25 30

Met Leu Leu Leu Thr Ala Asp His Asp Asp Arg Val Val Pro Leu His
35 40 45

Ser Leu Lys Phe Ile Ala Thr Leu Gln Tyr Ile Val Gly Arg Ser Arg
50 55 60

Lys Gln Asn Asn Pro Leu Leu Ile His Val Asp Thr

65

70

75

<210> 118

<211> 76

<212> PRT

<213> Capra hircus

<400> 118

Val Leu Leu Glu Ala Thr Ile Arg Glu Val Leu Arg Ile Arg Pro Val
1 5 10 15Ala Pro Met Leu Ile Pro His Lys Ala Ile Ile Asp Ser Ser Ile Gly
20 25 30Asp Leu Thr Ile Asp Lys Gly Thr Asp Val Val Val Asn Leu Trp Ala
35 40 45Leu His His Asn Glu Lys Glu Trp Gln Gln Pro Asp Leu Phe Met Pro
50 55 60Glu Arg Phe Leu Asp Pro Thr Gly Thr Gln Leu Ile
65 70 75

<210> 119

<211> 76

<212> PRT

<213> Sus scrofa

<400> 119

Leu Val Met Ile Asp Glu Leu Ile Thr Glu His Lys Met Thr Arg Asp
1 5 10 15Leu Ala Gln Pro Pro Arg Asp Leu Thr Asp Ala Phe Leu Asp Glu Met
20 25 30Lys Glu Ala Lys Gly Asn Pro Glu Ser Ser Phe Asn Asp Glu Asn Leu
35 40 45Arg Leu Val Val Ala His Leu Phe Ser Ala Gly Met Ile Thr Thr Ser
50 55 60Thr Thr Leu Ala Trp Ala Leu Leu Leu Met Ile Leu
65 70 75

<210> 120

<211> 126

<212> PRT

<213> Sus scrofa

<400> 120

Ser Phe Ser His Leu Asp Leu Ser Glu Glu Asp Ser Asp Asp Pro Ser
1 5 10 15Val Thr Leu Asp Leu Ser Gln Leu Ser Met Leu Pro His Leu Ala Asp
20 25 30Leu Val Ser Tyr Ser Ile Gln Lys Val Ile Gly Phe Ala Lys Met Ile
35 40 45

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Pro Gly Phe Arg Asp Leu Thr Ala Glu Asp Gln Ile Val Leu Leu Lys
50 55 60

Ser Ser Ala Ile Glu Val Ile Met Leu Arg Ser Asn Gln Ser Phe Thr
65 70 75 80

Met Asp Asp Met Ser Trp Thr Cys Gly Ser Arg Asp Tyr Lys Tyr Gln
85 90 95

Val Ser Asp Val Ala Lys Ala Gly His Ser Leu Glu Leu Ile Glu Pro
100 105 110

Leu Ile Lys Phe Gln Val Gly Leu Lys Lys Leu Asn Leu His
115 120 125

<210> 121
<211> 126
<212> PRT
<213> Sus scrofa

<400> 121
Thr Ala Met Leu His Asp Phe Thr Gln Gln Val Gln Val Ile Asp Met
1 5 10 15

Leu Gln Lys Val Thr Ile Asp Ile Lys Ser Leu Ser Ala Glu Lys Tyr
20 25 30

Asp Val Ser Ser Gln Val Ile Ser Gln Leu Lys Gln Lys Leu Glu Asn
35 40 45

Leu Gln Asn Leu Asn Leu Pro Gln Ser Phe Arg Val Pro Tyr Asp Pro
50 55 60

Gly Leu Lys Ala Gly Ala Leu Val Ile Glu Lys Cys Lys Val Met Ala
65 70 75 80

Ser Lys Lys Lys Pro Leu Trp Leu Glu Phe Lys Cys Ala Asp Pro Thr
85 90 95

Ala Leu Ser Asn Glu Thr Ile Gly Ile Ile Phe Lys His Gly Asp Asp
100 105 110

Leu Arg Gln Asp Met Leu Ile Leu Gln Ile Leu Arg Ile Met
115 120 125

<210> 122
<211> 101
<212> PRT
<213> Malus domestica

<400> 122
Glu Lys Leu Leu Asp Leu Leu Cys Glu Asn Leu Gly Leu Glu Lys Gly
1 5 10 15

Tyr Leu Lys Lys Val Phe Tyr Gly Ser Lys Gly Pro Asn Phe Gly Thr
Page 70

20

25

30

Lys Val Ser Asn Tyr Pro Pro Cys Pro Lys Pro Asp Leu Ile Lys Gly
35 40 45

Leu Arg Ala His Ser Asp Ala Gly Gly Ile Ile Leu Leu Phe Gln Asp
50 55 60

Asp Lys Val Ser Gly Leu Gln Leu Leu Lys Asp Gly Glu Trp Val Asp
65 70 75 80

Val Pro Pro Met His His Ser Ile Val Ile Asn Leu Gly Asp Gln Ile
85 90 95

Glu Val Ile Thr Asn
100

<210> 123
<211> 101
<212> PRT
<213> Malus domestica

<400> 123
Glu Lys Leu Leu Asp Leu Leu Cys Glu Asn Leu Gly Leu Glu Lys Gly
1 5 10 15

Tyr Leu Lys Lys Ala Phe Tyr Gly Ser Lys Gly Pro Asn Phe Gly Thr
20 25 30

Lys Val Ser Asn Tyr Pro Pro Cys Pro Lys Pro Asp Leu Ile Lys Gly
35 40 45

Leu Arg Ala His Thr Asp Ala Gly Gly Ile Ile Leu Leu Phe Gln Asp
50 55 60

Asp Lys Val Ser Gly Leu Gln Leu Leu Lys Asp Gly Glu Trp Met Asp
65 70 75 80

Val Pro Pro Val His His Ser Ile Val Ile Asn Leu Gly Asp Gln Ile
85 90 95

Glu Val Ile Thr Asn
100

<210> 124
<211> 276
<212> PRT
<213> Solanum tuberosum

<400> 124
Glu Leu Lys Glu Lys Phe Lys Arg Met Cys Asp Lys Ser Met Ile Lys
1 5 10 15

Lys Arg Tyr Met His Leu Thr Glu Glu Ile Leu Lys Glu Asn Pro Asn
20 25 30

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Met Cys Ala Tyr Met Ala Pro Ser Leu Asp Ala Arg Gln Asp Ile Val
35 40 45

Val Val Glu Val Pro Lys Leu Gly Lys Glu Ala Ala Gln Lys Ala Ile
50 55 60

Lys Glu Trp Gly Gln Pro Lys Ser Lys Ile Thr His Leu Val Phe Cys
65 70 75 80

Thr Thr Ser Gly Val Asp Met Pro Gly Cys Asp Tyr Gln Leu Ala Lys
85 90 95

Leu Leu Gly Leu Arg Pro Ser Val Lys Arg Leu Met Met Tyr Gln Gln
100 105 110

Gly Cys Phe Val Gly Gly Thr Val Leu Arg Leu Ala Lys Asp Leu Ala
115 120 125

Glu Asn Asn Lys Gly Ala Arg Val Leu Val Val Cys Ser Glu Ile Thr
130 135 140

Ala Val Thr Phe Arg Gly Pro Ser Glu Ser His Leu Asp Ser Leu Val
145 150 155 160

Gly Gln Ala Leu Phe Gly Asp Gly Ala Ala Ala Ile Ile Met Gly Ser
165 170 175

Asp Pro Ile Ile Gly Val Glu Arg Pro Leu Phe Glu Leu Val Ser Ala
180 185 190

Ala Gln Thr Leu Val Pro Asp Ser Glu Gly Ala Ile Asp Gly His Leu
195 200 205

Arg Glu Val Gly Leu Thr Phe His Leu Leu Lys Asp Val Pro Gly Leu
210 215 220

Ile Ser Lys Asn Ile Glu Lys Ser Leu Leu Glu Ala Phe Gln Pro Leu
225 230 235 240

Gly Ile Ser Asp Trp Asn Ser Leu Phe Trp Ile Ala His Pro Gly Gly
245 250 255

Pro Ala Ile Leu Asp Gln Val Glu Leu Lys Leu Gly Leu Lys Gln Glu
260 265 270

Lys Leu Arg Ala
275

<210> 125
<211> 176
<212> PRT
<213> Sus scrofa

<400> 125
Met Gln Arg Ser Pro Leu Glu Lys Ala Ser Ile Phe Ser Lys Leu Phe

1					5					10					15				
Phe	Ser	Trp	Thr 20	Arg	Pro	Ile	Leu	Arg 25	Lys	Gly	Tyr	Arg	Gln 30	Arg	Leu				
Glu	Leu	Ser 35	Asp	Ile	Tyr	His	Ile 40	Ser	Ser	Ser	Asp	Ser 45	Ala	Asp	Asn				
Leu	Ser 50	Glu	Lys	Leu	Glu	Arg 55	Glu	Trp	Asp	Arg	Glu 60	Leu	Ala	Ser	Lys				
Lys 65	Asn	Pro	Lys	Leu 70	Ile	Asn	Ala	Leu	Arg	Arg 75	Cys	Phe	Phe	Trp	Arg 80				
Phe	Met	Phe	Tyr	Gly 85	Ile	Ile	Leu	Tyr	Leu 90	Gly	Glu	Val	Thr	Lys 95	Ala				
Val	Gln	Pro	Leu 100	Leu	Leu	Gly	Arg	Ile 105	Ile	Ala	Ser	Tyr	Asp 110	Pro	Asp				
Asn	Lys	Ala 115	Glu	Arg	Ser	Ile	Ala 120	Ile	Tyr	Leu	Gly	Val 125	Gly	Leu	Cys				
Leu	Leu 130	Phe	Ile	Val	Arg	Thr 135	Leu	Leu	Leu	His	Pro 140	Ala	Ile	Phe	Gly				
Pro 145	His	His	Ile	Gly	Met 150	Gln	Met	Arg	Ile	Ala 155	Met	Phe	Ser	Leu	Ile 160				
Tyr	Lys	Lys	Thr	Leu 165	Lys	Leu	Ser	Ser	Arg 170	Val	Leu	Asp	Lys	Ile 175	Ser				
<210> 126																			
<211> 151																			
<212> PRT																			
<213> Capra hircus																			
<400> 126																			
Thr 1	Leu	Asp	Ile	Leu 5	Ser	Asp	Asn	Gln	Lys 10	Gly	Ile	Ala	Phe	Ala 15	Asp				
His	Gly	Ala	His 20	Trp	Gln	Leu	His	Arg 25	Lys	Leu	Val	Leu	Asn 30	Ala	Phe				
Ala	Leu	Phe 35	Lys	Asp	Gly	Asn	Leu 40	Lys	Leu	Glu	Lys	Ile 45	Ile	Asn	Gln				
Glu	Ala 50	Asn	Val	Leu	Cys	Asp 55	Phe	Leu	Ala	Thr	Gln 60	His	Gly	Gln	Ser				
Ile 65	Asp	Leu	Ser	Glu	Pro 70	Leu	Ser	Leu	Ala	Val 75	Thr	Asn	Ile	Ile	Ser 80				
Phe	Ile	Cys	Phe	Asn 85	Phe	Ser	Phe	Lys	Asn 90	Glu	Asp	Pro	Ala	Leu 95	Lys				

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Ala Ile Gln Asn Val Asn Asp Gly Ile Leu Glu Val Leu Ser Lys Glu
100 105 110

Ile Leu Leu Asp Ile Phe Pro Ala Leu Lys Ile Phe Pro Ser Lys Ala
115 120 125

Met Glu Lys Met Lys Gly Cys Val Glu Thr Arg Asn Glu Leu Leu Asn
130 135 140

Glu Ile Leu Glu Lys Cys Gln
145 150

<210> 127

<211> 276

<212> PRT

<213> Sus scrofa

<400> 127

Lys Lys His Arg Glu Glu Glu Leu Ala Glu Arg Arg Lys Leu Tyr Arg
1 5 10 15

Trp Gly Asn Trp Lys Asp Gly Leu Ile Leu Asn Ile Ala Ser Thr Gly
20 25 30

Ile His Asp Leu Pro Val Asp Glu Arg Phe Leu Glu Asp Lys Arg Ile
35 40 45

Asp Phe Glu Ala Ser Leu Ala Lys Gly Leu Ala Asp Leu Ala Val Lys
50 55 60

Asp Ser Leu Asn Val Leu Met Ser Trp Asn Ser Leu Asp Ser Phe Asn
65 70 75 80

Arg Ile Phe Trp Cys Gly Gln Ser Lys Leu Ala Glu Gln Val Arg Asp
85 90 95

Ser Trp Lys Glu Asp Ala Leu Phe Gly Tyr Gln Phe Leu Asn Gly Thr
100 105 110

Asn Pro Met Leu Leu Arg His Ser Val Glu Leu Pro Ala Arg Leu Lys
115 120 125

Phe Pro Pro Gly Met Glu Glu Leu Gln Ala Gln Leu Glu Lys Glu Leu
130 135 140

Gln Gly Gly Thr Leu Phe Glu Ala Asp Phe Ser Leu Leu Asp Gly Ile
145 150 155 160

Lys Ala Asn Val Ile Leu Cys Ser Gln Gln Tyr Leu Ala Val Pro Leu
165 170 175

Val Met Leu Lys Leu Gln Pro Asp Gly Lys Leu Leu Pro Met Val Ile
180 185 190

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Gln Leu Gln Leu Pro Arg Glu Gly Ser Pro Leu Pro Pro Leu Phe Leu
195 200 205

Pro Thr Asp Pro Pro Met Val Trp Leu Leu Ala Lys Cys Trp Val Arg
210 215 220

Ser Ser Asp Phe Gln Leu His Glu Leu His Ser His Leu Leu Arg Gly
225 230 235 240

His Leu Met Ala Glu Val Ile Ala Val Ala Thr Met Arg Cys Leu Pro
245 250 255

Ser Ile His Pro Ile Phe Lys Leu Leu Ile Pro His Phe Arg Tyr Thr
260 265 270

Met Glu Ile Asn
275

<210> 128
<211> 126
<212> PRT
<213> Capra hircus

<400> 128
Val Asn Asp Gly Ile Leu Glu Val Leu Ser Lys Glu Ile Leu Leu Asp
1 5 10 15

Ile Phe Pro Ala Leu Lys Ile Phe Pro Ser Lys Ala Met Glu Lys Met
20 25 30

Lys Gly Cys Val Glu Thr Arg Asn Glu Leu Leu Asn Glu Ile Leu Glu
35 40 45

Lys Cys Gln Glu Asn Phe Thr Ser Asp Ser Ile Thr Asn Leu Leu His
50 55 60

Ile Leu Met Gln Ala Lys Val Asn Ala Asp Asn Asn Asn Ala Gly Pro
65 70 75 80

Asp Gln Asp Ser Lys Leu Leu Ser Asn Arg His Met Leu Ala Thr Ile
85 90 95

Ala Asp Ile Phe Gly Ala Gly Val Glu Thr Thr Thr Ser Val Ile Lys
100 105 110

Trp Ile Val Ala Tyr Leu Leu His His Pro Ser Leu Lys Lys
115 120 125

<210> 129
<211> 126
<212> PRT
<213> Sus scrofa

<400> 129
Val Leu Gln Asn Leu Leu Thr Ile Glu Glu Arg Tyr Leu Pro Gln Cys
1 5 10 15

Ser Tyr Phe Lys Cys Val Gln Lys Asp Ile Gln Pro Tyr Met Arg Arg
20 25 30

Met Val Ala Thr Trp Met Leu Glu Val Cys Glu Glu Gln Lys Cys Glu
35 40 45

Glu Glu Val Phe Pro Leu Ala Ile Asn Tyr Leu Asp Arg Phe Leu Ala
50 55 60

Gly Val Pro Thr Pro Lys Thr His Leu Gln Leu Leu Gly Ala Val Cys
65 70 75 80

Met Phe Leu Ala Ser Lys Leu Lys Glu Thr Ile Pro Leu Thr Ala Glu
85 90 95

Lys Leu Cys Ile Tyr Thr Asp Asn Ser Ile Lys Pro Gln Glu Leu Leu
100 105 110

Glu Trp Glu Leu Val Val Leu Gly Lys Leu Lys Trp Asn Leu
115 120 125

<210> 130
<211> 126
<212> PRT
<213> Sus scrofa

<400> 130
Met Lys Ala Thr Ile Val Phe Leu Leu Leu Ala Gln Val Ser Trp Ala
1 5 10 15

Gly Pro Phe Gln Gln Lys Gly Leu Phe Asp Phe Met Leu Glu Asp Glu
20 25 30

Ala Ser Gly Ile Gly Pro Glu Asp Arg Phe Pro Glu Val Pro Glu Leu
35 40 45

Glu Pro Leu Gly Pro Met Cys Pro Phe Arg Cys Gln Cys His Leu Arg
50 55 60

Val Val Gln Cys Ser Asp Leu Gly Leu Asp Lys Val Pro Lys Asp Leu
65 70 75 80

Pro Pro Asp Thr Ala Leu Leu Asp Leu Gln Asn Asn Lys Ile Thr Glu
85 90 95

Ile Lys Asp Gly Asp Phe Lys Asn Leu Lys Asn Leu His Thr Leu Ile
100 105 110

Leu Ile Asn Asn Lys Ile Ser Lys Ile Ser Pro Gly Ala Phe
115 120 125

<210> 131
<211> 226
<212> PRT

<213> Sus scrofa

<400> 131

Met Lys Ala Thr Ile Val Phe Leu Leu Leu Ala Gln Val Ser Trp Ala
1 5 10 15Gly Pro Phe Gln Gln Lys Gly Leu Phe Asp Phe Met Leu Glu Asp Glu
20 25 30Ala Ser Gly Ile Gly Pro Glu Asp Arg Phe Pro Glu Val Pro Glu Leu
35 40 45Glu Pro Leu Gly Pro Met Cys Pro Phe Arg Cys Gln Cys His Leu Arg
50 55 60Val Val Gln Cys Ser Asp Leu Gly Leu Asp Lys Val Pro Lys Asp Leu
65 70 75 80Pro Pro Asp Thr Ala Leu Leu Asp Leu Gln Asn Asn Lys Ile Thr Glu
85 90 95Ile Lys Asp Gly Asp Phe Lys Asn Leu Lys Asn Leu His Thr Leu Ile
100 105 110Leu Ile Asn Asn Lys Ile Ser Lys Ile Ser Pro Gly Ala Phe Ala Pro
115 120 125Leu Val Lys Leu Glu Arg Leu Tyr Leu Ser Lys Asn Gln Leu Lys Glu
130 135 140Leu Pro Glu Lys Met Pro Lys Thr Leu Gln Glu Leu Arg Val His Glu
145 150 155 160Asn Glu Ile Thr Lys Val Arg Lys Ala Val Phe Asn Gly Leu Asn Gln
165 170 175Met Ile Val Val Glu Leu Gly Thr Asn Pro Leu Lys Ser Ser Gly Ile
180 185 190Glu Asn Gly Ala Phe Gln Gly Met Lys Lys Leu Ser Tyr Ile Arg Ile
195 200 205Ala Asp Thr Asn Ile Thr Thr Ile Pro Gln Gly Leu Pro Pro Ser Leu
210 215 220Thr Glu
225

<210> 132

<211> 151

<212> PRT

<213> Solanum tuberosum

<400> 132

Gln Ser Val Ser Glu Gln Lys Ser Arg Phe Gln Val Val Phe Asp Arg
1 5 10 15

Leu Arg Ile Asn Gln Tyr Ser Ile Asp Trp Ser Glu Val Ile Asp Lys
 20 25 30
 Lys Asp Leu Ser Lys Ser Leu Arg Phe Phe Leu Ser Lys Ser Leu Leu
 35 40 45
 Phe Leu Ser Lys Leu Leu Leu Phe Leu Ser Asn Ser Leu Pro Phe Phe
 50 55 60
 Cys Val Ser Phe Gly Asn Ile Pro Ile His Arg Ser Glu Ile Tyr Ile
 65 70 75 80
 Tyr Glu Glu Leu Lys Gly Pro Asn Asp Gln Leu Cys Asn Gln Leu Leu
 85 90 95
 Glu Ser Ile Gly Leu Gln Ile Val His Leu Lys Lys Leu Lys Pro Phe
 100 105 110
 Leu Leu Asp Asp His Asp Thr Ser Gln Lys Ser Lys Phe Leu Ile Asn
 115 120 125
 Gly Gly Thr Ile Ser Pro Phe Leu Phe Asn Lys Ile Pro Lys Trp Met
 130 135 140
 Ile Asp Ser Phe His Thr Arg
 145 150
 <210> 133
 <211> 226
 <212> PRT
 <213> Salmo salar
 <400> 133
 Leu Ala Asn Ala Ser Pro Phe Leu Arg Thr Gly Trp Ala Ala Arg Pro
 1 5 10 15
 Pro Gly Thr Asn Asn Gly His Gly Phe Arg Phe Thr Pro Ala Cys Phe
 20 25 30
 Ile Thr Ser Asp Ala Phe Leu Ser Arg Leu Ala Lys Gly Lys Ala Glu
 35 40 45
 Thr Asp Asp Thr His Tyr His His Pro Ala Ser Val Leu Pro Asp Ser
 50 55 60
 Ala Glu Gln Leu Ser Leu Leu Val Lys Asp Pro Asp Gln Pro Glu Asn
 65 70 75 80
 Ser Lys Val Leu Arg Val Ala Ile Ile Gly Ala Pro Asn Ala Gly Lys
 85 90 95
 Ser Thr Leu Ser Asn Gln Leu Leu Gly Arg Lys Val Phe Ala Val Ser
 100 105 110

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Lys Lys Val His Thr Thr Arg Ala Arg Ala Leu Gly Val Leu Thr Glu
115 120 125

Asp Asp Thr Gln Ile Ile Leu Leu Asp Thr Pro Gly Leu Thr Thr Pro
130 135 140

Thr Lys Val Lys Arg His Gln Leu Glu Lys Ser Leu Leu Glu Asp Pro
145 150 155 160

Trp Asn Thr Val Lys Glu Ala Gly Leu Val Val Val Met Val Asp Val
165 170 175

Ser Asp Lys Trp Ala Cys Asn Lys Leu Asp Phe Glu Val Leu Lys Cys
180 185 190

Leu Thr Gln His Pro Asp Val Pro Ala Val Leu Val Leu Asn Lys Val
195 200 205

Asp Leu Leu Lys Ser Lys Ser Arg Leu Leu Glu Ile Thr Ala Asp Leu
210 215 220

Thr Cys
225

<210> 134
<211> 101
<212> PRT
<213> Salmo salar

<400> 134
Met Ala Thr Asp Ala Lys Arg Leu Lys Thr Glu Gly Ser Asp Pro Leu
1 5 10 15

Gln Ser Phe Leu Gln Trp Cys Glu Gly Val Gly Leu Lys Leu Asn Asn
20 25 30

Lys Val Tyr Ile Ser Lys Glu Gly Thr Val Ala Glu Tyr Gly Met Leu
35 40 45

Ala Lys Glu Asp Ile Asp Glu Gly Glu Leu Leu Phe Thr Ile Pro Arg
50 55 60

Met Ala Leu Leu His Gln Gly Thr Thr Lys Val Leu Ala Val Leu Glu
65 70 75 80

Glu Gly Lys Ala Ser Leu Glu Asn Thr Ser Gly Trp Val Pro Leu Leu
85 90 95

Leu Ala Leu Met Tyr
100

<210> 135
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 135

Ile Arg Gly Tyr Met Leu Ile Thr Gln Ser Ile Leu Arg Lys Tyr Ile
1 5 10 15

Leu Leu Pro Ser Leu Ile Ile Ala Lys Asn Leu Gly Arg Met Leu Phe
20 25 30

Leu Gln Leu Pro Glu Trp Ser Glu Asp Leu Gln Glu Trp Asn Arg Glu
35 40 45

Met Gln Ile Lys Cys Thr Tyr Asn Gly Val Gln Leu Ser Glu Thr Glu
50 55 60

Phe Pro Lys Asp Trp Leu Arg Asp Gly Ile Gln Ile Lys Ile Leu Phe
65 70 75 80

Pro Phe Cys Leu Lys Pro Trp His Ile Ser Lys Leu Tyr Pro Ser Arg
85 90 95

Gly Glu Leu Met Lys
100

<210> 136

<211> 76

<212> PRT

<213> Sus scrofa

<400> 136

Thr Glu Val Leu Leu Lys Val Leu Asp Lys Ala His Arg Asn Tyr Ser
1 5 10 15

Glu Ser Phe Phe Glu Ala Ala Ser Met Met Ser Gln Leu Ser His Lys
20 25 30

His Leu Val Leu Asn Tyr Gly Val Cys Val Cys Gly Glu Glu Asn Ile
35 40 45

Leu Val Gln Glu Phe Val Lys Phe Gly Ser Leu Asp Thr Tyr Leu Lys
50 55 60

Lys Asn Lys Asn Ser Ile Asn Ile Leu Trp Lys Leu
65 70 75

<210> 137

<211> 76

<212> PRT

<213> Sus scrofa

<400> 137

Asn Asp Cys Leu Ile Thr Phe Leu Ile Thr Thr Asp Asn Glu Gly Lys
1 5 10 15

Thr Ile Ile His Ser Ile Ser Glu Lys Asp Cys Pro Lys Pro Pro Asn
20 25 30

Ser Pro Met Ile Met Leu Gly Val Ser Leu Ala Ile Leu Leu Ile Gly

35

40

45

Val Val Leu Leu Cys Ile Trp Lys Leu Leu Val Ser Phe His Asp Arg
 50 55 60

Lys Glu Val Ala Lys Phe Glu Ala Glu Arg Ser Lys
 65 70 75

<210> 138
 <211> 201
 <212> PRT
 <213> Sus scrofa

<400> 138
 Leu Glu Leu Ile Ala Lys Ser Gln Leu Thr Ser Leu Ser Gly Ile Ala
 1 5 10 15

Gln Lys Asn Phe Met Asn Ile Leu Glu Lys Val Val Leu Lys Val Leu
 20 25 30

Glu Asp Gln Gln Asn Ile Arg Leu Ile Arg Glu Leu Leu Gln Thr Leu
 35 40 45

Tyr Thr Ser Leu Cys Thr Leu Val Gln Arg Val Gly Lys Ser Val Leu
 50 55 60

Val Gly Asn Ile Asn Met Trp Val Tyr Arg Met Glu Thr Ile Leu His
 65 70 75 80

Trp Gln Gln Gln Leu Asn Asn Ile Gln Ile Thr Arg Pro Ala Phe Lys
 85 90 95

Gly Leu Thr Phe Thr Asp Leu Pro Leu Cys Leu Gln Leu Asn Ile Met
 100 105 110

Gln Arg Leu Ser Asp Gly Arg Asp Leu Val Ser Leu Gly Gln Val Ala
 115 120 125

Pro Asp Leu His Val Leu Ser Glu Asp Arg Leu Leu Trp Lys Lys Leu
 130 135 140

Cys Gln Tyr His Phe Ser Glu Arg Gln Ile Arg Lys Arg Leu Ile Leu
 145 150 155 160

Ser Asp Lys Gly Gln Leu Asp Trp Lys Lys Met Tyr Phe Lys Leu Val
 165 170 175

Arg Cys Tyr Pro Arg Lys Glu Gln Tyr Gly Asp Thr Leu Gln Leu Cys
 180 185 190

Arg His Cys His Ile Leu Ser Trp Lys
 195 200

<210> 139
 <211> 76

<212> PRT

<213> Sus scrofa

<400> 139

Leu Trp Asp Arg Thr Phe Ser Leu Phe Gln Gln Leu Ile Gln Ser Ser
 1 5 10 15

Phe Val Val Glu Arg Gln Pro Cys Met Pro Thr His Pro Gln Arg Pro
 20 25 30

Leu Val Leu Lys Thr Gly Val Gln Phe Thr Val Lys Leu Arg Leu Leu
 35 40 45

Val Lys Leu Gln Lys Leu Asn Tyr Asn Leu Lys Val Lys Val Leu Phe
 50 55 60

Asp Lys Asp Val Ser Glu Arg Asn Thr Val Lys Gly
 65 70 75

<210> 140

<211> 76

<212> PRT

<213> Salmo salar

<400> 140

Lys Ala Tyr Thr Thr Arg Val Gly Ile Gly Ala Phe Pro Thr Glu Gln
 1 5 10 15

Leu Asn Ala Thr Gly Glu Leu Leu Gln Thr Arg Gly His Glu Val Gly
 20 25 30

Val Thr Thr Gly Arg Lys Arg Arg Cys Gly Trp Leu Asp Leu Val Ile
 35 40 45

Leu Arg Tyr Ala His Met Ile Asn Gly Phe Thr Ala Ile Ala Leu Thr
 50 55 60

Lys Leu Asp Ile Leu Asp Val Leu Asp Glu Ile Lys
 65 70 75

<210> 141

<211> 126

<212> PRT

<213> Capra hircus

<400> 141

Gly Met His Glu Lys Gly Ile Ile Phe Asn Asn Asn Pro Ala Leu Trp
 1 5 10 15

Lys Ala Val Arg Pro Phe Phe Thr Lys Ala Leu Ser Gly Pro Gly Leu
 20 25 30

Val Arg Met Val Thr Ile Cys Ala Asp Ser Ile Thr Lys His Leu Asp
 35 40 45

Arg Leu Glu Glu Val Cys Asn Asp Leu Gly Tyr Val Asp Val Leu Thr
 50 55 60

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Leu Met Arg Arg Ile Met Leu Asp Thr Ser Asn Ile Leu Phe Leu Gly
65 70 75 80

Ile Pro Leu Asp Glu Ser Ala Ile Val Val Lys Ile Gln Gly Tyr Phe
85 90 95

Asp Ala Trp Gln Ala Leu Leu Leu Lys Pro Asp Ile Phe Phe Lys Ile
100 105 110

Ser Trp Leu Cys Arg Lys Tyr Glu Lys Ser Val Lys Asp Leu
115 120 125

<210> 142

<211> 201

<212> PRT

<213> Prunus persica

<400> 142

Arg Val Pro Leu Leu His Leu Ser Asn Phe Gln Ile Asn Asp Trp Pro
1 5 10 15

Glu Leu Ser Thr Lys Arg Tyr Ala Leu Met Val Leu Met Leu Pro Ser
20 25 30

Asp Ser Ala Arg Gln Trp His Val His Glu Leu Glu Leu Val Glu Val
35 40 45

Val Ala Asp Gln Val Ala Val Ala Leu Ser His Ala Ala Ile Leu Glu
50 55 60

Glu Ser Met Arg Ala Arg Asp Leu Leu Met Glu Gln Asn Ile Ala Leu
65 70 75 80

Asp Leu Ala Arg Arg Glu Ala Glu Thr Ala Ile Arg Ala Arg Asn Asp
85 90 95

Phe Leu Ala Val Met Asn His Glu Met Arg Thr Pro Met His Ala Ile
100 105 110

Ile Ala Leu Ser Ser Leu Leu Gln Glu Thr Glu Leu Thr Pro Glu Gln
115 120 125

Arg Leu Met Val Glu Thr Ile Leu Lys Ser Ser His Leu Leu Ala Thr
130 135 140

Leu Ile Asn Asp Val Leu Asp Leu Ser Arg Leu Glu Asp Gly Ser Leu
145 150 155 160

Gln Leu Glu Ile Ala Thr Phe Asn Leu His Ser Val Phe Arg Glu Val
165 170 175

His Asn Leu Ile Lys Pro Val Ala Ser Val Lys Lys Leu Ser Val Ser
180 185 190

Leu Asn Leu Ala Ala Asp Leu Pro Val
195 200

<210> 143
<211> 276
<212> PRT
<213> Capra hircus

<400> 143
Val Asn Asp Gly Ile Leu Glu Val Leu Ser Lys Glu Ile Leu Leu Asp
1 5 10 15

Ile Phe Pro Ala Leu Lys Ile Phe Pro Ser Lys Ala Met Glu Lys Met
20 25 30

Lys Gly Cys Val Glu Thr Arg Asn Glu Leu Leu Asn Glu Ile Leu Glu
35 40 45

Lys Cys Gln Glu Asn Phe Thr Ser Asp Ser Ile Thr Asn Leu Leu His
50 55 60

Ile Leu Met Gln Ala Lys Val Asn Ala Asp Asn Asn Asn Ala Gly Pro
65 70 75 80

Asp Gln Asp Ser Lys Leu Leu Ser Asn Arg His Met Leu Ala Thr Ile
85 90 95

Ala Asp Ile Phe Gly Ala Gly Val Glu Thr Thr Thr Ser Val Ile Lys
100 105 110

Trp Ile Val Ala Tyr Leu Leu His His Pro Ser Leu Lys Lys Arg Ile
115 120 125

Gln Asp Ser Ile Asp Gln Asn Ile Gly Phe Asn Arg Thr Pro Thr Ile
130 135 140

Ser Asp Arg Asn Cys Leu Val Leu Leu Glu Ala Thr Ile Arg Glu Val
145 150 155 160

Leu Arg Ile Arg Pro Val Ala Pro Met Leu Ile Pro His Lys Ala Ile
165 170 175

Ile Asp Ser Ser Ile Gly Asp Leu Thr Ile Asp Lys Gly Thr Asp Val
180 185 190

Val Val Asn Leu Trp Ala Leu His His Asn Glu Lys Glu Trp Gln Gln
195 200 205

Pro Asp Leu Phe Met Pro Glu Arg Phe Leu Asp Pro Thr Gly Thr Gln
210 215 220

Leu Ile Ser Pro Ser Leu Ser Tyr Leu Pro Phe Gly Ala Gly Pro Arg
225 230 235 240

Ser Cys Val Gly Glu Met Leu Ala Arg Gln Glu Leu Phe Leu Phe Met

245

250

255

Ser Arg Leu Leu Gln Arg Phe Asn Leu Glu Ile Pro Asp Asp Gly Lys
 260 265 270

Leu Pro Ser Leu
 275

<210> 144
 <211> 276
 <212> PRT
 <213> Sus scrofa

<400> 144
 Glu Glu Gln Gly Gly Ser Ala Val Arg Arg Val Ala Gln Glu Val Gln
 1 5 10 15

Arg Phe Ala Gln Glu Lys Gly His Asp Ala Ser Gln Ile Thr Leu Ala
 20 25 30

Leu Gly Thr Ala Ala Ser Tyr Pro Arg Ala Cys Gln Ala Leu Gly Ala
 35 40 45

Met Leu Ser Lys Gly Ala Leu Asn Pro Ala Asp Ile Thr Val Leu Phe
 50 55 60

Lys Met Phe Thr Ser Met Asp Pro Pro Pro Val Glu Leu Ile Arg Val
 65 70 75 80

Pro Ala Phe Leu Asp Leu Phe Met Gln Ser Leu Phe Lys Pro Gly Ala
 85 90 95

Arg Ile Asn Gln Asp His Lys His Lys Tyr Ile His Ile Leu Ala Tyr
 100 105 110

Ala Ala Ser Val Val Glu Thr Trp Lys Lys Asn Lys Arg Val Ser Ile
 115 120 125

Asn Lys Asp Glu Leu Lys Ser Thr Ser Lys Ala Val Glu Thr Val His
 130 135 140

Asn Leu Cys Cys Asn Glu Asn Lys Gly Ala Ser Glu Leu Val Ala Glu
 145 150 155 160

Leu Ser Thr Leu Tyr Gln Cys Ile Arg Phe Pro Val Val Ala Met Gly
 165 170 175

Val Leu Lys Trp Val Asp Trp Thr Val Ser Glu Pro Arg Tyr Phe Gln
 180 185 190

Leu Gln Thr Asp His Thr Pro Val His Leu Ala Leu Leu Asp Glu Ile
 195 200 205

Ser Thr Cys His Gln Leu Leu His Pro Gln Val Leu Gln Leu Leu Val
 210 215 220

Lys Leu Phe Glu Thr Glu His Ser Gln Leu Asp Val Met Glu Gln Leu
225 230 235 240

Glu Leu Lys Lys Thr Leu Leu Asp Arg Met Val His Leu Leu Ser Arg
245 250 255

Gly His Val Leu Pro Val Val Ser Tyr Ile Arg Lys Cys Leu Glu Lys
260 265 270

Leu Asp Thr Asp
275

<210> 145
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 145
Leu Glu Leu Glu Asn Gln Phe Leu Glu Lys Asn Ile Leu Arg Thr Gln
1 5 10 15

Thr Leu Leu Cys Asp Met Leu Met Arg Asp Ala Pro Leu Gly Ile Val
20 25 30

Ser Gln Ser Pro Asn Ile Met Asp Leu Ile Lys Cys Asp Gly Ala Ala
35 40 45

Leu Leu Tyr Lys Asn Lys Ile His Arg Leu Gly Met Asn Pro Ser Asp
50 55 60

Phe Gln Leu His Asp Ile Val Ser Trp Leu Cys Glu
65 70 75

<210> 146
<211> 101
<212> PRT
<213> Sus scrofa

<400> 146
Asp Arg Glu Leu Val His Met Ile Asn Trp Ala Lys Arg Val Pro Gly
1 5 10 15

Phe Leu Asp Leu Ser Leu His Asp Gln Val His Leu Leu Glu Cys Ala
20 25 30

Trp Leu Glu Ile Leu Met Ile Gly Leu Val Trp Arg Ser Met Glu His
35 40 45

Pro Gly Lys Leu Leu Phe Ala Pro Asn Leu Leu Leu Asp Arg Asn Gln
50 55 60

Gly Lys Cys Val Glu Gly Met Val Glu Ile Phe Asp Met Leu Leu Ala
65 70 75 80

Thr Ser Ser Arg Phe Arg Met Met Asn Leu Gln Gly Glu Glu Phe Val
Page 86

85

90

95

Cys Leu Lys Ser Ile
100

<210> 147
<211> 101
<212> PRT
<213> Sus scrofa

<400> 147
Gly Arg Ile Ile Leu Leu Glu Gln Gly Met Asp Ser Leu Glu Val Gln
1 5 10 15

Lys Gln Asn Cys Cys Trp Leu Leu Val Ser His Lys Pro Cys Val Lys
20 25 30

Asp Asp Val Ile Val Ala Leu Lys Lys Ala Asn Gly Asp Ala Ile Leu
35 40 45

Lys Phe Glu Pro Leu Val Leu His Val Gln Cys Arg Gln Leu Gln Asp
50 55 60

Ala Gln Ile Leu His Ser Val Ala Ile Asp Ser Gly Phe Arg Asn Ser
65 70 75 80

Gly Ile Thr Val Gly Lys Arg Gly Lys Thr Met Leu Ala Val Arg Ser
85 90 95

Thr His Gly Leu Glu
100

<210> 148
<211> 251
<212> PRT
<213> Sus scrofa

<400> 148
Thr Gly Arg Leu His Met Met Glu Glu Met Cys Ala Leu Ser Phe Ser
1 5 10 15

Gln Glu Leu Asp Tyr Trp Gly Ile Asp Glu Ile Tyr Leu Glu Ser Cys
20 25 30

Cys Gln Ala Arg Tyr His Gln Lys Lys Glu Gln Met Asn Glu Glu Leu
35 40 45

Lys Arg Glu Ala Glu Thr Leu Arg Glu Arg Glu Gly Glu Glu Phe Asp
50 55 60

Asn Thr Cys Cys Ala Glu Lys Arg Lys Lys Leu Trp Asp Leu Leu Glu
65 70 75 80

Lys Pro Asn Ser Ser Val Ala Ala Lys Ile Leu Ala Ile Ile Ser Ile
85 90 95

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Met Phe Ile Val Leu Ser Thr Ile Ala Leu Ser Leu Asn Thr Leu Pro
100 105 110

Glu Leu Gln Ser Leu Asp Glu Phe Gly Gln Thr Thr Asp Asn Pro Gln
115 120 125

Leu Ala His Val Glu Ala Val Cys Ile Ala Trp Phe Thr Met Glu Tyr
130 135 140

Leu Leu Arg Phe Leu Ser Ser Pro Lys Lys Trp Lys Phe Phe Lys Gly
145 150 155 160

Pro Leu Asn Ala Ile Asp Leu Leu Ala Ile Leu Pro Tyr Tyr Val Thr
165 170 175

Ile Phe Leu Thr Glu Ser Asn Lys Ser Val Leu Gln Phe Gln Asn Val
180 185 190

Arg Arg Val Val Gln Ile Phe Arg Ile Met Arg Ile Leu Arg Ile Leu
195 200 205

Lys Leu Ala Arg His Ser Thr Gly Leu Gln Ser Leu Gly Phe Thr Leu
210 215 220

Arg Arg Ser Tyr Asn Glu Leu Gly Leu Leu Ile Leu Phe Leu Ala Met
225 230 235 240

Gly Ile Met Ile Phe Ser Ser Leu Val Phe Phe
245 250

<210> 149
<211> 201
<212> PRT
<213> Sus scrofa

<400> 149
Leu Tyr Arg Leu Leu Gly Asn Asp Lys Leu Leu Ser Glu Asp Val Lys
1 5 10 15

Ala Asn Val Thr Glu Met Leu Ala Gly Gly Val Asp Thr Thr Ser Met
20 25 30

Thr Leu Gln Trp His Leu Tyr Glu Met Ala Arg Ser Leu Asn Val Gln
35 40 45

Glu Met Leu Arg Glu Glu Val Leu Asn Ala Arg Arg Gln Ala Gln Gly
50 55 60

Asp Thr Ser Lys Met Leu Gln Leu Val Pro Leu Leu Lys Ala Ser Ile
65 70 75 80

Lys Glu Thr Leu Arg Leu His Pro Ile Ser Val Thr Leu Gln Arg Tyr
85 90 95

Leu Val Asn Asp Leu Val Leu Arg Asp Tyr Met Ile Pro Ala Lys Thr

100

105

110

Leu Val Gln Val Ala Val Tyr Ala Met Gly Arg Asp Pro Ala Phe Phe
 115 120 125

Ser Asn Pro Gly Gln Phe Asp Pro Thr Arg Trp Leu Gly Lys Glu Arg
 130 135 140

Asp Leu Ile His Phe Arg Asn Leu Gly Phe Gly Trp Gly Val Arg Gln
 145 150 155 160

Cys Val Gly Arg Arg Ile Ala Glu Leu Glu Met Thr Leu Phe Leu Ile
 165 170 175

His Ile Leu Glu Asn Phe Lys Val Glu Leu Gln His Phe Ser Asp Val
 180 185 190

Asp Thr Ile Phe Asn Leu Ile Leu Met
 195 200

<210> 150

<211> 151

<212> PRT

<213> Sus scrofa

<400> 150

Ile Ser Thr Val Arg Glu Val Ala Leu Leu Arg Arg Leu Glu Ala Phe
 1 5 10 15

Glu His Pro Asn Val Val Arg Leu Met Asp Val Cys Ala Thr Ala Arg
 20 25 30

Thr Asp Arg Glu Thr Lys Val Thr Leu Val Phe Glu His Val Asp Gln
 35 40 45

Asp Leu Arg Thr Tyr Leu Asp Lys Ala Pro Pro Pro Gly Leu Pro Val
 50 55 60

Glu Thr Ile Lys Asp Leu Met Arg Gln Phe Leu Arg Gly Leu Asp Phe
 65 70 75 80

Leu His Ala Asn Cys Ile Val His Arg Asp Leu Lys Pro Glu Asn Ile
 85 90 95

Leu Val Thr Ser Gly Gly Thr Val Lys Leu Ala Asp Phe Gly Leu Ala
 100 105 110

Arg Ile Tyr Ser Tyr Gln Met Ala Leu Thr Pro Val Val Val Thr Leu
 115 120 125

Trp Tyr Arg Ala Pro Glu Val Leu Leu Gln Ser Thr Tyr Ala Thr Pro
 130 135 140

Val Asp Met Trp Ser Val Gly
 145 150

<210> 151
 <211> 126
 <212> PRT
 <213> Sus scrofa

<400> 151
 Asp His Lys His Lys Tyr Ile His Ile Leu Ala Tyr Ala Ala Ser Val
 1 5 10 15
 Val Glu Thr Trp Lys Lys Asn Lys Arg Val Ser Ile Asn Lys Asp Glu
 20 25 30
 Leu Lys Ser Thr Ser Lys Ala Val Glu Thr Val His Asn Leu Cys Cys
 35 40 45
 Asn Glu Asn Lys Gly Ala Ser Glu Leu Val Ala Glu Leu Ser Thr Leu
 50 55 60
 Tyr Gln Cys Ile Arg Phe Pro Val Val Ala Met Gly Val Leu Lys Trp
 65 70 75 80
 Val Asp Trp Thr Val Ser Glu Pro Arg Tyr Phe Gln Leu Gln Thr Asp
 85 90 95
 His Thr Pro Val His Leu Ala Leu Leu Asp Glu Ile Ser Thr Cys His
 100 105 110
 Gln Leu Leu His Pro Gln Val Leu Gln Leu Leu Val Lys Leu
 115 120 125

<210> 152
 <211> 201
 <212> PRT
 <213> Sus scrofa

<400> 152
 Asp Arg Glu Leu Val His Met Ile Asn Trp Ala Lys Arg Val Pro Gly
 1 5 10 15
 Phe Leu Asp Leu Ser Leu His Asp Gln Val His Leu Leu Glu Cys Ala
 20 25 30
 Trp Leu Glu Ile Leu Met Ile Gly Leu Val Trp Arg Ser Met Glu His
 35 40 45
 Pro Gly Lys Leu Leu Phe Ala Pro Asn Leu Leu Leu Asp Arg Asn Gln
 50 55 60
 Gly Lys Cys Val Glu Gly Met Val Glu Ile Phe Asp Met Leu Leu Ala
 65 70 75 80
 Thr Ser Ser Arg Phe Arg Met Met Asn Leu Gln Gly Glu Glu Phe Val
 85 90 95
 Cys Leu Lys Ser Ile Ile Leu Leu Asn Ser Gly Val Tyr Thr Phe Leu

100

105

110

Ser Ser Thr Leu Lys Ser Leu Glu Glu Lys Asp His Ile His Arg Val
115 120 125

Leu Asp Lys Ile Thr Asp Thr Leu Ile His Leu Met Ala Lys Ala Gly
130 135 140

Leu Thr Leu Gln Gln Gln His Arg Arg Leu Ala Gln Leu Leu Leu Ile
145 150 155 160

Leu Ser His Phe Arg His Met Ser Asn Lys Gly Met Glu His Leu Tyr
165 170 175

Asn Met Lys Cys Lys Asn Val Val Pro Leu Tyr Asp Leu Leu Leu Glu
180 185 190

Met Leu Asp Ala His Arg Leu His Ala
195 200

<210> 153

<211> 76

<212> PRT

<213> Sus scrofa

<400> 153

Cys Gly Pro Val Asn Cys Asn Glu Lys Ile Val Val Leu Leu Gln Arg
1 5 10 15

Leu Lys Pro Glu Ile Lys Asp Val Ile Glu Gln Leu Asn Leu Val Thr
20 25 30

Thr Trp Leu Gln Leu Gln Ile Pro Arg Ile Glu Asp Gly Asn Asn Phe
35 40 45

Gly Val Ala Val Gln Glu Lys Val Phe Glu Leu Met Thr Ala Leu His
50 55 60

Thr Lys Leu Glu Gly Phe His Thr Gln Ile Ser Lys
65 70 75

<210> 154

<211> 201

<212> PRT

<213> Meleagris gallopavo

<400> 154

Met Gly Lys Val Leu Ala Ala Ala Leu Ile Gly Ile Ala Ala Ala Leu
1 5 10 15

Ala Ala Glu Arg Leu Leu Ala Phe Arg Asn Arg Leu Asn Ala Thr Arg
20 25 30

Glu Val Asp Pro Val Ala Leu Pro Asn Cys Arg Leu Ile Lys Gly Ile
35 40 45

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Glu Ala Gly Ser Glu Asp Ile Asp Ile Leu Pro Asn Gly Leu Ala Phe
50 55 60

Ile Ser Ser Gly Leu Lys Tyr Pro Gly Leu Lys Ser Leu Ala Pro Asp
65 70 75 80

Lys Pro Gly Glu Ile Phe Leu Met Asp Leu Asn Glu Lys Lys Pro Lys
85 90 95

Ala Ser Glu Leu Arg Ile Ser Arg Gly Phe Asp Leu Gly Ser Phe Asn
100 105 110

Pro His Gly Ile Ser Thr Tyr Ile Asp Lys Asp Asp Thr Val Tyr Leu
115 120 125

Phe Val Val Asn His Pro His Gln Lys Ser Thr Val Glu Leu Phe Lys
130 135 140

Phe Met Glu Glu Asp Asn Ser Leu Leu His Leu Lys Thr Ile Arg His
145 150 155 160

Asp Leu Leu Thr Ser Val Asn Asp Val Val Ala Val Gly Pro Asp Ser
165 170 175

Phe Tyr Ala Thr Asn Asp His Tyr Phe Tyr Asp Phe Ile Leu Met Phe
180 185 190

Leu Glu Met Tyr Leu Gly Leu Thr Trp
195 200

<210> 155
<211> 76
<212> PRT
<213> Sus scrofa

<400> 155
Gln Ala Ile Ile Ile Val Phe Asn Leu Asn Asp Val Ala Ser Leu Glu
1 5 10 15

His Thr Lys Gln Trp Leu Ala Asp Ala Leu Lys Glu Asn Asp Pro Ser
20 25 30

Ser Val Leu Leu Phe Leu Val Gly Ser Lys Lys Asp Leu Ser Thr Pro
35 40 45

Ala Gln Tyr Val Leu Met Glu Lys Asp Ala Leu Lys Val Ala His Glu
50 55 60

Met Lys Ala Glu Tyr Trp Ala Val Ser Ser Leu Thr
65 70 75

<210> 156
<211> 251
<212> PRT
<213> Sus scrofa

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<400> 156

Ser Leu Glu Glu Trp Val Thr Gln Glu Ala Ser Cys Leu Cys Ala Ala
1 5 10 15

Phe Ala Asp Gln Ala Gly Arg Pro Phe Ser Pro Asn Asn Leu Leu Asn
20 25 30

Lys Ala Val Ser Asn Val Ile Ala Ser Leu Thr Phe Ala Arg Arg Phe
35 40 45

Glu Tyr Asn Asp Pro Arg Met Leu Lys Leu Leu Asp Leu Val Leu Glu
50 55 60

Gly Leu Lys Glu Glu Val Gly Leu Met Arg Gln Val Leu Glu Ala Met
65 70 75 80

Pro Val Leu Arg His Ile Pro Gly Leu Cys Ala Lys Leu Phe Pro Arg
85 90 95

Gln Lys Ala Phe Leu Val Met Ile Asp Glu Leu Ile Thr Glu His Lys
100 105 110

Met Thr Arg Asp Leu Ala Gln Pro Pro Arg Asp Leu Thr Asp Ala Phe
115 120 125

Leu Asp Glu Met Lys Glu Ala Lys Gly Asn Pro Glu Ser Ser Phe Asn
130 135 140

Asp Glu Asn Leu Arg Leu Val Val Ala His Leu Phe Ser Ala Gly Met
145 150 155 160

Ile Thr Thr Ser Thr Thr Leu Ala Trp Ala Leu Leu Leu Met Ile Leu
165 170 175

His Pro Asp Val Gln Arg Arg Val Gln Gln Glu Ile Asp Glu Val Ile
180 185 190

Gly His Val Arg Gln Pro Glu Ile Lys Asp Gln Ala Leu Met Pro Phe
195 200 205

Thr Leu Ala Val Leu His Glu Val Gln Arg Phe Gly Asp Ile Val Pro
210 215 220

Leu Gly Val Ala His Met Thr Ser Cys Asp Ile Glu Val Gln Gly Phe
225 230 235 240

Leu Ile Pro Lys Gly Thr Thr Leu Ile Thr Asn
245 250

<210> 157

<211> 126

<212> PRT

<213> Solanum tuberosum

<400> 157

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Met Ala Thr Ala Thr Thr Leu Ser Pro Ala Asp Ala Glu Lys Leu Asn
1 5 10 15

Asn Leu Lys Ser Ala Val Ala Gly Leu Asn Gln Ile Ser Glu Asn Glu
20 25 30

Lys Ser Gly Phe Ile Asn Leu Val Gly Arg Tyr Leu Ser Gly Glu Ala
35 40 45

Gln His Ile Asp Trp Ser Lys Ile Gln Thr Pro Thr Asp Glu Val Val
50 55 60

Val Pro Tyr Asp Lys Leu Ala Pro Leu Ser Glu Asp Pro Ala Glu Thr
65 70 75 80

Lys Lys Leu Leu Asp Lys Leu Val Val Leu Lys Leu Asn Gly Gly Leu
85 90 95

Gly Thr Thr Met Gly Cys Thr Gly Pro Lys Ser Val Ile Glu Val Arg
100 105 110

Asn Gly Leu Thr Phe Leu Asp Leu Ile Val Lys Gln Ile Glu
115 120 125

<210> 158
<211> 76
<212> PRT
<213> Salmo salar

<400> 158
Met Ala Lys Ile Glu Leu Lys Pro Val Gly Thr Asn Leu Leu Lys Ser
1 5 10 15

Val Ser Gly Glu Ser Val Glu Leu Gln Ser Leu Trp Arg Asp Lys Pro
20 25 30

Val Val Leu Phe Phe Leu Arg Arg Phe Gly Cys Gln Val Cys Arg Trp
35 40 45

Thr Ala Ala Glu Ile Ser Lys Leu Glu Pro Asp Leu Thr Ala His Gly
50 55 60

Ile Ala Leu Val Gly Ile Gly Pro Glu Glu Thr Gly
65 70 75

<210> 159
<211> 101
<212> PRT
<213> Sus scrofa

<400> 159
Ser Lys Phe Gly Lys Gln His Ile Glu Asn Leu Phe Asn Asp Leu Gln
1 5 10 15

Asp Gly Arg Arg Leu Leu Asp Leu Leu Glu Gly Leu Thr Gly Gln Lys
20 25 30

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Leu Pro Lys Glu Lys Gly Ser Thr Arg Val His Ala Leu Asn Asn Val
35 40 45

Asn Lys Ala Leu Gln Val Leu Gln Lys Asn Asn Val Asp Leu Val Asn
50 55 60

Ile Gly Ser Thr Asp Ile Val Asp Gly Asn His Lys Leu Thr Leu Gly
65 70 75 80

Leu Ile Trp Asn Ile Ile Leu His Trp Gln Val Lys Asn Val Met Lys
85 90 95

Asn Ile Met Ala Gly
100

<210> 160
<211> 176
<212> PRT
<213> Sus scrofa

<400> 160
Arg Met Arg Arg Leu Arg Tyr Lys His Leu Ala Phe Leu Ala Glu Ser
1 5 10 15

Ser Ala Thr Tyr Met Gln Glu Gln Gly Ser Gln Glu Leu Leu Ala Glu
20 25 30

Leu Leu Val His Leu Glu Arg Arg Trp Thr Glu Ile Asp Asp Gly Arg
35 40 45

Thr Val Val Ala Met Met Val Lys Ile Gly His Leu Ser Gln Ser Leu
50 55 60

Met Asn Arg Leu Glu Asp Lys Cys Leu Glu Leu Val Glu Gln Phe Gly
65 70 75 80

Pro Glu Glu Leu Arg Lys Val Leu Val Met Leu Ala Ala Gln Asn Arg
85 90 95

Arg Ser Val Pro Leu Leu Arg Ala Val Ser Tyr His Leu Val Gln Lys
100 105 110

Pro Phe Thr Leu Thr Lys Ser Ile Leu Leu Asp Leu Ala Tyr Ala Tyr
115 120 125

Gly Lys Leu Gly Phe His Gln Thr Gln Val Phe Gln Arg Leu Ala Ala
130 135 140

Asp Leu Leu Pro His Thr Pro Ser Leu Thr Ser Ser Glu Val Ala Arg
145 150 155 160

Cys Thr Lys Ser Phe Ala Phe Leu Lys Trp Leu Ser Leu Pro Leu Phe
165 170 175

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<210> 161

<211> 101

<212> PRT

<213> Capra hircus

<400> 161

Lys Val Leu Gln Asn Gly Gly Gly Lys Leu Glu Lys Thr Pro Leu Tyr
1 5 10 15

Leu Glu Glu Asp Ile Arg Pro Glu Met Arg Asp Asp Ile Tyr Asp Pro
20 25 30

Thr Tyr Gln Asp Lys Glu Gly Pro Lys Pro Lys Leu Glu Tyr Val Trp
35 40 45

Arg Asn Ile Ile Leu Met Gly Leu Leu His Leu Gly Ala Leu Tyr Gly
50 55 60

Ile Thr Leu Ile Pro Thr Cys Lys Ile Tyr Thr Phe Leu Trp Val Leu
65 70 75 80

Phe Tyr Tyr Met Met Ser Ala Leu Gly Ile Thr Ala Gly Val His Arg
85 90 95

Leu Trp Ser His Arg
100

<210> 162

<211> 76

<212> PRT

<213> Sus scrofa

<400> 162

Leu Leu Lys Cys Val Arg Asp Ser Asp Pro Ser Asp Pro Lys Arg Glu
1 5 10 15

Thr Ile Val Gln Leu Ile Asp Asp Phe Arg Ile Ser Gly Val Asn Gly
20 25 30

Val His Val Cys Met Val Leu Glu Val Leu Gly His Gln Leu Leu Lys
35 40 45

Trp Ile Ile Lys Ser Asn Tyr Gln Gly Leu Pro Val Pro Cys Val Lys
50 55 60

Ser Ile Val Arg Gln Val Leu His Gly Leu Asp Tyr
65 70 75

<210> 163

<211> 226

<212> PRT

<213> Sus scrofa

<400> 163

Cys Pro Gly Thr Val Leu Leu Val Phe Ser Ile Ser Leu Trp Ile Ile
1 5 10 15

Ala Ala Trp Thr Val Arg Val Cys Glu Arg Tyr His Asp Gln Gln Asp
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30

Val Thr Ser Asn Phe Leu Gly Ala Met Trp Leu Ile Ser Ile Thr Phe
35 40 45

Leu Ser Ile Gly Tyr Gly Asp Met Val Pro His Thr Tyr Cys Gly Lys
50 55 60

Gly Val Cys Leu Leu Thr Gly Ile Met Gly Ala Gly Cys Thr Ala Leu
65 70 75 80

Val Val Ala Val Val Ala Arg Lys Leu Glu Leu Thr Lys Ala Glu Lys
85 90 95

His Val His Asn Phe Met Met Asp Thr Gln Leu Thr Lys Arg Ile Lys
100 105 110

Asn Ala Ala Ala Asn Val Leu Arg Glu Thr Trp Leu Ile Tyr Lys His
115 120 125

Thr Lys Leu Leu Lys Lys Ile Asp His Ala Lys Val Arg Lys His Gln
130 135 140

Arg Lys Phe Leu Gln Ala Ile His Gln Leu Arg Ser Val Lys Met Glu
145 150 155 160

Gln Arg Lys Leu Ser Asp Gln Ala Asn Thr Leu Val Asp Leu Ser Lys
165 170 175

Met Gln Asn Val Met Tyr Asp Leu Ile Thr Glu Leu Asn Asp Arg Ser
180 185 190

Glu Asp Leu Glu Lys Gln Ile Gly Ser Leu Glu Ser Lys Leu Glu His
195 200 205

Leu Thr Ala Ser Phe Asn Ser Leu Pro Leu Leu Ile Ala Asp Thr Leu
210 215 220

Arg Gln
225

<210> 164
<211> 226
<212> PRT
<213> Sus scrofa

<400> 164
Met Asp Gly Glu Leu Glu Gln Leu Glu Lys Trp Phe Thr Ala Glu Ala
1 5 10 15

Lys Leu Leu Phe His Leu Arg Gln Leu Leu Lys Glu Leu Lys Gly Leu
20 25 30

Ser Ser Val Val Lys Tyr Asp Glu Asp Leu Leu Phe Lys Gly Val Asp
35 40 45

Leu Leu Lys Ala Gln Val Thr Glu Leu Leu Gln Arg Leu Leu His Arg
 50 55 60
 Ala Phe Ile Val Glu Thr Gln Pro Cys Met Pro Gln Thr Pro His Arg
 65 70 75 80
 Pro Leu Ile Leu Lys Thr Gly Ser Lys Phe Thr Val Arg Thr Arg Leu
 85 90 95
 Leu Val Arg Leu Gln Glu Gly Asn Glu Ser Leu Thr Ala Glu Val Ser
 100 105 110
 Ile Asp Arg Asn Pro Pro Lys Ser Gln Gly Phe Arg Lys Phe Asn Ile
 115 120 125
 Leu Thr Ser Asn Arg Lys Thr Leu Thr Pro Glu Lys Gly Gln Ser Gln
 130 135 140
 Gly Leu Ile Trp Asp Phe Gly Tyr Leu Thr Leu Met Glu Gln Arg Ser
 145 150 155 160
 Gly Gly Ala Gly Lys Gly Asn Asn Lys Gly Pro Leu Gly Val Thr Glu
 165 170 175
 Glu Leu His Ile Ile Ser Phe Thr Val Lys Tyr Thr Tyr Gln Gly Leu
 180 185 190
 Lys Gln Glu Leu Thr Thr Asp Thr Leu Pro Val Val Ile Ile Ser Asn
 195 200 205
 Met Asn Gln Leu Ser Ile Ala Trp Ala Ser Ile Leu Trp Phe Asn Leu
 210 215 220
 Leu Ser
 225
 <210> 165
 <211> 276
 <212> PRT
 <213> Sus scrofa
 <400> 165
 Leu Ile Glu Arg Ala Thr Gln Pro Glu Glu Ile Leu Ala Leu Leu Gly
 1 5 10 15
 Gly Gly His Cys Leu His Gln Asn Arg Ala Ala Leu Met Val Ile Gln
 20 25 30
 Leu Ser Arg Leu Leu Ser Glu Lys Pro Lys Asp Lys Ala Leu Leu Ile
 35 40 45
 Lys Asp Ala Arg Phe Gln His Leu Leu Arg Leu Val Asn Ser Gln Ile
 50 55 60

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Asn Ala Val Trp His Gly Thr Leu Val Lys Leu Leu Arg Ser Leu Tyr
65 70 75 80

Ala Leu Gly Leu Pro Ala Thr Ser Lys Glu Leu Gln Ser Val Glu Gln
85 90 95

Glu Val Arg Trp Arg Met Arg Arg Leu Arg Tyr Lys His Leu Ala Phe
100 105 110

Leu Ala Glu Ser Ser Ala Thr Tyr Met Gln Glu Gln Gly Ser Gln Glu
115 120 125

Leu Leu Ala Glu Leu Leu Val His Leu Glu Arg Arg Trp Thr Glu Ile
130 135 140

Asp Asp Gly Arg Thr Val Val Ala Met Met Val Lys Ile Gly His Leu
145 150 155 160

Ser Gln Ser Leu Met Asn Arg Leu Glu Asp Lys Cys Leu Glu Leu Val
165 170 175

Glu Gln Phe Gly Pro Glu Glu Leu Arg Lys Val Leu Val Met Leu Ala
180 185 190

Ala Gln Asn Arg Arg Ser Val Pro Leu Leu Arg Ala Val Ser Tyr His
195 200 205

Leu Val Gln Lys Pro Phe Thr Leu Thr Lys Ser Ile Leu Leu Asp Leu
210 215 220

Ala Tyr Ala Tyr Gly Lys Leu Gly Phe His Gln Thr Gln Val Phe Gln
225 230 235 240

Arg Leu Ala Ala Asp Leu Leu Pro His Thr Pro Ser Leu Thr Ser Ser
245 250 255

Glu Val Ala Arg Cys Thr Lys Ser Phe Ala Phe Leu Lys Trp Leu Ser
260 265 270

Leu Pro Leu Phe
275

<210> 166
<211> 176
<212> PRT
<213> Meleagris gallopavo

<400> 166
Gly Asp Ile Ala Gly Lys Leu Gln Thr Gly Arg Ser Arg Asn Glu Gln
1 5 10 15

Val Val Thr Asp Leu Lys Leu Leu Leu Lys Ser Ser Ile Ser Val Ile
20 25 30

1005_005_PCT_SL17083606

Ser Thr His Leu Leu Gln Leu Ile Lys Thr Leu Val Glu Arg Ala Ala
35 40 45

Ile Glu Ile Asp Ile Ile Met Pro Gly Tyr Thr His Leu Gln Lys Ala
50 55 60

Leu Pro Ile Arg Trp Ser Gln Phe Leu Leu Ser His Ala Val Ala Leu
65 70 75 80

Thr Arg Asp Ser Glu Arg Leu Gly Glu Val Lys Lys Arg Ile Thr Val
85 90 95

Leu Pro Leu Gly Ser Gly Val Leu Ala Gly Asn Pro Leu Glu Ile Asp
100 105 110

Arg Glu Leu Leu Arg Ser Glu Leu Asp Met Thr Ser Ile Thr Leu Asn
115 120 125

Ser Ile Asp Ala Ile Ser Glu Arg Asp Phe Val Val Glu Leu Ile Ser
130 135 140

Val Ala Thr Leu Leu Met Ile His Leu Ser Lys Leu Ala Glu Asp Leu
145 150 155 160

Ile Ile Phe Ser Thr Thr Glu Phe Gly Phe Val Thr Leu Ser Asp Ala
165 170 175

<210> 167

<211> 276

<212> PRT

<213> Sus scrofa

<400> 167

Met Val Leu Val Trp Leu Leu Leu Leu Leu Thr Leu Leu Ala Gly Ala
1 5 10 15

Arg Leu Leu Trp Gly Gln Trp Lys Leu Arg Asn Leu His Leu Pro Pro
20 25 30

Leu Val Pro Gly Phe Leu His Leu Leu Gln Pro Asn Leu Pro Ile Tyr
35 40 45

Leu Leu Gly Leu Thr Gln Arg Leu Gly Pro Ile Tyr Arg Leu Arg Leu
50 55 60

Gly Leu Gln Asp Val Val Val Leu Asn Ser Lys Arg Thr Ile Glu Glu
65 70 75 80

Ala Leu Val Arg Lys Trp Val Asp Phe Ala Gly Arg Pro Gln Ile Pro
85 90 95

Ser Tyr Lys Leu Ala Ser Gln His Cys Pro Asp Ile Ser Leu Gly Asp
100 105 110

Tyr Ser Leu Phe Trp Lys Ala His Lys Lys Leu Thr Arg Ser Ala Leu
Page 100

115
 120
 125
 Leu Leu Gly Val Arg Ser Ser Met Glu Pro Arg Val Glu Gln Leu Thr
 130 135 140
 Gln Glu Phe Cys Glu Arg Met Arg Ala Gln Ala Gly Thr Pro Val Thr
 145 150 155 160
 Ile Gln Lys Glu Phe Ser Val Leu Thr Cys Ser Ile Ile Cys Cys Leu
 165 170 175
 Thr Phe Gly Asp Lys Glu Asp Thr Leu Val His Ala Leu His Asp Cys
 180 185 190
 Val Gln Asp Leu Met Lys Thr Trp Glu His Trp Ser Ile Gln Ile Leu
 195 200 205
 Asp Met Val Pro Phe Leu Arg Phe Phe Pro Ser Pro Gly Leu Arg Arg
 210 215 220
 Leu Lys Gln Ala Ile Glu Asn Arg Asp His Leu Val Glu Lys Gln Leu
 225 230 235 240
 Arg Arg His Lys Glu Ser Met Val Ala Gly Gln Trp Arg Asp Met Leu
 245 250 255
 Asp Tyr Met Leu Gln Glu Ala Gly Arg Gln Arg Val Glu Glu Gly Gln
 260 265 270
 Gly Gln Leu Leu
 275

<210> 168
 <211> 76
 <212> PRT
 <213> Solanum tuberosum

<400> 168
 Phe Trp Leu Lys Asn Leu Phe Leu Val Ala Leu Glu Gln Leu Gly Asp
 1 5 10 15
 Ser Leu Glu Glu Ile Arg Gly Ser Ala Ser Gly Gly Asn Met Leu Gly
 20 25 30
 Pro Ala Tyr Gly Val Lys Ser Ile Arg Ser Lys Lys Lys Asp Trp Asn
 35 40 45
 Ile Asn Leu Ile Glu Ile Ile Asp Leu Ile Pro Asn Pro Ile Asn Arg
 50 55 60
 Ile Thr Phe Ser Arg Asn Thr Arg His Leu Ser His
 65 70 75

<210> 169
 <211> 101

<212> PRT

<213> Sus scrofa

<400> 169

Tyr Gln Asp Val Lys Asp Trp Trp Leu Phe Gly Phe Tyr Phe Cys Met
 1 5 10 15

Pro Leu Val Cys Thr Ala Ile Phe Tyr Thr Leu Met Thr Cys Glu Met
 20 25 30

Leu Asn Arg Arg Asn Gly Ser Leu Arg Ile Ala Leu Ser Glu His Leu
 35 40 45

Lys Gln Arg Arg Glu Val Ala Lys Thr Val Phe Cys Leu Val Val Ile
 50 55 60

Phe Ala Leu Cys Trp Phe Pro Leu His Leu Ser Arg Ile Leu Lys Lys
 65 70 75 80

Thr Val Tyr Asp Glu Met Asp Lys Asn Arg Cys Glu Leu Leu Ser Phe
 85 90 95

Leu Leu Leu Met Asp
 100

<210> 170

<211> 276

<212> PRT

<213> Meleagris gallopavo

<400> 170

Gly Asp Ile Ala Gly Lys Leu Gln Thr Gly Arg Ser Arg Asn Glu Gln
 1 5 10 15

Val Val Thr Asp Leu Lys Leu Leu Leu Lys Ser Ser Ile Ser Val Ile
 20 25 30

Ser Thr His Leu Leu Gln Leu Ile Lys Thr Leu Val Glu Arg Ala Ala
 35 40 45

Ile Glu Ile Asp Ile Ile Met Pro Gly Tyr Thr His Leu Gln Lys Ala
 50 55 60

Leu Pro Ile Arg Trp Ser Gln Phe Leu Leu Ser His Ala Val Ala Leu
 65 70 75 80

Thr Arg Asp Ser Glu Arg Leu Gly Glu Val Lys Lys Arg Ile Thr Val
 85 90 95

Leu Pro Leu Gly Ser Gly Val Leu Ala Gly Asn Pro Leu Glu Ile Asp
 100 105 110

Arg Glu Leu Leu Arg Ser Glu Leu Asp Met Thr Ser Ile Thr Leu Asn
 115 120 125

Ser Ile Asp Ala Ile Ser Glu Arg Asp Phe Val Val Glu Leu Ile Ser

130

135

140

Val Ala Thr Leu Leu Met Ile His Leu Ser Lys Leu Ala Glu Asp Leu
145 150 155 160

Ile Ile Phe Ser Thr Thr Glu Phe Gly Phe Val Thr Leu Ser Asp Ala
165 170 175

Tyr Ser Thr Gly Ser Ser Leu Leu Pro Gln Lys Lys Asn Pro Asp Ser
180 185 190

Leu Glu Leu Ile Arg Ser Lys Ala Gly Arg Val Phe Gly Arg Leu Ala
195 200 205

Ala Ile Leu Met Val Leu Lys Gly Ile Pro Ser Thr Phe Ser Lys Asp
210 215 220

Leu Gln Glu Asp Lys Glu Ala Val Leu Asp Val Val Asp Thr Leu Thr
225 230 235 240

Ala Val Leu Gln Val Ala Thr Gly Val Ile Ser Thr Leu Gln Ile Asn
245 250 255

Lys Glu Asn Met Glu Lys Ala Leu Thr Pro Glu Leu Leu Ser Thr Asp
260 265 270

Leu Ala Leu Tyr
275

<210> 171

<211> 226

<212> PRT

<213> Solanum tuberosum

<400> 171

Thr Phe Phe Asp Met Val Asp Lys Asp Ala Asp Gly Arg Leu Thr Glu
1 5 10 15

Glu Glu Val Arg Glu Ile Ile Cys Leu Ser Ala Ser Ala Asn Lys Leu
20 25 30

Ser Asn Ile Gln Lys Gln Ala Ala Glu Tyr Ala Ala Leu Ile Met Glu
35 40 45

Glu Leu Asp Arg Asp Gln Lys Gly Tyr Ile Met Leu Glu Asn Leu Glu
50 55 60

Met Leu Leu Leu Glu Ala Pro Ile Gln Pro Asp Gly Glu Lys Gly Leu
65 70 75 80

Asn Arg Asn Leu Ser His Met Leu Ser Met Lys Leu Lys Pro Thr Leu
85 90 95

Glu Thr Asn Pro Ile Lys Arg Trp Tyr Asn Asn Leu Lys Tyr Phe Leu
100 105 110

Leu Asp Asn Trp Arg Arg Val Trp Val Leu Leu Leu Trp Ile Gly Val
115 120 125

Met Ala Gly Leu Phe Ala Tyr Lys Tyr Val Gln Tyr Lys Asn Lys Ala
130 135 140

Ala Phe Asn Val Met Gly His Cys Val Cys Val Ala Lys Gly Ala Ala
145 150 155 160

Glu Val Leu Lys Leu Asn Met Ala Leu Ile Leu Leu Pro Val Cys Arg
165 170 175

Asn Thr Ile Thr Trp Leu Arg Asn Lys Thr Lys Leu Gly Gly Ala Val
180 185 190

Pro Phe Asp Asp Asn Ile Asn Phe His Lys Val Val Ala Gly Ala Ile
195 200 205

Ala Val Gly Val Gly Ile His Val Leu Ala His Met Thr Cys Asp Phe
210 215 220

Pro Arg
225

<210> 172
<211> 276
<212> PRT
<213> Capra hircus

<400> 172
Thr Leu Asp Ile Leu Ser Asp Asn Gln Lys Gly Ile Ala Phe Ala Asp
1 5 10 15

His Gly Ala His Trp Gln Leu His Arg Lys Leu Val Leu Asn Ala Phe
20 25 30

Ala Leu Phe Lys Asp Gly Asn Leu Lys Leu Glu Lys Ile Ile Asn Gln
35 40 45

Glu Ala Asn Val Leu Cys Asp Phe Leu Ala Thr Gln His Gly Gln Ser
50 55 60

Ile Asp Leu Ser Glu Pro Leu Ser Leu Ala Val Thr Asn Ile Ile Ser
65 70 75 80

Phe Ile Cys Phe Asn Phe Ser Phe Lys Asn Glu Asp Pro Ala Leu Lys
85 90 95

Ala Ile Gln Asn Val Asn Asp Gly Ile Leu Glu Val Leu Ser Lys Glu
100 105 110

Ile Leu Leu Asp Ile Phe Pro Ala Leu Lys Ile Phe Pro Ser Lys Ala
115 120 125

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Met Glu Lys Met Lys Gly Cys Val Glu Thr Arg Asn Glu Leu Leu Asn
130 135 140

Glu Ile Leu Glu Lys Cys Gln Glu Asn Phe Thr Ser Asp Ser Ile Thr
145 150 155 160

Asn Leu Leu His Ile Leu Met Gln Ala Lys Val Asn Ala Asp Asn Asn
165 170 175

Asn Ala Gly Pro Asp Gln Asp Ser Lys Leu Leu Ser Asn Arg His Met
180 185 190

Leu Ala Thr Ile Ala Asp Ile Phe Gly Ala Gly Val Glu Thr Thr Thr
195 200 205

Ser Val Ile Lys Trp Ile Val Ala Tyr Leu Leu His His Pro Ser Leu
210 215 220

Lys Lys Arg Ile Gln Asp Ser Ile Asp Gln Asn Ile Gly Phe Asn Arg
225 230 235 240

Thr Pro Thr Ile Ser Asp Arg Asn Cys Leu Val Leu Leu Glu Ala Thr
245 250 255

Ile Arg Glu Val Leu Arg Ile Arg Pro Val Ala Pro Met Leu Ile Pro
260 265 270

His Lys Ala Ile
275

<210> 173
<211> 251
<212> PRT
<213> Sus scrofa

<400> 173
Ile Thr Ala Val Ile Val Asn Arg Lys Glu His Lys Leu Lys Lys Gly
1 5 10 15

Ala Gly Tyr His Leu Asp Leu Phe Trp Val Ala Ile Leu Met Val Val
20 25 30

Cys Ser Phe Met Ala Leu Pro Trp Tyr Val Ala Ala Thr Val Ile Ser
35 40 45

Ile Ala His Ile Asp Ser Leu Lys Met Glu Thr Glu Thr Ser Ala Pro
50 55 60

Gly Glu Gln Pro Lys Phe Leu Gly Val Arg Glu Gln Arg Val Thr Gly
65 70 75 80

Thr Leu Val Phe Ile Leu Thr Gly Leu Ser Val Phe Met Ala Pro Ile
85 90 95

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Leu Lys Phe Ile Pro Met Pro Val Leu Tyr Gly Val Phe Leu Tyr Met
100 105 110

Gly Val Ala Ser Leu Asn Gly Val Gln Phe Met Asp Arg Leu Lys Leu
115 120 125

Leu Leu Met Pro Leu Lys His Gln Pro Asp Phe Ile Tyr Leu Arg His
130 135 140

Val Pro Leu Arg Arg Val His Leu Phe Thr Phe Leu Gln Val Leu Cys
145 150 155 160

Leu Ala Leu Leu Trp Ile Leu Lys Ser Thr Val Ala Ala Ile Ile Phe
165 170 175

Pro Val Met Ile Leu Ala Leu Val Ala Val Arg Lys Gly Met Asp Tyr
180 185 190

Leu Phe Ser Gln His Asp Leu Ser Phe Leu Asp Asp Val Ile Pro Glu
195 200 205

Lys Asp Lys Lys Lys Lys Glu Asp Glu Lys Lys Lys Lys Lys Lys Lys
210 215 220

Gly Ser Leu Asp Ser Asp Ser Asp Asp Ser Asp Cys Pro Tyr Ser Glu
225 230 235 240

Lys Val Pro Ser Ile Lys Ile Pro Met Asp Ile
245 250

<210> 174
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 174
Pro Glu Ala Asp Val Trp Thr Ala Gly Val Ile Leu Tyr Ile Leu Leu
1 5 10 15

Ser Gly Val Pro Pro Phe Trp Ala Glu Thr Gln Gln Gly Ile Phe Asp
20 25 30

Ala Val Leu Lys Gly His Ile Asp Phe Asp Ser Asp Pro Trp Pro Leu
35 40 45

Leu Ser Glu Ser Ala Lys Asp Leu Ile Arg Lys Met Leu Cys Met Arg
50 55 60

Pro Ser Glu Arg Leu Thr Ala His Glu Val Leu Cys
65 70 75

<210> 175
<211> 101
<212> PRT
<213> Sus scrofa

1005_005_PCT_SL17083606

<400> 175

Cys Leu Lys Tyr Met Ala Lys Ser Ser Glu Ile Thr Gln Asp Leu Glu
1 5 10 15

Leu Val Thr Val Glu Asp Leu Val Val Gly Ile Tyr Gln Gln Lys Phe
20 25 30

Leu Lys Glu Pro Ser Lys Thr Trp Val Arg Ser Leu Leu Asp Val Ala
35 40 45

Met Trp Asp Tyr Ser Ser Asn Thr Arg Cys Lys Trp His Glu Glu Asn
50 55 60

Asp Ile Leu Phe Cys Ala Leu Ala Val Cys Arg Lys Ile Ala Tyr Cys
65 70 75 80

Ile Ser Asn Ser Leu Ala Thr Leu Leu Gly Ile Gln Leu Thr Glu Ala
85 90 95

His Val Pro Leu Gln
100

<210> 176

<211> 201

<212> PRT

<213> Sus scrofa

<400> 176

Lys Glu Leu Val His Met Ile Ser Trp Ala Lys Lys Ile Pro Gly Phe
1 5 10 15

Met Glu Leu Ser Leu Tyr Asp Gln Val Arg Leu Leu Glu Ser Cys Trp
20 25 30

Leu Glu Val Leu Met Val Gly Leu Met Trp Arg Ser Ile Asp His Pro
35 40 45

Gly Lys Leu Ile Phe Ala Pro Asp Leu Val Leu Asp Arg Asp Glu Gly
50 55 60

Lys Cys Val Glu Gly Ile Leu Glu Ile Phe Asp Met Leu Leu Ala Thr
65 70 75 80

Thr Ser Arg Phe Arg Glu Leu Lys Leu Gln His Lys Glu Tyr Leu Cys
85 90 95

Val Lys Ala Met Ile Leu Leu Asn Ser Ser Met Tyr Pro Ser Ala Ala
100 105 110

Ala Gln Glu Ala Glu Ser Ser Arg Lys Leu Thr His Leu Leu Asn Ala
115 120 125

Val Thr Asp Ala Leu Val Trp Val Ile Ala Arg Ser Gly Ile Ser Ser
130 135 140

1005_005_PCT_SL17083606

Gln Gln Gln Ser Val Arg Leu Ala Asn Leu Leu Met Leu Leu Ser His
145 150 155 160

Val Arg His Ala Ser Asn Lys Gly Thr Glu His Leu Leu Asn Met Lys
165 170 175

Cys Lys Asn Val Val Pro Val Tyr Asp Leu Leu Leu Glu Met Leu Asn
180 185 190

Ala His Thr Leu Arg Gly Asn Lys Ser
195 200

<210> 177

<211> 76

<212> PRT

<213> Sus scrofa

<400> 177

Val Cys Lys Glu Lys Ile Gly Trp Arg Asn Asp Ser Leu His Leu Leu
1 5 10 15

Val Phe Val Ser Asp Ala Asp Ser His Phe Gly Met Asp Ser Lys Leu
20 25 30

Ala Gly Ile Val Ile Pro Asn Asp Gly Leu Cys His Leu Asp Ser Lys
35 40 45

Asn Glu Tyr Ser Met Ser Thr Val Leu Glu Tyr Pro Thr Ile Gly Gln
50 55 60

Leu Ile Asp Lys Leu Val Gln Asn Asn Val Leu Leu
65 70 75

<210> 178

<211> 101

<212> PRT

<213> Malus domestica

<400> 178

Leu Asn Glu Ala Leu Lys Pro Ile Gly Ile Ser Asp Trp Asn Ser Leu
1 5 10 15

Phe Trp Ile Ala His Pro Gly Gly Pro Ala Ile Leu Asp Gln Val Glu
20 25 30

Ala Lys Leu Ala Leu Lys Pro Glu Lys Leu Glu Ala Thr Arg Gln Val
35 40 45

Leu Ser Asp Tyr Gly Asn Met Ser Ser Ala Cys Val Leu Phe Ile Leu
50 55 60

Asp Glu Val Arg Arg Lys Ser Ala Glu Lys Gly Leu Glu Thr Thr Gly
65 70 75 80

Glu Gly Leu Glu Trp Gly Val Leu Phe Gly Phe Gly Pro Gly Leu Thr
85 90 95

Val Glu Thr Val Val
100

<210> 179
<211> 126
<212> PRT
<213> Solanum tuberosum

<400> 179
Asn Phe Leu Gly Cys Ala Glu Asn Ala Leu Gly Ile Arg Glu Trp Leu
1 5 10 15

Glu Ser Lys Gly His Gln Tyr Ile Val Thr Pro Asp Lys Glu Gly Pro
20 25 30

Asp Cys Glu Leu Glu Lys His Ile Pro Asp Leu His Val Leu Ile Ser
35 40 45

Thr Pro Phe His Pro Ala Tyr Val Thr Ala Glu Arg Ile Lys Lys Ala
50 55 60

Lys Asn Leu Gln Leu Leu Leu Thr Ala Gly Ile Gly Ser Asp His Val
65 70 75 80

Asp Leu Lys Ala Ala Ala Ala Ala Gly Leu Thr Val Ala Glu Val Thr
85 90 95

Gly Ser Asn Thr Val Ser Val Ala Glu Asp Glu Leu Met Arg Ile Leu
100 105 110

Ile Leu Val Arg Asn Phe Leu Pro Gly His His Gln Val Ile
115 120 125

<210> 180
<211> 76
<212> PRT
<213> Sus scrofa

<400> 180
Met Glu Asp Arg Arg Glu Ser Glu Leu Lys Thr Phe Cys Ser Lys Asn
1 5 10 15

Ile Leu Val Ile Leu Gly Phe Ser Ser Ile Ile Ala Val Ile Ala Leu
20 25 30

Leu Ala Leu Gly Leu Thr Gln Asn Lys Pro Leu Pro Glu Asn Val Lys
35 40 45

Phe Gly Ile Val Leu Asp Ala Gly Ser Ser His Thr Ser Leu Tyr Ile
50 55 60

Tyr Lys Trp Pro Ala Glu Lys Glu Asn Asp Thr Gly
65 70 75

<210> 181
<211> 126

<212> PRT

<213> Solanum tuberosum

<400> 181

Glu Leu Glu Leu Leu Thr Arg Met Asn Gly Leu Thr Val Asp Met Met
 1 5 10 15

Pro Glu Ile Asp Arg Phe Tyr Ile Thr Leu Gln Phe Glu Leu Ala Lys
 20 25 30

Ala Met Ser Pro Cys Ile Ile Trp Ile Pro Asn Ile His Asp Leu Asp
 35 40 45

Val Asn Glu Ser Asn Asp Leu Ser Leu Gly Leu Leu Val Asn His Leu
 50 55 60

Ser Arg Asp Cys Glu Arg Cys Ser Thr Arg Asn Ile Leu Val Ile Ala
 65 70 75 80

Ser Thr His Ile Pro Gln Lys Val Asp Pro Ala Leu Ile Ala Pro Asn
 85 90 95

Lys Leu Asn Thr Cys Ile Lys Ile Arg Arg Leu Leu Ile Pro Gln Gln
 100 105 110

Arg Lys His Phe Phe Thr Leu Ser Tyr Thr Arg Gly Phe His
 115 120 125

<210> 182

<211> 101

<212> PRT

<213> Solanum tuberosum

<400> 182

Val Leu Ala Glu Ala Ile Val Lys Gly Leu Gly Ser Thr Arg Met Ile
 1 5 10 15

Arg Gly Ser Gln Leu Tyr His Arg Val Trp Asn Gly Leu Trp Pro Leu
 20 25 30

Asp Arg Arg Cys Ile Gly Glu Cys Tyr Ser Phe Gly Met Glu Thr Leu
 35 40 45

Leu Lys Leu Asp Leu Lys Gly Thr Arg Arg Leu Phe Asp Ala Phe Phe
 50 55 60

Asp Leu Asp Pro Lys Tyr Trp Gln Gly Phe Leu Ser Ser Arg Leu Ser
 65 70 75 80

Val Lys Glu Leu Ala Ile Leu Ser Leu Cys Leu Phe Gly His Gly Ser
 85 90 95

Asn Leu Thr Arg Leu
 100

<210> 183

<211> 251

<212> PRT

<213> Capra hircus

<400> 183

Asn Leu Glu Tyr Leu Asp Leu Ser Tyr Asn Arg Leu Ser Asn Leu Ser
 1 5 10 15

Ser Ser Trp Phe Arg Ser Leu Tyr Ala Leu Lys Phe Leu Asn Leu Leu
 20 25 30

Gly Asn Val Tyr Lys Thr Leu Gly Glu Thr Ser Leu Phe Ser His Leu
 35 40 45

Pro Asn Leu Arg Thr Leu Lys Val Gly Asn Ser Asn Ser Phe Thr Glu
 50 55 60

Ile His Glu Lys Asp Phe Thr Gly Leu Ile Phe Leu Glu Glu Leu Glu
 65 70 75 80

Ile Ser Ala Gln Asn Leu Gln Ile Tyr Val Pro Lys Ser Leu Lys Ser
 85 90 95

Ile Gln Asn Ile Ser His Leu Ile Leu His Leu Lys Gln Pro Val Leu
 100 105 110

Leu Val Asp Ile Leu Val Asp Ile Val Ser Ser Leu Asp Cys Leu Glu
 115 120 125

Leu Arg Asp Thr Asn Leu His Thr Phe His Phe Ser Glu Ala Ser Ile
 130 135 140

Ser Glu Met Asn Thr Ser Val Lys Lys Leu Ile Phe Arg Asn Val Gln
 145 150 155 160

Phe Thr Asp Glu Ser Phe Val Glu Val Val Lys Leu Phe Asn Tyr Val
 165 170 175

Ser Gly Ile Leu Glu Val Glu Phe Asp Asp Cys Thr His Asp Gly Ile
 180 185 190

Gly Asp Phe Arg Ala Leu Ser Leu Asp Arg Ile Arg His Leu Gly Asn
 195 200 205

Val Glu Thr Leu Thr Ile Arg Lys Leu His Ile Pro Gln Phe Phe Leu
 210 215 220

Phe His Asp Leu Ser Ser Ile Tyr Pro Leu Thr Gly Lys Val Lys Arg
 225 230 235 240

Val Thr Ile Glu Ser Ser Lys Val Phe Leu Val
 245 250

<210> 184

<211> 176

<212> PRT

<213> Solanum tuberosum

<400> 184

Ile Leu Ala Leu Ala Arg Pro Asp Pro Lys Lys Asn Leu Thr Thr Leu
 1 5 10 15

Val Lys Ala Phe Gly Glu Cys Arg Pro Leu Arg Asp Leu Ala Asn Leu
 20 25 30

Thr Leu Ile Met Gly Asn Arg Asp Asn Ile Asp Glu Met Ser Ser Thr
 35 40 45

Asn Ser Ala Leu Leu Leu Ser Ile Leu Lys Met Ile Asp Lys Tyr Asp
 50 55 60

Leu Tyr Gly Gln Val Ala Tyr Pro Lys His His Lys Gln Ser Asp Val
 65 70 75 80

Pro Asp Ile Tyr Arg Leu Ala Ala Lys Thr Lys Gly Val Phe Ile Asn
 85 90 95

Pro Ala Phe Ile Glu Pro Phe Gly Leu Thr Leu Ile Glu Ala Ala Ala
 100 105 110

Tyr Gly Leu Pro Met Val Ala Thr Lys Asn Gly Gly Pro Val Asp Ile
 115 120 125

His Arg Val Leu Asp Asn Gly Leu Leu Val Asp Pro His Asp Gln Gln
 130 135 140

Ala Ile Ala Asp Ala Leu Leu Lys Leu Val Ala Asp Lys Gln Leu Trp
 145 150 155 160

Ala Lys Cys Arg Ala Asn Gly Leu Lys Asn Ile His Leu Phe Ser Trp
 165 170 175

<210> 185

<211> 251

<212> PRT

<213> Sus scrofa

<400> 185

Ala Gly Ser Gly Gly Gly Ser Gly Trp Gly Ser Gly Ala Gly Glu Glu
 1 5 10 15

Val Glu Gly Asp Glu Asp Glu Asn Met Val Tyr Tyr Phe Leu Glu Glu
 20 25 30

Ser Thr Gly Tyr Met Glu Pro Ala Leu Arg Cys Leu Ser Leu Leu His
 35 40 45

Thr Leu Val Ala Phe Leu Cys Ile Ile Gly Tyr Asn Cys Leu Lys Val
 50 55 60

Pro Leu Val Ile Phe Lys Arg Glu Lys Glu Leu Ala Arg Lys Leu Glu
 Page 112

Arg Ala Glu Ser Gly Tyr Asn Tyr Gly Val Ile Leu Ile Pro Glu Gly
85 90 95

Leu Ile Asp Phe Ile Pro Glu Val Gln Gln Leu Ile Ala Glu Leu Asn
100 105 110

Glu Ile Leu Ala His Asp Val Val Asp Glu Ala Gly Val Trp Lys Lys
115 120 125

Lys Leu Thr Pro Gln Cys Leu Glu Leu Phe Glu Leu Leu Pro Leu Ala
130 135 140

Ile Gln Glu Gln Leu Leu Leu
145 150

<210> 187
<211> 201
<212> PRT
<213> Capra hircus

<400> 187
Asp Arg Ile Arg His Leu Gly Asn Val Glu Thr Leu Thr Ile Arg Lys
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Leu His Ile Pro Gln Phe Phe Leu Phe His Asp Leu Ser Ser Ile Tyr
20 25 30

Pro Leu Thr Gly Lys Val Lys Arg Val Thr Ile Glu Ser Ser Lys Val
35 40 45

Phe Leu Val Pro Cys Leu Leu Ser Gln His Leu Lys Ser Leu Glu Tyr
50 55 60

Leu Asp Leu Ser Glu Asn Leu Met Ser Glu Glu Thr Leu Lys Asn Ser
65 70 75 80

Ala Cys Lys Asp Ala Trp Pro Phe Leu Gln Thr Leu Val Leu Arg Gln
85 90 95

Asn Arg Leu Lys Ser Leu Glu Lys Thr Gly Glu Leu Leu Leu Thr Leu
100 105 110

Lys Asn Leu Asn Asn Leu Asp Ile Ser Lys Asn Asn Phe Leu Ser Met
115 120 125

Pro Glu Thr Cys Gln Trp Pro Gly Lys Met Lys Gln Leu Asn Leu Ser
130 135 140

Ser Thr Arg Ile His Ser Leu Thr Gln Cys Leu Pro Gln Thr Leu Glu
145 150 155 160

Ile Leu Asp Val Ser Asn Asn Asn Leu Asp Ser Phe Ser Leu Ile Leu
165 170 175

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Pro Gln Leu Lys Glu Leu Tyr Ile Ser Arg Asn Lys Leu Lys Thr Leu
180 185 190

Pro Asp Ala Ser Phe Leu Pro Val Leu
195 200

<210> 188
<211> 101
<212> PRT
<213> Sus scrofa

<400> 188
Ile His Gly Leu Leu Pro Pro Cys Phe Ile Ser Gln Asp Ile Gln Val
1 5 10 15

Leu Arg Val Ile Lys Asn Phe Glu Arg Leu Asn Ser Asp Phe Asp Arg
20 25 30

Tyr Leu Leu Leu Met Asp Leu Gln Asp Arg Asn Glu Lys Leu Phe Tyr
35 40 45

Lys Val Leu Met Ser Asp Ile Glu Lys Phe Met Pro Ile Val Tyr Thr
50 55 60

Pro Thr Val Gly Leu Ala Cys Gln Gln Tyr Ser Leu Ala Phe Arg Lys
65 70 75 80

Pro Arg Gly Leu Phe Ile Ser Ile His Asp Arg Gly His Val Ala Ser
85 90 95

Val Leu Asn Ala Trp
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<210> 189
<211> 76
<212> PRT
<213> Sus scrofa

<400> 189
Val Ser Thr Ser His Leu Leu Ile Leu Asp Asp Ser Val Glu Met Glu
1 5 10 15

Ile Arg Pro Arg Phe Pro Leu Phe Gly Gly Trp Lys Thr His Tyr Ile
20 25 30

Val Gly Tyr Asn Leu Pro Ser Tyr Glu Tyr Leu Tyr Asn Leu Gly Asp
35 40 45

Gln Tyr Ala Leu Lys Met Arg Leu Val Asp His Val Phe Asp Glu Gln
50 55 60

Val Ile Asp Ser Leu Thr Val Lys Ile Ile Leu Pro
65 70 75

<210> 190
<211> 176

<212> PRT

<213> Sus scrofa

<400> 190

Lys Leu Arg Leu Val Glu Ile Ala Gln Val Pro Lys Pro His Val Asp
1 5 10 15

Glu Phe Lys Ser Val Ser Lys Phe Lys Ile Phe Asn Thr Asn Asn Leu
20 25 30

Trp Ile Ser Leu Ala Ala Val Lys Arg Leu Gln Glu Gln Asn Ala Ile
35 40 45

Asp Met Glu Ile Ile Val Asn Pro Lys Thr Leu Asp Gly Gly Leu Asn
50 55 60

Val Ile Gln Leu Glu Thr Ala Val Gly Ala Ala Ile Lys Ser Phe Glu
65 70 75 80

Asn Ser Leu Gly Ile Asn Val Pro Arg Ser Arg Phe Leu Pro Val Lys
85 90 95

Thr Thr Ser Asp Leu Leu Leu Val Met Ser Asn Leu Tyr Ser Leu Asn
100 105 110

Ala Gly Ser Leu Thr Met Ser Glu Lys Arg Glu Phe Pro Thr Val Pro
115 120 125

Leu Val Lys Leu Gly Ser Ser Phe Thr Lys Val Gln Asp Tyr Leu Arg
130 135 140

Arg Phe Glu Ser Ile Pro Asp Met Leu Glu Leu Asp His Leu Thr Val
145 150 155 160

Ser Gly Asp Val Thr Phe Gly Lys Asn Val Ser Leu Lys Gly Thr Val
165 170 175

<210> 191

<211> 151

<212> PRT

<213> Solanum tuberosum

<400> 191

Lys Trp Ala Phe Glu Thr Leu Asp Arg Tyr Arg Lys Lys Phe Cys Met
1 5 10 15

Phe Asn Asp Asp Ile Gln Gly Thr Ala Gly Val Ala Leu Ala Gly Leu
20 25 30

Leu Gly Thr Val Arg Ala Gln Gly Arg Pro Leu Thr Asp Phe Ala Asn
35 40 45

Gln Lys Ile Val Val Val Gly Ala Gly Ser Ala Gly Leu Gly Val Leu
50 55 60

Lys Met Ala Leu Gln Ala Val Ser Arg Met Thr Gly Pro Ser Ala Asp
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65	70					75					80						
Pro	His	Phe	Phe	Leu 85	Leu	Asp	Lys	Asn	Gly 90	Leu	Ile	Thr	Lys	Asp 95	Arg		
Lys	Asp	Ile	Asp 100	Pro	Ala	Ala	Leu	Pro 105	Phe	Ala	Lys	Ala	His 110	His	Glu		
Ile	Glu	Gly 115	Leu	Gly	Leu	Gln	Glu 120	Gly	Ala	Gly	Leu	Ala 125	Glu	Val	Val		
Lys	Lys 130	Val	Lys	Pro	His	Val 135	Leu	Leu	Gly	Leu	Ser 140	Gly	Val	Gly	Gly		
Ile 145	Phe	His	Glu	Glu	Val 150	Leu											
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<211> 276																	
<212> PRT																	
<213> Capra hircus																	
<400> 192																	
Met 1	Trp	Val	Leu	Leu 5	Gly	Val	Phe	Leu	Leu 10	Thr	Leu	Ala	Tyr	Leu 15	Phe		
Trp	Pro	Lys	Thr 20	Lys	His	Ser	Ala	Ala 25	Lys	Tyr	Pro	Arg	Ser 30	Leu	Pro		
Ser	Leu	Pro 35	Leu	Val	Gly	Ser	Leu 40	Leu	Phe	Leu	Pro	Arg 45	Arg	Gly	Gln		
Gln	His 50	Glu	Asn	Phe	Phe	Lys 55	Leu	Gln	Glu	Lys	Tyr 60	Gly	Pro	Ile	Tyr		
Ser 65	Phe	Arg	Leu	Gly	Ser 70	Lys	Thr	Thr	Val	Met 75	Ile	Gly	His	His	Gln 80		
Leu	Ala	Arg	Glu	Val 85	Leu	Leu	Lys	Lys	Gly 90	Lys	Glu	Phe	Ser	Gly 95	Arg		
Pro	Lys	Val	Ala 100	Thr	Leu	Asp	Ile	Leu 105	Ser	Asp	Asn	Gln	Lys 110	Gly	Ile		
Ala	Phe	Ala 115	Asp	His	Gly	Ala	His 120	Trp	Gln	Leu	His	Arg 125	Lys	Leu	Val		
Leu	Asn 130	Ala	Phe	Ala	Leu	Phe 135	Lys	Asp	Gly	Asn	Leu 140	Lys	Leu	Glu	Lys		
Ile 145	Ile	Asn	Gln	Glu	Ala 150	Asn	Val	Leu	Cys	Asp 155	Phe	Leu	Ala	Thr	Gln 160		
His	Gly	Gln	Ser	Ile 165	Asp	Leu	Ser	Glu	Pro 170	Leu	Ser	Leu	Ala	Val 175	Thr		

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Asn Ile Ile Ser Phe Ile Cys Phe Asn Phe Ser Phe Lys Asn Glu Asp
180 185 190

Pro Ala Leu Lys Ala Ile Gln Asn Val Asn Asp Gly Ile Leu Glu Val
195 200 205

Leu Ser Lys Glu Ile Leu Leu Asp Ile Phe Pro Ala Leu Lys Ile Phe
210 215 220

Pro Ser Lys Ala Met Glu Lys Met Lys Gly Cys Val Glu Thr Arg Asn
225 230 235 240

Glu Leu Leu Asn Glu Ile Leu Glu Lys Cys Gln Glu Asn Phe Thr Ser
245 250 255

Asp Ser Ile Thr Asn Leu Leu His Ile Leu Met Gln Ala Lys Val Asn
260 265 270

Ala Asp Asn Asn
275

<210> 193
<211> 201
<212> PRT
<213> Sus scrofa

<400> 193
Ser Lys Phe Gly Lys Gln His Ile Glu Asn Leu Phe Asn Asp Leu Gln
1 5 10 15

Asp Gly Arg Arg Leu Leu Asp Leu Leu Glu Gly Leu Thr Gly Gln Lys
20 25 30

Leu Pro Lys Glu Lys Gly Ser Thr Arg Val His Ala Leu Asn Asn Val
35 40 45

Asn Lys Ala Leu Gln Val Leu Gln Lys Asn Asn Val Asp Leu Val Asn
50 55 60

Ile Gly Ser Thr Asp Ile Val Asp Gly Asn His Lys Leu Thr Leu Gly
65 70 75 80

Leu Ile Trp Asn Ile Ile Leu His Trp Gln Val Lys Asn Val Met Lys
85 90 95

Asn Ile Met Ala Gly Leu Gln Gln Thr Asn Ser Glu Lys Ile Leu Leu
100 105 110

Ser Trp Val Arg Gln Ser Thr Arg Asn Tyr Pro Gln Val Asn Val Ile
115 120 125

Asn Phe Thr Thr Ser Trp Ser Asp Gly Leu Ala Leu Asn Ala Leu Ile
130 135 140

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His Ser His Arg Pro Asp Leu Phe Asp Trp Asn Ser Val Val Cys Gln
145 150 155 160

Gln Ser Ala Thr Gln Arg Leu Glu His Ala Phe Asn Ile Ala Lys Tyr
165 170 175

Gln Leu Gly Ile Glu Lys Leu Leu Asp Pro Glu Asp Val Ala Thr Thr
180 185 190

Tyr Pro Asp Lys Lys Ser Ile Leu Met
195 200

<210> 194
<211> 101
<212> PRT
<213> Sus scrofa

<400> 194
Ala Val Thr His Leu Leu Gln Glu Leu Arg Ala Lys Trp Pro Gly Pro
1 5 10 15

Thr Pro Gly Leu Thr Thr Ile Glu Ala Pro Thr Ser Gln Thr Val Thr
20 25 30

Leu Val Thr Gln Pro Thr Val Thr Lys Glu Thr Ala Ile Ser Lys Pro
35 40 45

Glu Met Pro Ser Ser Leu Leu Leu Glu Val Pro Ala Leu Ala Asp Phe
50 55 60

Asn Arg Ala Trp Thr Glu Leu Thr Asp Trp Leu Ser Leu Leu Asp Arg
65 70 75 80

Val Ile Lys Ser Gln Arg Val Met Val Gly Asp Leu Glu Asp Ile Asn
85 90 95

Glu Met Ile Ile Lys
100

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<211> 151
<212> PRT
<213> Malus domestica

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Arg Ser Ile His Ser Ile Phe Pro Phe Leu Glu Asp Lys Phe Pro His
1 5 10 15

Leu Asn Tyr Val Ser Asp Val Leu Ile Pro Tyr Pro Ile His Leu Glu
20 25 30

Ile Leu Val Gln Thr Leu Arg Tyr Trp Val Lys Asp Pro Ser Ser Leu
35 40 45

His Leu Leu Arg Leu Phe Leu His Glu Tyr Ser Asn Trp Asn Ser Leu
50 55 60

Ile Thr Pro Lys Lys Ile Ile Phe Ser Lys Ser Asn Pro Arg Leu Phe
65 70 75 80

Leu Leu Leu Tyr Asn Ser His Val Cys Glu Tyr Glu Ser Ile Leu Leu
85 90 95

Phe Leu Arg Asn Gln Ser Ser His Leu Arg Leu Thr Ser Ser Gly Ile
100 105 110

Phe Phe Glu Arg Ile His Phe Tyr Glu Lys Lys Lys Asp Pro Val Glu
115 120 125

Glu Val Phe Val Asn Asp Phe Pro Ala Ala Ile Leu Trp Phe Phe Lys
130 135 140

Asp Pro Phe Met His Tyr Val
145 150

<210> 196
<211> 101
<212> PRT
<213> Sus scrofa

<400> 196
Ile Pro Asn Asp Phe Ser Met Lys Asp Thr Thr Met Trp Ile Phe Val
1 5 10 15

Ala Ile Leu Ser Ala Val Val Cys Leu Ile Met Ile Trp Ala Val Ala
20 25 30

Leu Lys Gly Tyr Ser Met Val Ala Cys Ile Leu Pro Pro Val Pro Gly
35 40 45

Pro Lys Ile Lys Gly Phe Asp Thr His Leu Leu Glu Lys Gly Lys Ser
50 55 60

Glu Glu Leu Leu Ser Ala Leu Gly Cys Gln Asp Phe Pro Pro Thr Ser
65 70 75 80

Asp Cys Glu Asp Leu Leu Val Glu Phe Leu Glu Val Asp Asp Ser Glu
85 90 95

Asp Gln Gln Leu Met
100

<210> 197
<211> 76
<212> PRT
<213> Sus scrofa

<400> 197
Pro Lys Pro Phe Thr Glu Glu Val Leu Trp Asn Val Trp Leu Glu Phe
1 5 10 15

Ser Ile Lys Ile Lys Asp Leu Pro Lys Gly Ala Leu Leu Asn Leu Gln
Page 120

20

25

30

Ile Tyr Cys Gly Lys Ala Pro Ala Leu Ser Gly Lys Thr Ser Ala Glu
35 40 45

Met Pro Ser Pro Glu Ser Lys Gly Lys Ala Gln Leu Leu Tyr Tyr Val
50 55 60

Asn Leu Leu Leu Ile Asp His Arg Phe Leu Leu Arg
65 70 75

<210> 198

<211> 276

<212> PRT

<213> Solanum tuberosum

<400> 198

Met Ala Thr Ala Thr Thr Leu Ser Pro Ala Asp Ala Glu Lys Leu Asn
1 5 10 15

Asn Leu Lys Ser Ala Val Ala Gly Leu Asn Gln Ile Ser Glu Asn Glu
20 25 30

Lys Ser Gly Phe Ile Asn Leu Val Gly Arg Tyr Leu Ser Gly Glu Ala
35 40 45

Gln His Ile Asp Trp Ser Lys Ile Gln Thr Pro Thr Asp Glu Val Val
50 55 60

Val Pro Tyr Asp Lys Leu Ala Pro Leu Ser Glu Asp Pro Ala Glu Thr
65 70 75 80

Lys Lys Leu Leu Asp Lys Leu Val Val Leu Lys Leu Asn Gly Gly Leu
85 90 95

Gly Thr Thr Met Gly Cys Thr Gly Pro Lys Ser Val Ile Glu Val Arg
100 105 110

Asn Gly Leu Thr Phe Leu Asp Leu Ile Val Lys Gln Ile Glu Ala Leu
115 120 125

Asn Ala Lys Phe Gly Cys Ser Val Pro Leu Leu Leu Met Asn Ser Phe
130 135 140

Asn Thr His Asp Asp Thr Leu Lys Ile Val Glu Lys Tyr Ala Asn Ser
145 150 155 160

Asn Ile Asp Ile His Thr Phe Asn Gln Ser Gln Tyr Pro Arg Leu Val
165 170 175

Thr Glu Asp Phe Ala Pro Leu Pro Cys Lys Gly Asn Ser Gly Lys Asp
180 185 190

Gly Trp Tyr Pro Pro Gly His Gly Asp Val Phe Pro Ser Leu Met Asn
195 200 205

Ser Gly Lys Leu Asp Ala Leu Leu Ala Lys Gly Lys Glu Tyr Val Phe
210 215 220

Val Ala Asn Ser Asp Asn Leu Gly Ala Ile Val Asp Leu Lys Ile Leu
225 230 235 240

Asn His Leu Ile Leu Asn Lys Asn Glu Tyr Cys Met Glu Val Thr Pro
245 250 255

Lys Thr Leu Ala Asp Val Lys Gly Gly Thr Leu Ile Ser Tyr Glu Gly
260 265 270

Lys Val Gln Leu
275

<210> 199
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<212> PRT
<213> Malus domestica

<400> 199
Tyr Leu Asp Leu Tyr Leu Val His Tyr Pro Met Pro Thr Lys His Asn
1 5 10 15

Ala Ile Gly Lys Thr Ala Ser Leu Leu Gly Glu Asp Lys Val Leu Asp
20 25 30

Ile Asp Val Thr Ile Ser Leu Gln Gln Thr Trp Glu Gly Met Glu Lys
35 40 45

Thr Val Ser Leu Gly Leu Val Arg Ser Ile Gly Leu Ser Asn Tyr Glu
50 55 60

Leu Phe Leu Thr Arg Asp Cys Leu Ala Tyr Ser Lys
65 70 75

<210> 200
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<212> PRT
<213> Sus scrofa

<400> 200
Lys Leu Asp Ala Val Tyr Leu Asn Lys Asn Lys Tyr Leu Thr Val Ile
1 5 10 15

Asp Lys Asp Ala Phe Gly Gly Val Phe Ser Gly Pro Thr Leu Leu Asp
20 25 30

Val Ser Tyr Thr Ser Val Thr Ala Leu Pro Pro Lys Gly Leu Glu His
35 40 45

Leu Lys Glu Leu Ile Ala Arg Asn Thr Trp Thr Leu Lys Lys Leu Pro
50 55 60

Leu Ser Leu Ser Phe Leu His Leu Thr Arg Ala Asp Leu Ser Tyr Pro
Page 122

65 70 75 80

Ser His Cys Cys Ala Phe Lys Asn Gln Lys Lys Ile Arg Gly Ile Leu
 85 90 95

Glu Ser Leu Met Cys
100

<210>	201
<211>	76
<212>	PRT
<213>	Sus scrofa

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Phe Ala Asn Gly Thr Ile Arg Thr Ser Glu Leu Arg Leu Ser Met Gln
1 5 10 15

Lys Ser Met Gln Ser His Ala Ala Val Phe Arg Val Gly Ser Val Leu
20 25 30

Gln Glu Gly Cys Glu Lys Ile Leu Arg Leu Tyr Gly Asp Leu Gln His
35 40 45

Leu Lys Thr Phe Asp Arg Gly Met Val Trp Asn Thr Asp Leu Val Glu
50 55 60

Thr Leu Glu Leu Gln Asn Leu Met Leu Cys Ala Leu
65 70 75

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<210> 202
<211> 76
<212> PRT
<213> Malus domestica
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<400> 202
Ala Leu Leu Val Glu Ala Glu Trp Tyr Asn Lys Ser His Ile Pro Thr
1 5 10 15

Leu Glu Glu Tyr Leu Arg Asn Gly Cys Ile Ser Ser Ser Val Ser Val
20 25 30

Leu Leu Val His Ser Phe Phe Ser Ile Thr His Glu Gly Thr Lys Glu
35 40 45

Met Ala Asp Phe Leu His Lys Asn Glu Asp Leu Leu Tyr Asn Ile Ser
50 55 60

Leu Ile Val Arg Leu Asn Asn Asp Leu Gly Thr Ser
65 70 75

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<213> Sus scrofa
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Thr Leu Asp Ile Leu Ser Asp Asn Gln Lys Gly Ile Ala Phe Ala Asp
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His Gly Thr Ser Trp Gln Leu His Arg Lys Leu Ala Leu Ser Thr Phe
20 25 30

Ser Leu Phe Lys Gly Gly Asn Leu Lys Leu Glu Asn Ile Ile Asn Gln
35 40 45

Glu Ile Lys Val Leu Cys Asp Phe Leu Ala Thr Arg Asn Gly Glu Ser
50 55 60

Ile Asp Leu Ala Gln Pro Leu Ser Leu Ala Met Thr Asn Ile Val Ser
65 70 75 80

Phe Ile Cys Phe Asn Phe Ser Phe Lys Lys Gly Asp Pro Ala Leu Gln
85 90 95

Ala Ile Val Asn Phe Asn Asp Gly Ile Leu Asp Ala Val Gly Lys Glu
100 105 110

Ile Leu Tyr Asp Met Phe Pro Gly Ile Arg Ile Leu Pro Ser Gln Thr
115 120 125

Leu Glu Asn Met Lys Gln Cys Val Arg Met Arg Asn Glu Leu Leu Arg
130 135 140

Glu Ile Leu Glu Asn Arg Lys Glu Asn Tyr Ser Arg Asn Ser Ile Thr
145 150 155 160

Asn Leu Leu Asp Ile Met Ile Gln Ala Lys Thr Asn Ala Glu Ser Asn
165 170 175

Thr Gly Gly Pro Asp His Asn Leu Lys Leu Leu Ser Asp Arg His Met
180 185 190

Leu Ala Thr Val Ala Asp Ile Phe Gly Ala Gly Val Glu Thr Ser Ala
195 200 205

Ser Val Val Lys Trp Ile Val Ala Phe Leu Leu His Tyr Pro Leu Leu
210 215 220

Arg Lys
225

<210> 204
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<212> PRT
<213> Sus scrofa

<400> 204
Met Gly Ser Gly Pro Ile Asp Pro Lys Glu Leu Leu Lys Gly Leu Asp
1 5 10 15

Ser Phe Leu Asn Arg Asp Gly Glu Val Lys Ser Val Asp Gly Ile Ser
20 25 30

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Lys Ile Phe Ser Leu Met Lys Glu Ala Arg Lys Met Val Ser Arg Cys
35 40 45

Thr Tyr Leu Asn Ile Leu Leu Gln Thr Arg Ser Pro Glu Ile Leu Val
50 55 60

Lys Phe Ile Asp Val Gly Gly Tyr Lys Leu Leu Asn Asn Trp Leu Thr
65 70 75 80

Tyr Ser Lys Thr Thr Asn Asn Ile Pro Leu Leu Gln Gln Ile Leu Leu
85 90 95

Thr Leu Gln His Leu
100

<210> 205
<211> 126
<212> PRT
<213> Sus scrofa

<400> 205
Asp Phe Phe Ile Asn Gly Asn Ile Lys Val Phe Pro Asp Pro Pro Pro
1 5 10 15

Pro Val Arg Pro Pro Pro Val Glu Lys Glu Glu Asn Gly Thr Leu Thr
20 25 30

Ile Glu Gln Leu Asp Asn Leu Arg Asp Gln Phe Leu Asp Ile Ala Pro
35 40 45

Lys Gly Val Ile Gly Asn Lys Ala Phe Ala Asp Ile Leu Leu Asp Leu
50 55 60

Val Thr Leu Asn Leu Gly Thr Asn Asn Phe Pro Ser Ser Trp Met His
65 70 75 80

Leu Thr Gln Pro Glu Leu Gln Glu Leu Ala Ser Leu Leu Val Ile Asn
85 90 95

Ser Glu Leu Val Asp Trp Arg Lys Phe Leu Leu Val Ala Ala Leu Pro
100 105 110

Trp Pro Ile Pro Leu Glu Glu Glu Leu Leu Glu Thr Leu Gln
115 120 125

<210> 206
<211> 201
<212> PRT
<213> Sus scrofa

<400> 206
Val Ile Asn Val His Glu Ala Glu Arg Asn Phe Thr Val Ala Cys Gln
1 5 10 15

His Arg Ser Asn Ser Glu Ile Ile Cys Cys Thr Thr Pro Ser Leu Gln
20 25 30

Gln Leu Asn Leu Gln Leu Pro Leu Lys Thr Lys Ala Phe Phe Met Leu
35 40 45

Asp Gly Ile His Ser Lys Tyr Phe Asp Leu Ile Tyr Val His Asn Pro
50 55 60

Val Phe Lys Pro Phe Glu Lys Pro Val Met Ile Ser Ile Gly Asn Glu
65 70 75 80

Asn Val Leu Glu Ile Lys Gly Asn Asp Ile Asp Pro Glu Ala Val Lys
85 90 95

Gly Glu Val Leu Lys Val Gly Asn Lys Ser Cys Glu Asn Ile His Ser
100 105 110

His Ser Glu Ala Val Leu Cys Thr Val Pro Asn Asp Leu Leu Lys Leu
115 120 125

Asn Ser Glu Leu Asn Ile Glu Trp Lys Gln Ala Ile Ser Ser Thr Val
130 135 140

Leu Gly Lys Val Ile Val Gln Pro Asp Gln Asn Phe Thr Gly Leu Ile
145 150 155 160

Val Gly Val Val Ser Ile Ser Ile Ile Leu Leu Leu Leu Gly Leu
165 170 175

Phe Leu Trp Leu Lys Lys Arg Lys Gln Ile Lys Asp Leu Gly Ser Glu
180 185 190

Leu Val Arg Tyr Asp Ala Arg Val His
195 200

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<211> 76
<212> PRT
<213> Capsicum annuum

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Val Asp Thr Ile Asn Tyr Pro Ile His Met Lys Asn Leu Ser Leu Lys
1 5 10 15

Glu Leu Lys Gln Leu Ala Asp Glu Leu Arg Ser Asp Thr Ile Phe Asn
20 25 30

Val Ser Lys Thr Gly Gly His Leu Gly Ser Ser Leu Gly Val Val Glu
35 40 45

Leu Thr Val Ala Leu His Tyr Val Phe Asn Ala Pro Gln Asp Arg Ile
50 55 60

Leu Trp Asp Val Gly His Gln Ser Tyr Pro His Lys
65 70 75

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<212> PRT
<213> Sus scrofa

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Val Asp Lys Thr Thr Thr Val Gln Val Pro Met Met His Gln Met Glu
1 5 10 15
Gln Tyr Tyr His Leu Val Asp Thr Glu Leu Asn Cys Thr Val Leu Gln
20 25 30
Met Asp Tyr Ser Lys Asn Ala Leu Ala Leu Phe Val Leu Pro Asn Glu
35 40 45
Gly Gln Met Glu Trp Val Glu Gly Ala Met Ser Ser Lys Ile Leu Lys
50 55 60
Lys Trp Asn Arg Leu Leu Gln Lys Gly Trp Ile Asp Leu Phe Val Pro
65 70 75 80
Lys Phe Ser Met Ser Ala Thr Tyr Asp Leu Gly Asp Ile Leu Leu Lys
85 90 95
Met Gly Ile Gln Asp Ala Phe Ala Asp Asn Ala Asp Phe Ser Gly Leu
100 105 110
Thr Lys Asp Asn Gly Leu Lys Leu Ser Asn Ala Ala His Lys Ala Val
115 120 125
Leu Asn Ile Gly Glu Lys Gly Thr Glu Ala Ile Pro Glu Val Thr Phe
130 135 140
Leu Asn Gln Pro Lys Ile Thr Leu Leu His Pro Ile Ile Gln Phe Asp
145 150 155 160
Arg Ser Phe Leu Leu Leu Ile Leu Glu Lys Ser Thr Arg Ser Ile Leu
165 170 175

<210> 209
<211> 126
<212> PRT
<213> Sus scrofa

<400> 209
Ile Val Leu Thr Phe Glu Tyr Leu His Ser Leu Asp Leu Ile Tyr Arg
1 5 10 15
Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp His Gln Gly Tyr Ile Gln
20 25 30
Val Thr Asp Phe Gly Phe Ala Lys Arg Val Lys Gly Arg Thr Trp Thr
35 40 45
Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Ile Ile Leu Ser Lys
50 55 60

Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala Leu Gly Val Leu Ile Tyr
65 70 75 80

Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe Ala Asp Gln Pro Ile Gln
85 90 95

Ile Tyr Glu Lys Ile Val Ser Gly Lys Val Arg Phe Pro Ser His Phe
100 105 110

Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn Leu Leu Gln Val
115 120 125

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<211> 201

<212> PRT

<213> Malus domestica

<400> 210

Gly Ala Arg Val Leu Val Val Cys Ser Glu Ile Thr Ala Val Thr Phe
1 5 10 15

Arg Gly Pro Ser Asp Thr His Leu Asp Ser Leu Val Gly Gln Ala Leu
20 25 30

Phe Gly Asp Gly Ala Ala Ala Val Ile Ile Gly Ala Asp Pro Val Pro
35 40 45

Glu Val Glu Lys Pro Leu Phe Glu Leu Val Ser Ala Ala Gln Thr Val
50 55 60

Leu Pro Asp Ser Asp Gly Ala Ile Asp Gly His Leu Arg Glu Val Gly
65 70 75 80

Leu Thr Phe His Leu Leu Lys Asp Val Pro Gly Leu Ile Ser Lys Asn
85 90 95

Ile Glu Lys Ser Leu Asn Glu Ala Leu Lys Pro Ile Gly Ile Ser Asp
100 105 110

Trp Asn Ser Leu Phe Trp Ile Ala His Pro Gly Gly Pro Ala Ile Leu
115 120 125

Asp Gln Val Glu Ala Lys Leu Ala Leu Lys Pro Glu Lys Leu Glu Ala
130 135 140

Thr Arg Gln Val Leu Ser Asp Tyr Gly Asn Met Ser Ser Ala Cys Val
145 150 155 160

Leu Phe Ile Leu Asp Glu Val Arg Arg Lys Ser Ala Glu Lys Gly Leu
165 170 175

Glu Thr Thr Gly Glu Gly Leu Glu Trp Gly Val Leu Phe Gly Phe Gly
180 185 190

Pro Gly Leu Thr Val Glu Thr Val Val
195 200

<210> 211
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<212> PRT
<213> Sus scrofa

<400> 211
Gln Leu Phe Thr Leu Val Glu Trp Ala Lys Arg Ile Pro His Phe Ser
1 5 10 15

Asp Leu Thr Leu Glu Asp Gln Val Ile Leu Leu Arg Ala Gly Trp Asn
20 25 30

Glu Leu Leu Ile Ala Ser Phe Ser His Arg Ser Val Ser Val Gln Asp
35 40 45

Gly Ile Leu Leu Ala Thr Gly Leu His Val His Arg Ser Ser Ala His
50 55 60

Ser Ala Gly Val Gly Ser Ile Phe Asp Arg Val Leu Thr Glu Leu Val
65 70 75 80

Ser Lys Met Lys Asp Met Gln Met Asp Lys Ser Glu Leu Gly Cys Leu
85 90 95

Arg Ala Ile Val Leu
100

<210> 212
<211> 101
<212> PRT
<213> Agaricus bisporus

<400> 212
Ile Leu Leu Ser Asn Phe Phe Ala Gln Pro Glu Ala Leu Ala Phe Gly
1 5 10 15

Lys Thr Glu Glu Glu Val Arg Lys Glu Leu Gly Gln Asn Ala Ser Glu
20 25 30

Ala Leu Val Lys Ser Lys Val Phe Glu Gly Asn Arg Pro Ser Ser Ser
35 40 45

Leu Met Phe Asp Lys Leu Asp Pro Ala Thr Leu Gly Ala Leu Ile Ala
50 55 60

Leu Tyr Glu His Lys Ile Phe Val Gln Gly Val Val Trp Gly Ile Asn
65 70 75 80

Ser Phe Asp Gln Met Gly Val Glu Leu Gly Lys Val Leu Ala Lys Gln
85 90 95

Ile Leu Ala Gln Leu
100

<210> 213
 <211> 276
 <212> PRT
 <213> Malus domestica

<400> 213
 Glu Tyr Ile Tyr Ala Leu Ala His Asp His Gly Leu Asn Arg Ser Ile
 1 5 10 15
 Leu Leu Asp Asn Val Gly Tyr Asp Thr Lys Tyr Ser Leu Leu Ile Ile
 20 25 30
 Lys Arg Leu Ile Ser Arg Met Tyr Gln Gln Asn His Leu Ile Ile Ser
 35 40 45
 Ala Asn Asp Ser Asn Gln Asn Lys Phe Phe Gly Tyr Asn Lys Asn Leu
 50 55 60
 Tyr Ser Gln Met Met Ser Glu Gly Phe Ala Val Ile Val Glu Ile Pro
 65 70 75 80
 Phe Ser Arg Arg Leu Val Ser Ser Leu Glu Ala Thr Glu Ile Val Lys
 85 90 95
 Ser Tyr Asn Leu Arg Ser Ile His Ser Ile Phe Pro Phe Leu Glu Asp
 100 105 110
 Lys Phe Pro His Leu Asn Tyr Val Ser Asp Val Leu Ile Pro Tyr Pro
 115 120 125
 Ile His Leu Glu Ile Leu Val Gln Thr Leu Arg Tyr Trp Val Lys Asp
 130 135 140
 Pro Ser Ser Leu His Leu Leu Arg Leu Phe Leu His Glu Tyr Ser Asn
 145 150 155 160
 Trp Asn Ser Leu Ile Thr Pro Lys Lys Ile Ile Phe Ser Lys Ser Asn
 165 170 175
 Pro Arg Leu Phe Leu Leu Leu Tyr Asn Ser His Val Cys Glu Tyr Glu
 180 185 190
 Ser Ile Leu Leu Phe Leu Arg Asn Gln Ser Ser His Leu Arg Leu Thr
 195 200 205
 Ser Ser Gly Ile Phe Phe Glu Arg Ile His Phe Tyr Glu Lys Lys Lys
 210 215 220
 Asp Pro Val Glu Glu Val Phe Val Asn Asp Phe Pro Ala Ala Ile Leu
 225 230 235 240
 Trp Phe Phe Lys Asp Pro Phe Met His Tyr Val Arg Tyr Gln Gly Lys
 245 250 255

Ser Ile Leu Ser Ser Lys Asp Thr Pro Leu Leu Met Asn Lys Trp Lys
260 265 270

Tyr Tyr Leu Val
275

<210> 214
<211> 76
<212> PRT
<213> Sus scrofa

<400> 214
Leu Ile Glu Arg Ala Thr Gln Pro Glu Glu Ile Leu Ala Leu Leu Gly
1 5 10 15

Gly Gly His Cys Leu His Gln Asn Arg Ala Ala Leu Met Val Ile Gln
20 25 30

Leu Ser Arg Leu Leu Ser Glu Lys Pro Lys Asp Lys Ala Leu Leu Ile
35 40 45

Lys Asp Ala Arg Phe Gln His Leu Leu Arg Leu Val Asn Ser Gln Ile
50 55 60

Asn Ala Val Trp His Gly Thr Leu Val Lys Leu Leu
65 70 75

<210> 215
<211> 126
<212> PRT
<213> Sus scrofa

<400> 215
Ile Leu Pro Leu Pro Gly Gln Ser Val Asp Gln Leu Cys Val Asp Leu
1 5 10 15

Lys His Ser Gln Gly Pro Val Lys Leu Leu Ser Asp Pro Gly Gln Gly
20 25 30

Val Glu Val Thr Gly His Tyr Glu Arg Glu Lys Ala Arg Phe Ser Trp
35 40 45

Ile Glu Val Thr Phe Lys His Pro Pro Leu Gln Val Arg Ala Ser Leu
50 55 60

Glu His Ile Val Val Ile Arg Asn Arg Gln Ser Ser Ala Tyr Lys Trp
65 70 75 80

Lys Glu Thr Leu Tyr Ser Val Met Pro Gly Leu Lys Ile Thr Met Asp
85 90 95

Lys Ala Gly Leu Leu Leu Leu Ser Ser Pro Asn Arg Val Thr Ile Gly
100 105 110

Leu Leu Ser Trp Asp Gly Pro Gly Lys Gly Leu Arg Leu Leu
115 120 125

<210> 216
 <211> 201
 <212> PRT
 <213> Sus scrofa

<400> 216
 Thr Thr Ala Leu Leu Phe Thr Pro Val Thr Ile Arg Leu Cys Glu Val
 1 5 10 15
 Leu Asn Leu Asp Pro Arg Gln Val Leu Ile Ala Glu Val Ile Phe Thr
 20 25 30
 Asn Ile Gly Gly Ala Ala Thr Ala Ile Gly Asp Pro Pro Asn Val Ile
 35 40 45
 Ile Val Ser Asn Gln Glu Leu Arg Lys Met Gly Leu Asp Phe Ala Gly
 50 55 60
 Phe Thr Ala His Met Phe Ala Gly Ile Cys Phe Val Leu Leu Phe Ser
 65 70 75 80
 Phe Pro Leu Leu Arg Leu Leu Tyr Trp Asn Arg Lys Leu Tyr Asn Lys
 85 90 95
 Glu Pro Ser Glu Ile Val Glu Leu Lys His Glu Ile His Val Trp Arg
 100 105 110
 Leu Thr Ala Gln Arg Ile Ser Pro Ala Ser Arg Glu Glu Thr Ala Val
 115 120 125
 Arg Gly Leu Leu Leu Glu Lys Val Leu Ser Leu Glu Arg Leu Leu Ala
 130 135 140
 Arg Arg Leu His Ser Phe His Arg Gln Ile Ser Gln Glu Asp Lys Asn
 145 150 155 160
 Trp Glu Thr Asn Ile Gln Glu Leu Gln Lys Lys His Arg Ile Ser Asp
 165 170 175
 Arg Thr Leu Leu Thr Lys Cys Val Thr Val Leu Gly Leu Val Ile Phe
 180 185 190
 Met Phe Phe Leu Asn Ser Phe Val Pro
 195 200

<210> 217
 <211> 176
 <212> PRT
 <213> Sus scrofa

<400> 217
 Met Glu Leu Gly Ala Ala Ala Arg Ala Trp Ser Leu Leu Trp Leu Leu
 1 5 10 15
 Leu Pro Leu Leu Gly Leu Val Gly Ala Ser Gly Pro Arg Thr Leu Val
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20

25

30

Leu Leu Asp Asn Leu Asn Leu Arg Glu Thr His Ser Leu Phe Phe Arg
 35 40 45

Ser Leu Lys Asp Arg Gly Phe Val Leu Thr Phe Lys Thr Ala Asp Asp
 50 55 60

Pro Ser Leu Ser Leu Ile Lys Tyr Gly Glu Phe Leu Tyr Asp Asn Leu
 65 70 75 80

Ile Val Phe Ser Pro Ser Val Glu Asp Phe Gly Gly Asn Ile Asn Val
 85 90 95

Glu Thr Ile Ser Thr Phe Ile Asp Gly Gly Gly Ser Val Leu Val Ala
 100 105 110

Ala Ser Ser Asp Ile Gly Asp Pro Leu Arg Glu Leu Gly Ser Glu Cys
 115 120 125

Gly Ile Glu Phe Asp Glu Glu Lys Thr Ala Val Ile Asp His His Asn
 130 135 140

Tyr Asp Val Ser Asp Leu Ala Gln His Thr Leu Ile Val Ala Asp Thr
 145 150 155 160

Glu Asn Leu Leu Lys Ala Pro Thr Ile Val Gly Lys Ser Ser Leu Asn
 165 170 175

<210> 218

<211> 76

<212> PRT

<213> Capsicum annuum

<400> 218

Leu Ala Ala Ala Ser Val Leu Glu Ser Arg Gly Leu Gln Val Thr Val
 1 5 10 15

Ala Asp Ala Arg Phe Cys Lys Pro Leu Asp Arg Ala Leu Ile Arg Ser
 20 25 30

Leu Ala Lys Ser His Glu Val Leu Val Thr Val Glu Lys Gly Ser Ile
 35 40 45

Gly Gly Phe Gly Ser His Val Val Gln Phe Met Ala Leu Asp Gly Leu
 50 55 60

Leu Asp Gly Lys Leu Lys Trp Arg Pro Ile Val Leu
 65 70 75

<210> 219

<211> 76

<212> PRT

<213> Sus scrofa

<400> 219

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Val Leu Ser Trp Gln Phe Ser Ser Val Thr Lys Arg Gly Leu Asn Val
1 5 10 15

Asp Gln Leu Asn Met Leu Gly Glu Lys Leu Leu Gly Pro Thr Ala Gly
20 25 30

Pro Asp Gly Leu Ile Pro Trp Thr Arg Phe Cys Lys Glu Asn Ile Asn
35 40 45

Asp Lys Asn Phe Pro Phe Trp Leu Trp Ile Glu Ser Ile Leu Glu Leu
50 55 60

Ile Lys Lys His Leu Leu Ser Leu Trp Asn Asp Gly
65 70 75

<210> 220
<211> 276
<212> PRT
<213> Sus scrofa

<400> 220
Met Trp Val Leu Leu Val Phe Phe Leu Leu Thr Leu Thr Tyr Leu Phe
1 5 10 15

Trp Pro Lys Thr Lys Gly Ser Gly Ala Lys Tyr Pro Arg Ser Leu Pro
20 25 30

Val Leu Pro Val Val Gly Ser Leu Pro Phe Leu Pro Arg Arg Gly His
35 40 45

Gln His Met Asn Phe Phe Lys Leu Gln Asp Lys Tyr Gly Pro Ile Phe
50 55 60

Ser Phe Arg Leu Gly Ser Lys Thr Thr Val Val Ile Gly Asp His Gln
65 70 75 80

Leu Ala Lys Glu Val Leu Leu Lys Lys Gly Lys Glu Phe Ser Gly Arg
85 90 95

Pro Arg Val Met Thr Leu Asp Ile Leu Ser Asp Asn Gln Lys Gly Ile
100 105 110

Ala Phe Ala Asp His Gly Thr Ser Trp Gln Leu His Arg Lys Leu Ala
115 120 125

Leu Ser Thr Phe Ser Leu Phe Lys Gly Gly Asn Leu Lys Leu Glu Asn
130 135 140

Ile Ile Asn Gln Glu Ile Lys Val Leu Cys Asp Phe Leu Ala Thr Arg
145 150 155 160

Asn Gly Glu Ser Ile Asp Leu Ala Gln Pro Leu Ser Leu Ala Met Thr
165 170 175

Asn Ile Val Ser Phe Ile Cys Phe Asn Phe Ser Phe Lys Lys Gly Asp
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185

190

Pro Ala Leu Gln Ala Ile Val Asn Phe Asn Asp Gly Ile Leu Asp Ala
 195 200 205

Val Gly Lys Glu Ile Leu Tyr Asp Met Phe Pro Gly Ile Arg Ile Leu
 210 215 220

Pro Ser Gln Thr Leu Glu Asn Met Lys Gln Cys Val Arg Met Arg Asn
 225 230 235 240

Glu Leu Leu Arg Glu Ile Leu Glu Asn Arg Lys Glu Asn Tyr Ser Arg
 245 250 255

Asn Ser Ile Thr Asn Leu Leu Asp Ile Met Ile Gln Ala Lys Thr Asn
 260 265 270

Ala Glu Ser Asn
 275

<210> 221
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 221
 His Lys Ile Gln Ser Glu Lys Met Val Val Ser Leu Glu Thr Arg Ile
 1 5 10 15

Ala Gln Glu Lys Leu Cys Arg Leu Ser Leu Ser His Gln Thr Ile Thr
 20 25 30

Lys Met Asn Gln Ile Ala Lys Lys Leu Trp Thr Arg Cys Leu Thr His
 35 40 45

Ser Gln Gly Val Phe Arg Leu Pro Ile Ala Ala Ala Gln Ile Leu Pro
 50 55 60

Ala Leu Leu Gly Lys Thr Tyr Leu Asp Val Thr Lys
 65 70 75

<210> 222
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 222
 Ser Leu Ile His Gln Leu Val Ser Ala Glu Asp Leu Glu Pro Leu Gly
 1 5 10 15

Thr Pro Met Leu Ile Glu Asp Gly Tyr Ala Val Thr Gln Ala Glu Leu
 20 25 30

Phe Ala Leu Leu Cys Arg Leu Ala Asp Glu Leu Leu Phe Arg Gln Ile
 35 40 45

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Ala Trp Ile Lys Lys Leu Pro Phe Phe Cys Glu Leu Ser Ile Lys Asp
50 55 60

Tyr Thr Cys Leu Leu Ser Ser Thr Trp Gln Glu Leu
65 70 75

<210> 223

<211> 226

<212> PRT

<213> Prunus persica

<400> 223

Met Asn His Glu Met Arg Thr Pro Met His Ala Ile Ile Ala Leu Ser
1 5 10 15

Ser Leu Leu Gln Glu Thr Glu Leu Thr Pro Glu Gln Arg Leu Met Val
20 25 30

Glu Thr Ile Leu Lys Ser Ser His Leu Leu Ala Thr Leu Ile Asn Asp
35 40 45

Val Leu Asp Leu Ser Arg Leu Glu Asp Gly Ser Leu Gln Leu Glu Ile
50 55 60

Ala Thr Phe Asn Leu His Ser Val Phe Arg Glu Val His Asn Leu Ile
65 70 75 80

Lys Pro Val Ala Ser Val Lys Lys Leu Ser Val Ser Leu Asn Leu Ala
85 90 95

Ala Asp Leu Pro Val Gln Ala Val Gly Asp Glu Lys Arg Leu Met Gln
100 105 110

Ile Val Leu Asn Val Val Gly Asn Ala Val Lys Phe Ser Lys Glu Gly
115 120 125

Ser Ile Ser Ile Thr Ala Phe Val Ala Lys Ser Glu Ser Leu Arg Asp
130 135 140

Phe Arg Ala Pro Glu Phe Phe Pro Ala Gln Ser Asp Asn His Phe Tyr
145 150 155 160

Leu Arg Val Gln Val Lys Asp Ser Gly Ser Gly Ile Asn Pro Gln Asp
165 170 175

Ile Pro Lys Leu Phe Thr Lys Phe Ala Gln Thr Gln Ser Leu Ala Thr
180 185 190

Arg Asn Ser Gly Gly Ser Gly Leu Gly Leu Ala Ile Cys Lys Arg Phe
195 200 205

Val Asn Leu Met Glu Gly His Ile Trp Ile Glu Ser Glu Gly Pro Gly
210 215 220

Lys Gly

225

<210> 224

<211> 151

<212> PRT

<213> *Prunus persica*

<400> 224

Glu Tyr Ile Tyr Ala Leu Ala His Asp His Gly Leu Asn Arg Ser Ile
 1 5 10 15

Leu Leu Asp Asn Val Gly Tyr Asp Asn Lys Ser Ser Leu Leu Ile Ile
 20 25 30

Lys Arg Leu Ile Ser Arg Met Tyr Lys His Asn His Phe Phe Ile Ser
 35 40 45

Ala Asn Ala Ser Asn Gln Lys Lys Lys Leu Gly Tyr Asn Lys Asn Leu
 50 55 60

Tyr Ser Gln Lys Ile Ser Glu Gly Phe Thr Val Ile Val Glu Ile Ser
 65 70 75 80

Phe Ser Leu Arg Leu Val Ser Ser Leu Glu Ala Thr Glu Thr Val Lys
 85 90 95

Ser Tyr Asn Leu Arg Ser Ile His Ser Ile Phe Pro Phe Leu Glu Asp
 100 105 110

Lys Phe Pro His Leu Asn Tyr Val Ser Asp Val Leu Ile Pro Tyr Pro
 115 120 125

Ile His Leu Glu Ile Leu Val Gln Thr Leu Arg Tyr Trp Val Lys Asp
 130 135 140

Ala Ser Ser Leu His Leu Leu
 145 150

<210> 225

<211> 126

<212> PRT

<213> *Sus scrofa*

<400> 225

Ile Phe His Ile Met Lys His Asn His Tyr Thr Cys Arg Phe Gly Ser
 1 5 10 15

Lys Leu Gly Leu Glu Cys Ile Gly Met His Glu Lys Gly Ile Met Phe
 20 25 30

Asn Asn Asn Pro Ala Leu Trp Lys Ala Val Arg Pro Phe Phe Thr Lys
 35 40 45

Ala Leu Ser Gly Pro Gly Leu Val Arg Met Val Thr Val Cys Ala Asp
 50 55 60

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Ser Ile Thr Lys His Leu Asp Lys Leu Glu Glu Val Arg Asn Asp Leu
65 70 75 80

Gly Tyr Val Asp Val Leu Thr Leu Met Arg Arg Ile Met Leu Asp Thr
85 90 95

Ser Asn Asn Leu Phe Leu Gly Ile Pro Leu Asp Glu Ser Ala Leu Val
100 105 110

His Lys Val Gln Gly Tyr Phe Asp Ala Trp Gln Ala Leu Leu
115 120 125

<210> 226
<211> 126
<212> PRT
<213> Sus scrofa

<400> 226
Pro Pro Pro Pro Pro Thr Leu Leu Pro Ser Arg Pro Leu Pro Pro
1 5 10 15

Leu Pro Pro Pro Ser Leu Lys Lys Lys Arg Asp His Asn Ala Gly Leu
20 25 30

Cys Leu Leu Val Met Phe Phe Met Val Leu Val Ala Leu Val Gly Leu
35 40 45

Gly Leu Gly Met Phe Gln Leu Phe His Leu Gln Lys Glu Leu Thr Glu
50 55 60

Leu Arg Glu Ser Ala Ser Gln Arg His Thr Glu Ser Ser Leu Glu Lys
65 70 75 80

Gln Ile Gly His Pro Asn Leu Pro Ser Glu Lys Lys Glu Leu Arg Lys
85 90 95

Val Ala His Leu Thr Gly Lys Pro Asn Ser Arg Ser Ile Pro Leu Glu
100 105 110

Trp Glu Asp Thr Tyr Gly Ile Ala Leu Val Ser Gly Val Lys
115 120 125

<210> 227
<211> 251
<212> PRT
<213> Sus scrofa

<400> 227
Thr Leu Glu Arg Asp Pro Asp Val Leu Asp Thr Trp Phe Ser Ser Ala
1 5 10 15

Leu Phe Pro Phe Ser Ala Leu Gly Trp Pro Gln Glu Thr Pro Asp Leu
20 25 30

Ala Arg Phe Tyr Pro Leu Ser Leu Leu Glu Thr Gly Ser Asp Leu Leu
35 40 45

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Leu Phe Trp Val Gly Arg Met Val Met Leu Gly Thr Gln Leu Thr Gly
50 55 60

Gln Leu Pro Phe Ser Lys Val Leu Leu His Ser Met Val Arg Asp Arg
65 70 75 80

Gln Gly Arg Lys Met Ser Lys Ser Leu Gly Asn Val Leu Asp Pro Arg
85 90 95

Asp Ile Ile Asn Gly Val Glu Leu Gln Val Leu Gln Glu Lys Leu Arg
100 105 110

Asp Gly Asn Leu Asp Pro Ala Glu Leu Ala Ile Ala Ala Ala Gln
115 120 125

Lys Lys Asp Phe Pro His Gly Ile Pro Glu Cys Gly Thr Asp Ala Leu
130 135 140

Arg Phe Thr Leu Cys Ser His Gly Val Leu Gly Gly Asp Leu His Leu
145 150 155 160

Ser Val Ser Glu Val Leu Ser Phe Arg His Phe Cys Asn Lys Ile Trp
165 170 175

Asn Ala Leu Arg Phe Ile Leu Asn Ala Leu Gly Glu Lys Phe Ile Pro
180 185 190

Gln Pro Leu Glu Glu Leu Cys Pro Thr Ser Pro Met Asp Ala Trp Ile
195 200 205

Leu Ser Cys Leu Ala Arg Thr Ala Gln Glu Cys Glu Arg Gly Phe Leu
210 215 220

Thr Arg Glu Leu Ala Leu Val Thr His Ala Leu His His Phe Trp Leu
225 230 235 240

His Asn Leu Cys Asp Val Tyr Leu Glu Ala Val
245 250

<210> 228

<211> 76

<212> PRT

<213> Sus scrofa

<400> 228

Met Lys Thr Pro Trp Lys Val Leu Leu Gly Leu Leu Gly Ile Ala Ala
1 5 10 15

Leu Val Thr Val Ile Thr Val Pro Val Val Leu Leu Asn Lys Gly Thr
20 25 30

Asp Asp Ala Ala Ala Asp Ser Arg Arg Thr Tyr Thr Leu Thr Asp Tyr
35 40 45

Leu Lys Ser Thr Phe Arg Val Lys Phe Tyr Thr Leu Gln Trp Ile Ser
 50 55 60

Asp His Glu Tyr Leu Tyr Lys Gln Glu Asn Asn Ile
 65 70 75

<210> 229
 <211> 251
 <212> PRT
 <213> Sus scrofa

<400> 229
 Glu Leu Leu Lys Phe Leu Gln Met Asn Gly Tyr Ala Val Thr Arg Gly
 1 5 10 15

Leu Lys Asp Met Glu Leu Asp Thr Ser Ser Ile Glu Lys Arg Phe Ala
 20 25 30

Phe Gly Phe Leu Gln Gln Leu Leu Arg Trp Met Asp Ile Ser Gln Glu
 35 40 45

Phe Ile Ala His Leu Glu Ala Val Val Ser Ser Gly Arg Val Glu Lys
 50 55 60

Ser Pro His Glu Gln Glu Ile Lys Phe Phe Ala Lys Ile Leu Leu Pro
 65 70 75 80

Leu Ile Asn Gln Tyr Phe Thr Asn His Cys Leu Tyr Phe Leu Ser Thr
 85 90 95

Pro Ala Lys Val Leu Gly Ser Gly Gly His Ala Ser Asn Lys Glu Lys
 100 105 110

Glu Met Ile Thr Ser Leu Phe Cys Lys Leu Ala Ala Leu Val Arg His
 115 120 125

Arg Val Ser Leu Phe Gly Thr Asp Ala Pro Ala Val Val Asn Cys Leu
 130 135 140

His Ile Leu Ala Arg Ser Leu Asp Ala Arg Thr Val Met Lys Ser Gly
 145 150 155 160

Pro Glu Ile Val Lys Ala Gly Leu Arg Ser Phe Phe Glu Ser Ala Ser
 165 170 175

Glu Asp Ile Glu Lys Met Val Glu Asn Leu Arg Leu Gly Lys Val Ser
 180 185 190

Gln Ala Arg Thr Gln Val Lys Gly Val Gly Gln Asn Leu Thr Tyr Thr
 195 200 205

Thr Val Ala Leu Leu Pro Val Leu Thr Thr Leu Phe Gln His Ile Ala
 210 215 220

Gln His Gln Phe Gly Asp Asp Val Ile Leu Asp Asp Val Gln Val Ser
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Val Thr Asp Asp Val Lys Asp Val Thr Lys Leu Val Ala Asn Leu Pro
35 40 45

Lys Asp Tyr Lys Ile Thr Leu Lys Tyr Val Pro Gly Met Asp Val Leu
50 55 60

Pro Ser His Cys Trp Ile Ser Glu Met Val Glu Gln Leu Ser Val Ser
65 70 75 80

Leu Thr Asp Leu Leu Asp Lys Phe Ser Asn Ile Ser Glu Gly Leu Ser
85 90 95

Asn Tyr Ser Ile Ile
100

<210> 232
<211> 126
<212> PRT
<213> Sus scrofa

<400> 232
Lys Val Gly Asn Lys Ser Cys Glu Asn Ile His Ser His Ser Glu Ala
1 5 10 15

Val Leu Cys Thr Val Pro Asn Asp Leu Leu Lys Leu Asn Ser Glu Leu
20 25 30

Asn Ile Glu Trp Lys Gln Ala Ile Ser Ser Thr Val Leu Gly Lys Val
35 40 45

Ile Val Gln Pro Asp Gln Asn Phe Thr Gly Leu Ile Val Gly Val Val
50 55 60

Ser Ile Ser Ile Ile Leu Leu Leu Leu Leu Gly Leu Phe Leu Trp Leu
65 70 75 80

Lys Lys Arg Lys Gln Ile Lys Asp Leu Gly Ser Glu Leu Val Arg Tyr
85 90 95

Asp Ala Arg Val His Thr Pro His Leu Asp Arg Leu Val Ser Ala Arg
100 105 110

Ser Val Ser Pro Thr Thr Glu Met Val Ser Ser Glu Pro Val
115 120 125

<210> 233
<211> 76
<212> PRT
<213> Sus scrofa

<400> 233
Leu Trp Leu Val Ser Asp Tyr His Glu His Gly Ser Leu Phe Asp Tyr
1 5 10 15

Leu Asn Arg Tyr Thr Val Thr Val Glu Gly Met Ile Lys Leu Ala Leu
20 25 30

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Ser Thr Ala Ser Gly Leu Ala His Leu His Met Glu Ile Val Gly Thr
35 40 45

Gln Gly Lys Pro Ala Ile Ala His Arg Asp Leu Lys Ser Lys Asn Ile
50 55 60

Leu Val Lys Lys Asn Gly Thr Cys Cys Ile Ala Asp
65 70 75

<210> 234
<211> 126
<212> PRT
<213> Sus scrofa

<400> 234
Ser Asp Thr Phe Ser His Leu Ser Arg Leu Glu Gly Leu Val Leu Lys
1 5 10 15

Asp Ser Ser Leu Tyr Asn Leu Asp Thr Arg Trp Phe Arg Gly Leu Asp
20 25 30

Arg Leu Gln Val Leu Asp Leu Ser Glu Asn Phe Leu Tyr Asp Cys Ile
35 40 45

Thr Lys Thr Thr Ala Phe Gln Gly Leu Ala Arg Leu Arg Ser Leu Asn
50 55 60

Leu Ser Phe Asn Tyr His Lys Lys Val Ser Phe Ala His Leu His Leu
65 70 75 80

Ala Pro Ser Phe Gly His Leu Arg Ser Leu Lys Glu Leu Asp Met His
85 90 95

Gly Ile Phe Phe Arg Ser Leu Ser Glu Thr Thr Leu Gln Pro Leu Val
100 105 110

Gln Leu Pro Met Leu Gln Thr Leu Arg Leu Gln Met Asn Phe
115 120 125

<210> 235
<211> 226
<212> PRT
<213> Solanum tuberosum

<400> 235
Glu Val Pro Lys Leu Gly Lys Glu Ala Ala Gln Lys Ala Ile Lys Glu
1 5 10 15

Trp Gly Gln Pro Lys Ser Lys Ile Thr His Val Val Phe Cys Thr Thr
20 25 30

Ser Gly Val Asp Met Pro Gly Ala Asp Tyr Gln Leu Thr Lys Leu Leu
35 40 45

Gly Leu Arg Pro Ser Val Lys Arg Leu Met Met Tyr Gln Gln Gly Cys
50 55 60

Phe Ala Gly Gly Thr Val Ile Arg Leu Ala Lys Asp Leu Ala Glu Asn
65 70 75 80

Asn Lys Gly Ala Arg Val Leu Val Val Cys Ser Glu Ile Thr Ala Val
85 90 95

Thr Phe Ser Gly Pro Ser Asp Thr His Leu Asp Ser Met Val Gly Gln
100 105 110

Ala Leu Phe Gly Asp Gly Ala Ala Ala Met Ile Ile Gly Ser Asp Pro
115 120 125

Leu Pro Glu Val Glu Arg Pro Leu Phe Glu Leu Val Ser Ala Ala Gln
130 135 140

Thr Leu Leu Pro Asp Ser Glu Gly Ala Ile Asp Gly His Leu Arg Glu
145 150 155 160

Val Gly Leu Thr Phe His Leu Leu Lys Asp Val Pro Gly Leu Ile Ser
165 170 175

Lys Asn Ile Glu Lys Ser Leu Ile Glu Ala Phe Gln Pro Leu Gly Ile
180 185 190

Ser Asp Trp Asn Ser Ile Phe Trp Ile Ala His Pro Gly Gly Pro Ala
195 200 205

Ile Leu Asp Gln Val Glu Leu Lys Leu Gly Leu Lys Pro Glu Lys Leu
210 215 220

Gln Ala
225

<210> 236
<211> 151
<212> PRT
<213> Sus scrofa

<400> 236
Glu Leu Leu Lys Phe Leu Gln Met Asn Gly Tyr Ala Val Thr Arg Gly
1 5 10 15

Leu Lys Asp Met Glu Leu Asp Thr Ser Ser Ile Glu Lys Arg Phe Ala
20 25 30

Phe Gly Phe Leu Gln Gln Leu Leu Arg Trp Met Asp Ile Ser Gln Glu
35 40 45

Phe Ile Ala His Leu Glu Ala Val Val Ser Ser Gly Arg Val Glu Lys
50 55 60

Ser Pro His Glu Gln Glu Ile Lys Phe Phe Ala Lys Ile Leu Leu Pro
65 70 75 80

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Leu Ile Asn Gln Tyr Phe Thr Asn His Cys Leu Tyr Phe Leu Ser Thr
85 90 95

Pro Ala Lys Val Leu Gly Ser Gly Gly His Ala Ser Asn Lys Glu Lys
100 105 110

Glu Met Ile Thr Ser Leu Phe Cys Lys Leu Ala Ala Leu Val Arg His
115 120 125

Arg Val Ser Leu Phe Gly Thr Asp Ala Pro Ala Val Val Asn Cys Leu
130 135 140

His Ile Leu Ala Arg Ser Leu
145 150

<210> 237
<211> 76
<212> PRT
<213> Sus scrofa

<400> 237
Ile Val Pro Pro Ala Ser Thr Trp Val Phe Pro Thr Leu Gly Ile Met
1 5 10 15

His Tyr Asn Lys Gln Ala Thr Glu Asn Ala Lys Asp Glu Val Arg Arg
20 25 30

Val Leu Gly Leu Leu Asp Ala His Leu Lys Thr Arg Thr Phe Leu Val
35 40 45

Gly Glu Arg Val Thr Leu Ala Asp Ile Thr Val Val Cys Thr Leu Leu
50 55 60

Trp Leu Tyr Lys Gln Val Leu Glu Pro Ser Phe Arg
65 70 75

<210> 238
<211> 276
<212> PRT
<213> Malus domestica

<400> 238
Ala Glu Gln Arg Leu Met Val Glu Thr Ile Leu Arg Ser Ser Asn Leu
1 5 10 15

Leu Ala Thr Leu Ile Asn Asp Val Leu Asp Leu Ser Arg Leu Glu Asp
20 25 30

Gly Ser Leu Gln Leu Glu Ile Ala Thr Phe Asn Leu His Ser Val Phe
35 40 45

Arg Glu Val His Asn Met Ile Lys Pro Val Ala Ser Ile Lys Arg Leu
50 55 60

Ser Val Thr Leu Asn Ile Ala Ala Asp Leu Pro Met Tyr Ala Ile Gly
65 70 75 80

Asp Glu Lys Arg Leu Met Gln Thr Ile Leu Asn Val Val Gly Asn Ala
 85 90 95
 Val Lys Phe Ser Lys Glu Gly Ser Ile Ser Ile Thr Ala Phe Val Ala
 100 105 110
 Lys Ser Glu Ser Leu Arg Asp Phe Arg Ala Pro Asp Phe Phe Pro Val
 115 120 125
 Gln Ser Asp Asn His Phe Tyr Leu Arg Val Gln Val Lys Asp Ser Gly
 130 135 140
 Ser Gly Ile Asn Pro Gln Asp Ile Pro Lys Leu Phe Thr Lys Phe Ala
 145 150 155 160
 Gln Thr Gln Ala Leu Ala Thr Arg Asn Ser Gly Gly Ser Gly Leu Gly
 165 170 175
 Leu Ala Ile Cys Lys Arg Phe Val Asn Leu Met Glu Gly His Ile Trp
 180 185 190
 Ile Glu Ser Glu Gly Leu Gly Lys Gly Cys Thr Ala Thr Phe Ile Val
 195 200 205
 Lys Leu Gly Phe Pro Glu Arg Ser Asn Glu Ser Lys Leu Pro Phe Ala
 210 215 220
 Pro Lys Leu Gln Ala Asn His Val Gln Thr Asn Phe Pro Gly Leu Lys
 225 230 235 240
 Val Leu Val Met Asp Asp Asn Gly Val Ser Arg Ser Val Thr Lys Gly
 245 250 255
 Leu Leu Ala His Leu Gly Cys Asp Val Thr Ala Val Ser Leu Ile Asp
 260 265 270
 Glu Leu Leu His
 275
 <210> 239
 <211> 126
 <212> PRT
 <213> Sus scrofa
 <400> 239
 Met Val Arg Ala Lys Ser Trp Thr Leu Lys Lys His Phe Val Gly Tyr
 1 5 10 15
 Pro Thr Pro Ser Asn Phe Glu Leu Lys Thr Val Glu Leu Pro Pro Leu
 20 25 30
 Lys Asn Gly Glu Val Leu Leu Glu Ala Leu Phe Leu Thr Val Asp Pro
 35 40 45

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Tyr Met Arg Ile Ala Ala Arg Lys Leu Lys Glu Gly Asp Met Met Met
50 55 60

Gly Glu Gln Val Ala Arg Val Ile Glu Ser Lys Asn Ala Ala Phe Pro
65 70 75 80

Thr Gly Thr Ile Val Val Ala Leu Leu Gly Trp Thr Thr His Ser Ile
85 90 95

Ser Asp Gly Lys Asn Leu Glu Arg Leu Leu Ala Glu Trp Pro Asp Thr
100 105 110

Leu Pro Leu Ser Leu Thr Leu Gly Thr Val Gly Met Pro Gly
115 120 125

<210> 240
<211> 201
<212> PRT
<213> Sus scrofa

<400> 240
Ile Val Glu Leu Lys His Glu Ile His Val Trp Arg Leu Thr Ala Gln
1 5 10 15

Arg Ile Ser Pro Ala Ser Arg Glu Glu Thr Ala Val Arg Gly Leu Leu
20 25 30

Leu Glu Lys Val Leu Ser Leu Glu Arg Leu Leu Ala Arg Arg Leu His
35 40 45

Ser Phe His Arg Gln Ile Ser Gln Glu Asp Lys Asn Trp Glu Thr Asn
50 55 60

Ile Gln Glu Leu Gln Lys Lys His Arg Ile Ser Asp Arg Thr Leu Leu
65 70 75 80

Thr Lys Cys Val Thr Val Leu Gly Leu Val Ile Phe Met Phe Phe Leu
85 90 95

Asn Ser Phe Val Pro Gly Val His Leu Asp Leu Gly Trp Ile Ala Ile
100 105 110

Leu Gly Ala Ile Trp Leu Leu Ile Leu Ala Asp Ile His Asp Phe Glu
115 120 125

Ile Ile Leu His Arg Val Glu Trp Ala Thr Leu Leu Phe Phe Ala Ala
130 135 140

Leu Phe Ile Leu Met Glu Ala Leu Ala His Leu His Leu Ile Glu Tyr
145 150 155 160

Val Gly Glu Gln Thr Ala Leu Leu Ile Lys Met Val Pro Glu Asp Gln
165 170 175

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Arg Leu Ala Ala Ala Ile Ile Val Val Val Trp Val Ser Ala Ile Ala
180 185 190

Ser Ser Leu Ile Asp Asn Ile Pro Phe
195 200

<210> 241
<211> 76
<212> PRT
<213> Sus scrofa

<400> 241
Met Arg Ile Leu Lys Pro Cys Leu Arg Ser Thr Cys Ile Gln Cys Tyr
1 5 10 15

Leu Cys Leu Leu Leu Asn Ser His Phe Leu Thr Glu Asp Gly Ile His
20 25 30

Val Phe Ile Leu Gly Cys Ile Ser Ala Gly Leu Pro Lys Thr Glu Ala
35 40 45

Thr Trp Gln His Val Ile Ser Asp Leu Lys Lys Ile Glu Asp Leu Ile
50 55 60

Arg Ser Ile His Met Asp Ala Thr Leu Tyr Thr Glu
65 70 75

<210> 242
<211> 76
<212> PRT
<213> Salmo salar

<400> 242
Leu Leu His Leu Ala Ala Lys Ser Phe Ser His Ser Phe Ser Ala Leu
1 5 10 15

Ala Lys Phe His Glu Ile Leu Lys Ala Leu Thr Asp Cys Asp Glu Gly
20 25 30

Lys Leu His Ile Leu Arg Val Val Tyr Glu Val Trp Lys Asn His Pro
35 40 45

Gln Met Val Ser Val Leu Val Asp Lys Leu Ile Arg Thr Gln Ile Val
50 55 60

Asp Cys Ala Ala Val Ala Asn Trp Leu Phe Ser Pro
65 70 75

<210> 243
<211> 76
<212> PRT
<213> Sus scrofa

<400> 243
Asp Arg Tyr Leu Leu Lys Asn Gly His Arg Ile Ile Leu Leu Ala Glu
1 5 10 15

Gly Arg Leu Val Asn Leu Gly Cys Ala Met Gly His Pro Ser Phe Val
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20

25

30

Met Ser Asn Ser Phe Thr Asn Gln Val Leu Ala Gln Ile Glu Leu Trp
35 40 45

Thr His Pro Asp Lys Tyr Pro Val Gly Val His Phe Leu Pro Lys Lys
50 55 60

Leu Asp Glu Ala Val Ala Glu Ala His Leu Gly Lys
65 70 75

<210> 244
<211> 126
<212> PRT
<213> Sus scrofa

<400> 244
Met Ser His Gly Lys Met Pro Leu Val Leu Ser Leu Val Leu Ile Leu
1 5 10 15

Cys Gly Leu Phe Asn Ser Ile Ser Cys Glu Lys Gln Gln Thr Ser Pro
20 25 30

Lys Thr Ile Thr Pro Val Ser Phe Lys Arg Ile Ala Ala Leu Ser Gln
35 40 45

Lys Met Glu Ala Asn Tyr Lys Ala Phe Ala Gln Glu Leu Phe Lys Thr
50 55 60

Leu Leu Ile Glu Asp Pro Arg Lys Asn Met Ile Phe Ser Pro Val Ser
65 70 75 80

Ile Ser Ile Ser Leu Ala Thr Leu Ser Leu Gly Leu Arg Ser Ala Thr
85 90 95

Arg Thr Asn Ala Ile Asp Val Leu Glu Arg Asp Leu Arg Asn Leu Arg
100 105 110

Val Trp Asp Lys His Gln Ala Leu Gln His Leu Val Glu Met
115 120 125

<210> 245
<211> 76
<212> PRT
<213> Meleagris gallopavo

<400> 245
Val Tyr Leu Phe Val Val Asn His Pro His Gln Lys Ser Thr Val Glu
1 5 10 15

Leu Phe Lys Phe Met Glu Glu Asp Asn Ser Leu Leu His Leu Lys Thr
20 25 30

Ile Arg His Asp Leu Leu Thr Ser Val Asn Asp Val Val Ala Val Gly
35 40 45

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Pro Asp Ser Phe Tyr Ala Thr Asn Asp His Tyr Phe Tyr Asp Phe Ile
50 55 60

Leu Met Phe Leu Glu Met Tyr Leu Gly Leu Thr Trp
65 70 75

<210> 246
<211> 76
<212> PRT
<213> Sus scrofa

<400> 246
Lys Glu Asn Tyr Ser Arg Asn Ser Ile Thr Asn Leu Leu Asp Ile Met
1 5 10 15

Ile Gln Ala Lys Thr Asn Ala Glu Ser Asn Thr Gly Gly Pro Asp His
20 25 30

Asn Leu Lys Leu Leu Ser Asp Arg His Met Leu Ala Thr Val Ala Asp
35 40 45

Ile Phe Gly Ala Gly Val Glu Thr Ser Ala Ser Val Val Lys Trp Ile
50 55 60

Val Ala Phe Leu Leu His Tyr Pro Leu Leu Arg Lys
65 70 75

<210> 247
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 247
Gly His Asn Val Ile Trp Gly Leu His Asp Ala Leu Lys Val His Asn
1 5 10 15

Pro Lys Asn Ile Leu Leu Gly Phe Leu Gly Gly Ser Glu Gly Leu Phe
20 25 30

Ala Gln Lys Thr Leu Glu Ile Thr Asp Asp Val Leu Ala Thr Tyr Lys
35 40 45

Asn Gln Gly Gly Tyr Asp Met Leu Gly Arg Thr Lys Asp Gln Ile Arg
50 55 60

Thr Thr Glu Gln Val Asn Ala Ala Met Ala Ala Cys Lys Ala Leu Lys
65 70 75 80

Leu Asp Gly Leu Val Ile Ile Gly Gly Val Thr Ser Asn Thr Asp Ala
85 90 95

Ala His Leu Ala Glu
100

<210> 248
<211> 201
<212> PRT

<213> Solanum tuberosum

<400> 248

Glu Val Pro Lys Leu Gly Lys Glu Ala Ala Gln Lys Ala Ile Lys Glu
1 5 10 15

Trp Gly Gln Pro Lys Ser Lys Ile Thr His Leu Val Phe Cys Thr Thr
20 25 30

Ser Gly Val Asp Met Pro Gly Cys Asp Tyr Gln Leu Ala Lys Leu Leu
35 40 45

Gly Leu Arg Pro Ser Val Lys Arg Leu Met Met Tyr Gln Gln Gly Cys
50 55 60

Phe Ala Gly Gly Thr Val Leu Arg Leu Ala Lys Asp Leu Ala Glu Asn
65 70 75 80

Asn Lys Gly Ala Arg Val Leu Val Val Cys Ser Glu Ile Thr Ala Val
85 90 95

Thr Phe Arg Gly Pro Ser Glu Ser His Leu Asp Ser Leu Val Gly Gln
100 105 110

Ala Leu Phe Gly Asp Gly Ala Ala Ala Ile Ile Met Gly Ser Asp Pro
115 120 125

Ile Ile Gly Val Glu Arg Pro Leu Phe Glu Leu Val Ser Ala Ala Gln
130 135 140

Thr Leu Val Pro Asp Ser Glu Gly Ala Ile Asp Gly His Leu Arg Glu
145 150 155 160

Val Gly Leu Thr Phe His Leu Leu Lys Asp Val Pro Gly Leu Ile Ser
165 170 175

Lys Asn Ile Glu Lys Ser Leu Leu Glu Ala Phe Gln Pro Leu Gly Ile
180 185 190

Ser Asp Trp Asn Ser Leu Phe Trp Ile
195 200

<210> 249

<211> 101

<212> PRT

<213> Sus scrofa

<400> 249

Thr Leu Glu Arg Asp Pro Asp Val Leu Asp Thr Trp Phe Ser Ser Ala
1 5 10 15

Leu Phe Pro Phe Ser Ala Leu Gly Trp Pro Gln Glu Thr Pro Asp Leu
20 25 30

Ala Arg Phe Tyr Pro Leu Ser Leu Leu Glu Thr Gly Ser Asp Leu Leu
35 40 45

Leu Phe Trp Val Gly Arg Met Val Met Leu Gly Thr Gln Leu Thr Gly
50 55 60

Gln Leu Pro Phe Ser Lys Val Leu Leu His Ser Met Val Arg Asp Arg
65 70 75 80

Gln Gly Arg Lys Met Ser Lys Ser Leu Gly Asn Val Leu Asp Pro Arg
85 90 95

Asp Ile Ile Asn Gly
100

<210> 250
<211> 76
<212> PRT
<213> Sus scrofa

<400> 250
Thr Leu Asp Ile Leu Ser Asp Asn Gln Lys Gly Ile Ala Phe Ala Asp
1 5 10 15

His Gly Thr Ser Trp Gln Leu His Arg Lys Leu Ala Leu Ser Thr Phe
20 25 30

Ser Leu Phe Lys Gly Gly Asn Leu Lys Leu Glu Asn Ile Ile Asn Gln
35 40 45

Glu Ile Lys Val Leu Cys Asp Phe Leu Ala Thr Arg Asn Gly Glu Ser
50 55 60

Ile Asp Leu Ala Gln Pro Leu Ser Leu Ala Met Thr
65 70 75

<210> 251
<211> 76
<212> PRT
<213> Sus scrofa

<400> 251
Ala Ile Gly Leu Ser Val Thr Asp Leu Val Gly Ser Ile Leu Lys Asn
1 5 10 15

Leu Arg Arg Val His Pro Val Ser Thr Met Val Lys Gly Leu Tyr Gly
20 25 30

Ile Lys Glu Glu Ile Phe Leu Ser Ile Pro Cys Val Leu Gly Arg Asn
35 40 45

Gly Val Ser Asp Ile Val Lys Val Asn Leu Asn Ala Glu Glu Glu Ala
50 55 60

Leu Phe Lys Lys Ser Ala Asn Thr Leu Trp Asn Val
65 70 75

<210> 252

<211> 276

<212> PRT

<213> Sus scrofa

<400> 252

Met Gln Arg Ser Pro Leu Glu Lys Ala Ser Ile Phe Ser Lys Leu Phe
 1 5 10 15

Phe Ser Trp Thr Arg Pro Ile Leu Arg Lys Gly Tyr Arg Gln Arg Leu
 20 25 30

Glu Leu Ser Asp Ile Tyr His Ile Ser Ser Ser Asp Ser Ala Asp Asn
 35 40 45

Leu Ser Glu Lys Leu Glu Arg Glu Trp Asp Arg Glu Leu Ala Ser Lys
 50 55 60

Lys Asn Pro Lys Leu Ile Asn Ala Leu Arg Arg Cys Phe Phe Trp Arg
 65 70 75 80

Phe Met Phe Tyr Gly Ile Ile Leu Tyr Leu Gly Glu Val Thr Lys Ala
 85 90 95

Val Gln Pro Leu Leu Leu Gly Arg Ile Ile Ala Ser Tyr Asp Pro Asp
 100 105 110

Asn Lys Ala Glu Arg Ser Ile Ala Ile Tyr Leu Gly Val Gly Leu Cys
 115 120 125

Leu Leu Phe Ile Val Arg Thr Leu Leu Leu His Pro Ala Ile Phe Gly
 130 135 140

Pro His His Ile Gly Met Gln Met Arg Ile Ala Met Phe Ser Leu Ile
 145 150 155 160

Tyr Lys Lys Thr Leu Lys Leu Ser Ser Arg Val Leu Asp Lys Ile Ser
 165 170 175

Ile Gly Gln Leu Val Ser Leu Leu Ser Asn Asn Leu Asn Lys Phe Asp
 180 185 190

Glu Gly Leu Ala Leu Ala His Phe Val Trp Ile Ala Pro Leu Gln Val
 195 200 205

Thr Leu Leu Met Gly Leu Leu Trp Glu Leu Leu Gln Ala Ser Ala Phe
 210 215 220

Cys Gly Leu Ala Phe Leu Val Val Leu Ala Leu Phe Gln Ala Gly Leu
 225 230 235 240

Gly Lys Met Met Met Lys Tyr Arg Asp Gln Arg Ala Gly Lys Ile Asn
 245 250 255

Glu Arg Leu Val Ile Thr Ser Glu Met Ile Glu Asn Ile Gln Ser Val
 260 265 270

Lys Ala Tyr Cys
275

<210> 253
<211> 176
<212> PRT
<213> Sus scrofa

<400> 253
Leu Trp Asp Arg Thr Phe Ser Leu Phe Gln Gln Leu Ile Gln Ser Ser
1 5 10 15

Phe Val Val Glu Arg Gln Pro Cys Met Pro Thr His Pro Gln Arg Pro
20 25 30

Leu Val Leu Lys Thr Gly Val Gln Phe Thr Val Lys Leu Arg Leu Leu
35 40 45

Val Lys Leu Gln Lys Leu Asn Tyr Asn Leu Lys Val Lys Val Leu Phe
50 55 60

Asp Lys Asp Val Ser Glu Arg Asn Thr Val Lys Gly Phe Arg Lys Phe
65 70 75 80

Asn Ile Leu Gly Thr His Thr Lys Val Met Asn Met Glu Glu Ser Thr
85 90 95

Asn Gly Ser Leu Ala Ala Glu Phe Arg His Leu Gln Leu Lys Glu Gln
100 105 110

Lys Asn Ala Gly Ala Arg Thr Asn Glu Gly Pro Leu Ile Val Thr Glu
115 120 125

Glu Leu His Ser Leu Ser Phe Glu Thr Gln Leu Cys Gln Pro Gly Leu
130 135 140

Val Ile Asp Leu Glu Thr Thr Ser Leu Pro Val Val Val Ile Ser Asn
145 150 155 160

Val Ser Gln Leu Pro Ser Gly Trp Ala Ser Ile Leu Trp Tyr Asn Met
165 170 175

<210> 254
<211> 276
<212> PRT
<213> Sus scrofa

<400> 254
Leu Trp Asp Arg Thr Phe Ser Leu Phe Gln Gln Leu Ile Gln Ser Ser
1 5 10 15

Phe Val Val Glu Arg Gln Pro Cys Met Pro Thr His Pro Gln Arg Pro
20 25 30

Leu Val Leu Lys Thr Gly Val Gln Phe Thr Val Lys Leu Arg Leu Leu

35

40

45

Val Lys Leu Gln Lys Leu Asn Tyr Asn Leu Lys Val Lys Val Leu Phe
 50 55 60

Asp Lys Asp Val Ser Glu Arg Asn Thr Val Lys Gly Phe Arg Lys Phe
 65 70 75 80

Asn Ile Leu Gly Thr His Thr Lys Val Met Asn Met Glu Glu Ser Thr
 85 90 95

Asn Gly Ser Leu Ala Ala Glu Phe Arg His Leu Gln Leu Lys Glu Gln
 100 105 110

Lys Asn Ala Gly Ala Arg Thr Asn Glu Gly Pro Leu Ile Val Thr Glu
 115 120 125

Glu Leu His Ser Leu Ser Phe Glu Thr Gln Leu Cys Gln Pro Gly Leu
 130 135 140

Val Ile Asp Leu Glu Thr Thr Ser Leu Pro Val Val Val Ile Ser Asn
 145 150 155 160

Val Ser Gln Leu Pro Ser Gly Trp Ala Ser Ile Leu Trp Tyr Asn Met
 165 170 175

Leu Val Ala Glu Pro Arg Asn Leu Ser Phe Phe Leu Asn Pro Pro Cys
 180 185 190

Ala Arg Trp Ser Gln Leu Ser Glu Val Leu Ser Trp Gln Phe Ser Ser
 195 200 205

Val Thr Lys Arg Gly Leu Asn Val Asp Gln Leu Asn Met Leu Gly Glu
 210 215 220

Lys Leu Leu Gly Pro Thr Ala Gly Pro Asp Gly Leu Ile Pro Trp Thr
 225 230 235 240

Arg Phe Cys Lys Glu Asn Ile Asn Asp Lys Asn Phe Pro Phe Trp Leu
 245 250 255

Trp Ile Glu Ser Ile Leu Glu Leu Ile Lys Lys His Leu Leu Ser Leu
 260 265 270

Trp Asn Asp Gly
 275

<210> 255

<211> 126

<212> PRT

<213> Sus scrofa

<400> 255

Pro Ala Lys Gly Arg Pro Asp Gln Pro Ala Pro Phe Ser Leu Leu Cys
 1 5 10 15

Arg Met Ala Asp Gln Thr Phe Ile Ser Ile Val Asp Trp Ala Arg Arg
20 25 30

Cys Met Val Phe Lys Glu Leu Glu Val Ala Asp Gln Met Thr Leu Leu
35 40 45

Gln Asn Cys Trp Ser Glu Leu Leu Val Phe Asp His Ile Tyr Arg Gln
50 55 60

Ile Gln His Gly Lys Glu Gly Ser Ile Leu Leu Val Thr Gly Gln Glu
65 70 75 80

Val Glu Leu Thr Thr Val Ala Ala Gln Ala Gly Ser Leu Leu His Gly
85 90 95

Leu Val Leu Arg Ala Gln Glu Leu Val Leu Gln Leu His Ala Leu Gln
100 105 110

Leu Asp Arg Gln Glu Phe Val Cys Leu Lys Phe Leu Ile Leu
115 120 125

<210> 256
<211> 151
<212> PRT
<213> Sus scrofa

<400> 256
Asn Ala Val Leu Glu Asn Ile Ser Phe Ser Ile Ser Pro Gly Gln Arg
1 5 10 15

Val Gly Leu Leu Gly Arg Thr Gly Ser Gly Lys Ser Thr Leu Leu Leu
20 25 30

Ala Phe Leu Arg Leu Leu Asn Thr Glu Gly Glu Ile Gln Val Asp Gly
35 40 45

Val Ser Trp Asp Ser Ile Thr Leu Gln Gln Trp Arg Lys Ala Phe Gly
50 55 60

Val Ile Pro Gln Lys Val Phe Ile Phe Ser Gly Thr Phe Arg Lys Asn
65 70 75 80

Leu Asp Pro Tyr Gly Gln Trp Asn Asp Gln Glu Ile Trp Lys Val Ala
85 90 95

Glu Glu Val Gly Leu Arg Ser Val Ile Glu Gln Phe Pro Gly Lys Leu
100 105 110

Asp Phe Val Leu Val Asp Gly Gly Cys Val Leu Ser His Gly His Lys
115 120 125

Gln Leu Met Cys Leu Ala Arg Ser Val Leu Gly Lys Ala Lys Ile Leu
130 135 140

Leu Leu Asp Glu Pro Ser Ala
145 150

<210> 257
<211> 176
<212> PRT
<213> Capra hircus

<400> 257
Met Trp Val Leu Leu Gly Val Phe Leu Leu Thr Leu Ala Tyr Leu Phe
1 5 10 15

Trp Pro Lys Thr Lys His Ser Ala Ala Lys Tyr Pro Arg Ser Leu Pro
20 25 30

Ser Leu Pro Leu Val Gly Ser Leu Leu Phe Leu Pro Arg Arg Gly Gln
35 40 45

Gln His Glu Asn Phe Phe Lys Leu Gln Glu Lys Tyr Gly Pro Ile Tyr
50 55 60

Ser Phe Arg Leu Gly Ser Lys Thr Thr Val Met Ile Gly His His Gln
65 70 75 80

Leu Ala Arg Glu Val Leu Leu Lys Lys Gly Lys Glu Phe Ser Gly Arg
85 90 95

Pro Lys Val Ala Thr Leu Asp Ile Leu Ser Asp Asn Gln Lys Gly Ile
100 105 110

Ala Phe Ala Asp His Gly Ala His Trp Gln Leu His Arg Lys Leu Val
115 120 125

Leu Asn Ala Phe Ala Leu Phe Lys Asp Gly Asn Leu Lys Leu Glu Lys
130 135 140

Ile Ile Asn Gln Glu Ala Asn Val Leu Cys Asp Phe Leu Ala Thr Gln
145 150 155 160

His Gly Gln Ser Ile Asp Leu Ser Glu Pro Leu Ser Leu Ala Val Thr
165 170 175

<210> 258
<211> 251
<212> PRT
<213> Solanum tuberosum

<400> 258
Ser Leu Cys Leu Lys Lys Cys Val Glu Lys Gly Gln Met Tyr Arg Thr
1 5 10 15

Phe Gln Arg Asp Ser Ala Phe Ser Thr Leu Ser Lys Trp Asn Leu Phe
20 25 30

Gln Thr Tyr Met Pro Trp Phe Leu Thr Ser Thr Gly Tyr Lys Tyr Leu
35 40 45

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Asn Leu Ile Phe Leu Asp Thr Phe Ser Asp Leu Leu Pro Ile Leu Ser
50 55 60

Ser Ser Gln Lys Phe Val Ser Ile Phe Pro Asp Ile Met His Gly Ser
65 70 75 80

Gly Ile Ser Trp Arg Ile Leu Gln Lys Lys Leu Cys Leu Pro Gln Trp
85 90 95

Asn Leu Ile Ser Glu Ile Ser Ser Lys Cys Leu His Asn Leu Leu Leu
100 105 110

Ser Glu Glu Met Ile His Arg Asn Asn Glu Ser Pro Leu Ile Ser Thr
115 120 125

His Leu Arg Ser Pro Asn Ala Arg Glu Phe Leu Tyr Ser Ile Leu Phe
130 135 140

Leu Leu Leu Val Ala Gly Tyr Leu Val Arg Thr His Leu Leu Phe Val
145 150 155 160

Ser Arg Ala Ser Ser Glu Leu Gln Thr Glu Phe Glu Lys Val Lys Ser
165 170 175

Leu Met Ile Pro Ser Ser Met Ile Glu Leu Arg Lys Leu Leu Asp Arg
180 185 190

Tyr Pro Thr Ser Glu Pro Asn Ser Phe Trp Leu Lys Asn Leu Phe Leu
195 200 205

Val Ala Leu Glu Gln Leu Gly Asp Ser Leu Glu Glu Ile Arg Gly Ser
210 215 220

Ala Ser Gly Gly Asn Met Leu Gly Pro Ala Tyr Gly Val Lys Ser Ile
225 230 235 240

Arg Ser Lys Lys Lys Asp Trp Asn Ile Asn Leu
245 250

<210> 259
<211> 126
<212> PRT
<213> Sus scrofa

<400> 259
Lys Asn Ile His Leu Thr Leu Gln Val Pro Glu Ile Pro Leu His Leu
1 5 10 15

Ala Tyr Asp Ser Lys Leu Val Phe Leu Gln Glu Ala Pro Lys Ala Val
20 25 30

Ile Thr Glu Leu Pro Pro Ser Thr Thr Lys Asn Gln Leu Phe Leu Trp
35 40 45

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Ala Asn Thr Lys Gly Ser Ile Ile Ser Ala Ala Glu Leu Asp Asn Pro
50 55 60

Gln Ser Ile Leu Leu Arg Leu Asp Gln Ala Pro Thr Ser Pro Ser Arg
65 70 75 80

Cys Thr Leu Glu Pro Arg Lys Asp Met Gly His Thr Leu Glu Trp Lys
85 90 95

Ser His Thr Gln Ala Ser Val Leu Gly Cys His Leu Glu Gly Val Thr
100 105 110

Gly His Lys Glu Ala His Ile Leu Arg Val Leu Pro Gly Ser
115 120 125

<210> 260
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 260
Pro Ser Asp Thr His Leu Asp Ser Met Val Gly Gln Ala Leu Phe Gly
1 5 10 15

Asp Gly Ala Ala Ala Met Ile Ile Gly Ser Asp Pro Leu Pro Glu Val
20 25 30

Glu Arg Pro Leu Phe Glu Leu Val Ser Ala Ala Gln Thr Leu Leu Pro
35 40 45

Asp Ser Glu Gly Ala Ile Asp Gly His Leu Arg Glu Val Gly Leu Thr
50 55 60

Phe His Leu Leu Lys Asp Val Pro Gly Leu Ile Ser Lys Asn Ile Glu
65 70 75 80

Lys Ser Leu Ile Glu Ala Phe Gln Pro Leu Gly Ile Ser Asp Trp Asn
85 90 95

Ser Ile Phe Trp Ile
100

<210> 261
<211> 151
<212> PRT
<213> Solanum tuberosum

<400> 261
Ser Val Arg Trp Leu Gln Val Gln Thr Ser Ser Gly Leu Asp Leu Arg
1 5 10 15

Ser Glu Leu Val Gln Glu Leu Ile Pro Glu Gln Gln Asp Arg Leu Lys
20 25 30

Lys Ile Lys Ser Asp Met Lys Gly Ser Ile Gly Asn Ile Thr Val Asp
35 40 45

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Met Val Leu Gly Gly Met Arg Gly Met Thr Gly Leu Leu Trp Lys Pro
50 55 60

His Tyr Leu Asp Pro Asp Glu Gly Ile Arg Phe Arg Gly Leu Ser Ile
65 70 75 80

Pro Glu Cys Gln Lys Val Leu Pro Ala Ala Lys Pro Gly Gly Glu Pro
85 90 95

Leu Pro Glu Gly Leu Leu Trp Leu Leu Leu Thr Gly Lys Val Pro Ser
100 105 110

Lys Glu Gln Val Asn Ser Ile Val Ser Gly Ile Ala Glu Ser Gly Ile
115 120 125

Ile Ser Leu Ile Ile Met Tyr Thr Thr Ile Asp Ala Leu Pro Val Thr
130 135 140

Ala His Pro Met Thr Gln Phe
145 150

<210> 262
<211> 251
<212> PRT
<213> Sus scrofa

<400> 262
Phe Tyr Ala Ala Leu Ile Asp Leu Leu Gly Arg Cys Ala Pro Glu Met
1 5 10 15

His Leu Ile Gln Ala Gly Lys Gly Glu Ala Leu Arg Ile Arg Ala Ile
20 25 30

Leu Arg Ser Leu Val Pro Leu Asp Asp Leu Val Gly Ile Ile Ser Leu
35 40 45

Pro Leu Gln Ile Pro Thr Leu Gly Lys Asp Gly Ala Leu Val Gln Pro
50 55 60

Lys Met Ser Ala Ser Phe Val Pro Asp His Lys Ala Ser Met Val Leu
65 70 75 80

Phe Leu Asp Arg Val Tyr Gly Ile Glu Asn Gln Asp Phe Leu Leu His
85 90 95

Val Leu Asp Val Gly Phe Leu Pro Asp Met Arg Ala Ala Ala Ser Leu
100 105 110

Asp Thr Ala Thr Phe Ser Thr Thr Glu Met Ala Leu Ala Leu Asn Arg
115 120 125

Tyr Leu Cys Leu Ala Val Leu Pro Leu Ile Thr Lys Cys Ala Pro Leu
130 135 140

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Phe Ala Gly Thr Glu His Arg Ala Ile Met Val Asp Ser Met Leu His
145 150 155 160

Thr Val Tyr Arg Leu Ser Arg Gly Arg Ser Leu Thr Lys Ala Gln Arg
165 170 175

Asp Val Ile Glu Glu Cys Leu Met Ala Leu Cys Arg Tyr Ile Arg Pro
180 185 190

Ser Met Leu Gln His Leu Leu Arg Arg Leu Val Phe Asp Val Pro Ile
195 200 205

Leu Asn Glu Phe Ala Lys Met Pro Leu Lys Leu Leu Thr Asn His Tyr
210 215 220

Glu Arg Cys Trp Lys Tyr Tyr Cys Leu Pro Thr Gly Trp Ala Asn Phe
225 230 235 240

Gly Val Thr Ser Glu Glu Glu Leu His Leu Thr
245 250

<210> 263

<211> 251

<212> PRT

<213> Prunus persica

<400> 263

Glu Tyr Ile Tyr Ala Leu Ala His Asp His Gly Leu Asn Arg Ser Ile
1 5 10 15

Leu Leu Asp Asn Val Gly Tyr Asp Asn Lys Ser Ser Leu Leu Ile Ile
20 25 30

Lys Arg Leu Ile Ser Arg Met Tyr Lys His Asn His Phe Phe Ile Ser
35 40 45

Ala Asn Ala Ser Asn Gln Lys Lys Lys Leu Gly Tyr Asn Lys Asn Leu
50 55 60

Tyr Ser Gln Lys Ile Ser Glu Gly Phe Thr Val Ile Val Glu Ile Ser
65 70 75 80

Phe Ser Leu Arg Leu Val Ser Ser Leu Glu Ala Thr Glu Thr Val Lys
85 90 95

Ser Tyr Asn Leu Arg Ser Ile His Ser Ile Phe Pro Phe Leu Glu Asp
100 105 110

Lys Phe Pro His Leu Asn Tyr Val Ser Asp Val Leu Ile Pro Tyr Pro
115 120 125

Ile His Leu Glu Ile Leu Val Gln Thr Leu Arg Tyr Trp Val Lys Asp
130 135 140

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Ala Ser Ser Leu His Leu Leu Arg Leu Phe Leu His Glu Tyr Tyr Asn
145 150 155 160

Trp Asn Ser Leu Ile Thr Ser Asn Asn Phe Phe Phe Ser Lys Ser Asn
165 170 175

Pro Arg Leu Phe Leu Leu Leu Tyr Asn Ser His Val Cys Glu Tyr Glu
180 185 190

Phe Ile Leu Leu Phe Leu Arg Asn Gln Ser Ser His Leu Gln Leu Thr
195 200 205

Ser Ser Gly Ile Phe Phe Glu Arg Ile His Phe Tyr Glu Lys Ile Lys
210 215 220

Tyr Pro Val Glu Lys Val Phe Ala Asn Asp Phe Pro Ala Ser Ile Leu
225 230 235 240

Trp Phe Phe Lys Asp Pro Phe Met His Tyr Val
245 250

<210> 264
<211> 251
<212> PRT
<213> Sus scrofa

<400> 264
Gly Glu Pro Ser Glu Gln Pro Glu Trp Tyr Val Gly Ala Pro Val Ala
1 5 10 15

Tyr Ile Gln Gln Ile Phe Val Lys Ser Ser Val Ser Pro Trp His Lys
20 25 30

Asn Leu Leu Ala Val Asp Val Phe Arg Ser Pro Leu Ser Arg Ala Phe
35 40 45

Gln Leu Val Glu Glu Ile Arg Asn His Val Leu Arg Asp Ser Ser Gly
50 55 60

Thr Arg Ser Leu Glu Glu Val Cys Leu Gln Val Thr Asp Leu Leu Pro
65 70 75 80

Gly Leu Arg Lys Leu Arg Asn Ile Leu Pro Glu His Gly Cys Leu Leu
85 90 95

Leu Ser Pro Gly Asn Phe Trp Gln Asn Asp Arg Glu Arg Phe His Ala
100 105 110

Asp Pro Asp Ile Ile Gly Thr Ile His Gln His Glu Pro Lys Thr Leu
115 120 125

Gln Thr Ser Ala Thr Leu Lys Asp Leu Leu Phe Gly Val Pro Gly Lys
130 135 140

His Ser Gly Val Ser Leu Tyr Thr Arg Lys Arg Leu Val Ser Tyr Thr
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145 150 155 160
 Ile Thr Leu Val Phe Gln His Tyr His Ala Lys Phe Leu Gly Ser Leu
 165 170 175
 Arg Ala Arg Leu Met Leu Leu His Pro Ser Pro Asn Cys Ser Leu Arg
 180 185 190
 Ala Glu Ser Leu Val His Val His Phe Lys Glu Glu Ile Gly Ile Ala
 195 200 205
 Glu Leu Ile Pro Leu Val Thr Thr Tyr Ile Ile Leu Phe Ala Tyr Ile
 210 215 220
 Tyr Phe Ser Thr Arg Lys Ile Asp Met Val Lys Ser Lys Trp Gly Leu
 225 230 235 240
 Ala Leu Ala Ala Val Val Thr Val Leu Ser Ser
 245 250
 <210> 265
 <211> 151
 <212> PRT
 <213> Sus scrofa
 <400> 265
 Val Leu Ala Thr Tyr Phe Val Phe Met Thr Phe Phe Pro Ala Cys Val
 1 5 10 15
 Ser Leu Val Leu Glu Leu Ser Arg Glu Ser Arg Glu Gly Arg Pro Ile
 20 25 30
 Trp Gln Leu Ser His Phe Ala Arg Val Leu Glu Gly Glu Glu Asn Lys
 35 40 45
 Pro Asn Pro Val Thr Gln Arg Val Lys Ile Ile Met Ser Leu Gly Leu
 50 55 60
 Val Leu Val His Ala His Ser Arg Trp Ile Ala Asp Pro Ser Pro Gln
 65 70 75 80
 Asn Ser Thr Ala Asp Asn Ser Lys Val Ser Leu Gly Leu Asp Glu Asn
 85 90 95
 Val Ser Lys Arg Ile Glu Pro Ser Val Ser Leu Trp Gln Phe Tyr Leu
 100 105 110
 Ser Lys Met Ile Ser Met Asp Ile Glu Gln Val Ile Thr Leu Thr Leu
 115 120 125
 Ala Leu Leu Leu Ala Val Lys Tyr Ile Phe Phe Glu Gln Ala Glu Thr
 130 135 140
 Glu Ser Thr Leu Ser Leu Lys
 145 150

<210> 266
 <211> 176
 <212> PRT
 <213> Solanum tuberosum

<400> 266
 Met Ala Lys Lys Lys Ala Phe Thr Pro Leu Phe Tyr Leu Ala Ser Ile
 1 5 10 15
 Val Phe Leu Pro Trp Trp Ile Ser Phe Ser Val Asn Lys Cys Leu Glu
 20 25 30
 Ser Trp Val Thr Asn Trp Trp Asn Thr Gly Gln Ser Gln Ile Val Leu
 35 40 45
 Asn Asn Ile Gln Glu Lys Ser Leu Leu Glu Lys Phe Arg Glu Leu Glu
 50 55 60
 Glu Leu Leu Phe Leu Asp Glu Met Ile Lys Glu Tyr Ser Glu Thr His
 65 70 75 80
 Leu Glu Glu Phe Gly Ile Gly Ile His Lys Glu Thr Ile Gln Leu Ile
 85 90 95
 Thr Ile Gln Asn Glu Asn Arg Met Asp Thr Ile Leu His Phe Ser Thr
 100 105 110
 Asn Ile Ile Trp Phe Gly Ile Leu Ser Gly Tyr Ser Ile Leu Gly Lys
 115 120 125
 Glu Lys Leu Val Ile Leu Asn Ser Trp Ala Gln Glu Phe Leu Tyr Asn
 130 135 140
 Leu Ser Asp Thr Ala Lys Ala Leu Cys Leu Leu Leu Val Thr Glu Phe
 145 150 155 160
 Phe Leu Gly Tyr His Ser Pro Pro Gly Trp Glu Phe Ala Ile Arg Ser
 165 170 175

<210> 267
 <211> 176
 <212> PRT
 <213> Sus scrofa

<400> 267
 Met Ser Leu Leu Leu Val Ser Leu Leu Ala Phe Leu Thr Leu Gly Ser
 1 5 10 15
 Gly Cys His His Arg Ile Cys His Cys Ser Asn Gly Val Phe Leu Cys
 20 25 30
 Gln Glu Ser Lys Val Thr Glu Ile Pro Pro Asp Leu Pro Arg Asn Ala
 35 40 45
 Val Glu Leu Arg Phe Val Leu Thr Lys Leu Arg Val Ile Pro Lys Gly

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50		55		60	
Ala 65	Phe	Ser	Gly	Phe 70	Gly 75
	Asp	Leu	Glu	Lys	Ile 80
	Glu	Ile	Ser	Gln	Asn
Asp 85	Val	Leu	Glu	Val 90	Phe 95
	Asn	Val	Ser	Asn	Leu
	Pro	Lys			
Leu 100	His	Glu	Ile	Arg	Gly 105
	Asn	Asn	Leu	Leu	Tyr 110
	Ile	Asp			
Pro 115	Asp	Ala	Phe	Gln	Asn
	Leu	Pro	Asn	Leu	Arg
	Tyr	Leu	Leu	Ile	Ser
Asn 130	Thr	Gly	Val	Lys	His
	Leu	Pro	Ala	Val	His
	Lys	Ile	Gln	Ser	Leu
Gln 145	Lys	Val	Leu	Leu	Asp
	Ile	Gln	Asp	Asn	Ile
	Asn	Ile	His	Thr	Val
Glu 165	Arg	Asn	Ser	Phe	Val
	Gly	Leu	Ser	Phe	Glu
	Ser	Met	Ile	Leu	Trp
<210>	268				
<211>	76				
<212>	PRT				
<213>	Meleagris gallopavo				
<400>	268				
Gly 1	Asp	Ile	Ala	Gly 5	Lys
	Leu	Gln	Thr	Gly 10	Arg
	Ser	Arg	Asn	Glu	Gln
Val 20	Val	Thr	Asp	Leu	Lys
	Leu	Leu	Leu	Lys	Ser
	Ser	Ser	Ile	Ser	Val
	Ile				
Ser 35	Thr	His	Leu	Leu	Gln
	Leu	Ile	Lys	Thr	Leu
	Val	Glu	Arg	Ala	Ala
Ile 50	Glu	Ile	Asp	Ile	Ile
	Met	Pro	Gly	Tyr	Thr
	His	Leu	Gln	Lys	Ala
Leu 65	Pro	Ile	Arg	Trp	Ser
	Gln	Phe	Leu	Leu	Ser
	His				
<210>	269				
<211>	251				
<212>	PRT				
<213>	Malus domestica				
<400>	269				
Arg 1	Ser	Ile	His	Ser 5	Ile
	Phe	Pro	Phe	Leu 10	Glu
	Asp	Lys	Phe	Pro	His
Leu 20	Asn	Tyr	Val	Ser	Asp
	Val	Leu	Ile	Pro	Tyr
	Pro	Ile	His	Leu	Glu

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Ile Leu Val Gln Thr Leu Arg Tyr Trp Val Lys Asp Pro Ser Ser Leu
35 40 45

His Leu Leu Arg Leu Phe Leu His Glu Tyr Ser Asn Trp Asn Ser Leu
50 55 60

Ile Thr Pro Lys Lys Ile Ile Phe Ser Lys Ser Asn Pro Arg Leu Phe
65 70 75 80

Leu Leu Leu Tyr Asn Ser His Val Cys Glu Tyr Glu Ser Ile Leu Leu
85 90 95

Phe Leu Arg Asn Gln Ser Ser His Leu Arg Leu Thr Ser Ser Gly Ile
100 105 110

Phe Phe Glu Arg Ile His Phe Tyr Glu Lys Lys Lys Asp Pro Val Glu
115 120 125

Glu Val Phe Val Asn Asp Phe Pro Ala Ala Ile Leu Trp Phe Phe Lys
130 135 140

Asp Pro Phe Met His Tyr Val Arg Tyr Gln Gly Lys Ser Ile Leu Ser
145 150 155 160

Ser Lys Asp Thr Pro Leu Leu Met Asn Lys Trp Lys Tyr Tyr Leu Val
165 170 175

Asn Leu Trp Gln Cys His Ser Tyr Val Trp Ser Gln Pro Gly Arg Ile
180 185 190

Tyr Ile Asn Gln Leu Ser Lys His Ser Leu Asp Phe Leu Gly Tyr Phe
195 200 205

Ser Ser Met Arg Pro Asn Leu Ser Val Val Arg Gly Gln Met Leu Glu
210 215 220

Asn Ser Phe Ile Met Asp Asn Ala Met Lys Lys Leu Asp Thr Leu Val
225 230 235 240

Pro Ile Ile Pro Leu Ile Gly Ser Leu Ala Lys
245 250

<210> 270

<211> 76

<212> PRT

<213> Sus scrofa

<400> 270

Leu Thr Phe Leu Pro Ser Asp Asp Asp Phe Tyr Asp Cys Lys Val Glu
1 5 10 15

His Trp Gly Leu Asp Lys Pro Leu Leu Lys His Trp Glu Pro Glu Ile
20 25 30

Pro Ala Pro Met Ser Glu Leu Thr Glu Thr Val Val Cys Ala Leu Gly

35

Leu Ile Val Gly Leu Val Gly Ile Val Val Gly Thr Val Phe Ile Ile
50 55 60

Gln Gly Leu Arg Ser Gly Gly Pro Ser Arg His Gln
65 70 75

<210> 271
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 271
Glu Pro Phe Gly Leu Thr Leu Ile Glu Ala Ala Ala Tyr Gly Leu Pro
1 5 10 15

Met Val Ala Thr Lys Asn Gly Gly Pro Val Asp Ile His Arg Val Leu
20 25 30

Asp Asn Gly Leu Leu Val Asp Pro His Asp Gln Gln Ala Ile Ala Asp
35 40 45

Ala Leu Leu Lys Leu Val Ala Asp Lys Gln Leu Trp Ala Lys Cys Arg
50 55 60

Ala Asn Gly Leu Lys Asn Ile His Leu Phe Ser Trp
65 70 75

<210> 272
<211> 201
<212> PRT
<213> Sus scrofa

<400> 272
Ala Pro Glu Thr Val His Thr Leu Lys Gly Gly Arg Ala Val Ala Glu
1 5 10 15

Asp Thr Val Ile Ile Leu Val Asp Leu Phe Asn Asp His Tyr Phe Met
20 25 30

Asp Asn Val Thr Ala Pro Asp Tyr Met Lys Asn Val Leu Val Leu Thr
35 40 45

Leu Pro Pro Glu Asn Ser Val Ser Asn Ser Ser Phe Ser Lys Asp Leu
50 55 60

Ser Leu Val Lys Asn Asp Phe Thr Leu Ala Tyr Met Asn Gly Val Leu
65 70 75 80

Leu Phe Gly His Met Leu Lys Ile Phe Leu Glu Lys Arg Glu Asp Val
85 90 95

Thr Thr Ser Lys Phe Ala His Ala Phe Arg Asn Ile Thr Phe Glu Gly
100 105 110

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His Met Gly Pro Val Thr Leu Asp Asn Cys Gly Asp Ile Asp Asn Thr
115 120 125

Met Phe Leu Leu Tyr Thr Ser Val Asp Thr Ser Lys Tyr Lys Val Leu
130 135 140

Leu Thr Tyr Asp Thr Arg Lys Asn Tyr Thr Asn Pro Val Asp Lys Ser
145 150 155 160

Pro Thr Phe Ile Trp Lys Asn His Lys Leu Pro Asn Asp Ile Pro Gly
165 170 175

Arg Gly Pro Gln Ile Leu Met Ile Ala Val Phe Thr Leu Thr Gly Thr
180 185 190

Ile Val Leu Leu Leu Leu Ile Ala Leu
195 200

<210> 273
<211> 276
<212> PRT
<213> Sus scrofa

<400> 273
Val Pro Leu His Asn Leu Ser Leu Asp Leu Ser Leu Asn Pro Leu Asn
1 5 10 15

Phe Ile Glu Pro Gly Ala Phe Asn Lys Ile Arg Leu Asn Gly Leu Thr
20 25 30

Leu Arg Ser Asn Phe Asn Ser Ser Asp Val Met Lys Thr Cys Ile Gln
35 40 45

Gly Leu Ala Gly Ser Lys Val Asn Gln Leu Val Leu Gly Glu Phe Lys
50 55 60

Asn Glu Arg Asn Leu Glu Ser Phe Asp Lys Ser Val Leu Glu Glu Leu
65 70 75 80

Cys Asn Leu Thr Leu Glu Gln Phe Arg Ile Ala His Phe Gly Glu Phe
85 90 95

Pro Asp Asp Val Ser Asp Leu Phe Asn Cys Leu Ala Asn Ala Ser Val
100 105 110

Ile Ser Leu Leu Ser Leu Asn Leu His Gly Leu Glu Ala Leu Pro Asn
115 120 125

Asp Phe Arg Trp Gln His Leu Glu Val Val Asn Cys Lys Leu Gln Gln
130 135 140

Phe Pro Ala Leu Lys Phe Asn Ser Leu Lys Lys Phe Val Phe Lys Asp
145 150 155 160

Asn Lys His Met His Thr Phe Thr Glu Ile Asn Leu Pro Asn Leu Gln

165

170

175

Phe Leu Asp Leu Ser Gly Asn His Leu Ser Phe Lys Gly Cys Cys Ser
 180 185 190

His Asn Glu Phe Gly Thr Thr Lys Leu Lys His Leu Asp Leu Ser Phe
 195 200 205

Asn Glu Ile Ile Thr Met Lys Ser Asn Phe Met Gly Leu Glu Gln Leu
 210 215 220

Glu Tyr Leu Asp Phe Gln His Ser Ser Leu Lys Gln Ala Asn Asp Phe
 225 230 235 240

Ser Ile Phe Leu Ser Leu Arg Asn Leu His Tyr Leu Asp Ile Ser Tyr
 245 250 255

Thr Asn Ile His Val Val Phe Arg Gly Ile Phe Ala Gly Leu Val Ser
 260 265 270

Leu Gln Thr Leu
 275

<210> 274
 <211> 126
 <212> PRT
 <213> Sus scrofa

<400> 274
 Gly Pro Asn Gly Gly Leu Leu Tyr Cys Met Glu Tyr Leu Glu Ala Asn
 1 5 10 15

Leu Asp Trp Leu Arg Ala Lys Leu Asp Pro Leu Arg Gly His Tyr Phe
 20 25 30

Leu Phe Asp Cys Pro Gly Gln Val Glu Leu Cys Thr His His Gly Ala
 35 40 45

Leu Arg Ser Ile Phe Ser Gln Met Thr Gln Trp Asp Leu Arg Leu Thr
 50 55 60

Ala Val His Leu Val Asp Ser His Tyr Cys Thr Asp Pro Ala Lys Phe
 65 70 75 80

Ile Ser Val Leu Cys Thr Ser Leu Ala Thr Met Leu His Val Glu Leu
 85 90 95

Pro His Val Asn Leu Leu Ser Lys Met Asp Leu Ile Glu His Tyr Gly
 100 105 110

Lys Leu Ala Phe Asn Leu Asp Tyr Tyr Thr Glu Val Leu Asp
 115 120 125

<210> 275
 <211> 76

<212> PRT

<213> Sus scrofa

<400> 275

Tyr Leu Thr Phe Leu Pro Ser Asp Asp Asp Phe Tyr Asp Cys Lys Val
 1 5 10 15

Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His Trp Glu Pro Glu
 20 25 30

Ile Pro Ala Pro Met Ser Glu Leu Thr Glu Thr Val Val Cys Ala Leu
 35 40 45

Gly Leu Ile Val Gly Leu Val Gly Ile Val Val Gly Thr Val Phe Ile
 50 55 60

Ile Gln Gly Leu Arg Ser Gly Gly Pro Ser Arg His
 65 70 75

<210> 276

<211> 76

<212> PRT

<213> Sus scrofa

<400> 276

Ile Ile Lys His Ile Ala Lys Lys Asn Gly Lys Ser Leu Pro Ala Ser
 1 5 10 15

Leu Gln Ser Leu Arg Pro Asp Glu Glu Val Gly Glu Lys Leu Lys Pro
 20 25 30

Ser Phe Leu Asp Leu Val Arg Thr Pro Gln Ile Arg Lys His Thr Leu
 35 40 45

Ile Leu Met Tyr Asn Trp Phe Thr Ser Ala Val Leu Tyr Gln Gly Leu
 50 55 60

Val Met His Met Gly Leu Ala Gly Ser Asn Leu Tyr
 65 70 75

<210> 277

<211> 101

<212> PRT

<213> Sus scrofa

<400> 277

Met Gln Leu Lys Pro Met Glu Ile Asn Pro Glu Met Leu Asn Lys Val
 1 5 10 15

Leu Thr Arg Leu Gly Val Ala Gly His Trp Arg Phe Ala Asp Val Leu
 20 25 30

Gly Leu Glu Glu Glu Ser Leu Gly Ser Val Pro Ala Pro Ala Cys Ala
 35 40 45

Leu Leu Leu Leu Phe Pro Leu Thr Ala Gln His Glu Asn Phe Arg Lys
 50 55 60

Lys Gln Ile Glu Glu Leu Lys Gly Gln Glu Val Ser Pro Lys Val Tyr
65 70 75 80

Phe Met Lys Gln Thr Ile Gly Asn Ser Cys Gly Thr Ile Gly Leu Ile
85 90 95

His Ala Val Ala Asn
100

<210> 278

<211> 101

<212> PRT

<213> Capra hircus

<400> 278

Ser Glu Leu Lys Pro Gly Glu Leu Arg Leu Leu Glu Val Asp Asn Arg
1 5 10 15

Val Val Leu Pro Met Glu Met Thr Ile Arg Met Leu Ile Ser Ser Glu
20 25 30

Asp Val Leu His Ser Trp Ala Val Pro Ser Leu Gly Leu Lys Thr Asp
35 40 45

Ala Ile Pro Gly Arg Leu Asn Gln Thr Thr Leu Met Ser Thr Arg Pro
50 55 60

Gly Leu Phe Tyr Gly Gln Cys Ser Glu Ile Cys Gly Ser Asn His Ser
65 70 75 80

Phe Met Pro Ile Val Leu Glu Leu Val Pro Leu Lys Tyr Phe Glu Lys
85 90 95

Trp Ser Ala Ser Met
100

<210> 279

<211> 251

<212> PRT

<213> Capra hircus

<400> 279

Met Pro Arg Ala Leu Trp Thr Ala Trp Val Trp Ala Val Ile Ile Leu
1 5 10 15

Ser Met Glu Gly Ala Ser His Gln Ala Ser Ser Leu Ser Cys Asp Pro
20 25 30

Thr Gly Val Cys Asp Gly His Ser Arg Ser Leu Asn Ser Ile Pro Ser
35 40 45

Gly Leu Thr Asp Gly Val Lys Ser Leu Asp Leu Ser Asn Asn Glu Ile
50 55 60

Thr Tyr Val Ser Asn Arg Asp Leu Gln Arg Cys Val Asn Leu Lys Thr
65 70 75 80

Leu Arg Leu Gly Ala Asn Glu Ile His Thr Val Glu Glu Asp Ser Phe
 85 90 95
 Phe His Leu Arg Asn Leu Glu Tyr Leu Asp Leu Ser Tyr Asn Arg Leu
 100 105 110
 Ser Asn Leu Ser Ser Ser Trp Phe Arg Ser Leu Tyr Ala Leu Lys Phe
 115 120 125
 Leu Asn Leu Leu Gly Asn Val Tyr Lys Thr Leu Gly Glu Thr Ser Leu
 130 135 140
 Phe Ser His Leu Pro Asn Leu Arg Thr Leu Lys Val Gly Asn Ser Asn
 145 150 155 160
 Ser Phe Thr Glu Ile His Glu Lys Asp Phe Thr Gly Leu Ile Phe Leu
 165 170 175
 Glu Glu Leu Glu Ile Ser Ala Gln Asn Leu Gln Ile Tyr Val Pro Lys
 180 185 190
 Ser Leu Lys Ser Ile Gln Asn Ile Ser His Leu Ile Leu His Leu Lys
 195 200 205
 Gln Pro Val Leu Leu Val Asp Ile Leu Val Asp Ile Val Ser Ser Leu
 210 215 220
 Asp Cys Leu Glu Leu Arg Asp Thr Asn Leu His Thr Phe His Phe Ser
 225 230 235 240
 Glu Ala Ser Ile Ser Glu Met Asn Thr Ser Val
 245 250

 <210> 280
 <211> 126
 <212> PRT
 <213> Sus scrofa

 <400> 280
 His Tyr Tyr Val Phe Phe Glu Glu Gln Glu Asp Glu Ile Ile Gly Phe
 1 5 10 15

 Gly Gln Glu Leu Lys Asn Pro Gln Glu Glu Thr Leu Gln Ala Phe Asp
 20 25 30

 Ser His Tyr Asp Tyr Thr Val Cys Gly Gly Ser Glu Asp Met Val Cys
 35 40 45

 Thr Pro Lys Ser Asp Glu Phe Asn Pro Cys Glu Asp Ile Met Gly Tyr
 50 55 60

 Arg Phe Leu Arg Ile Val Val Trp Phe Val Ser Leu Leu Ala Leu Leu
 65 70 75 80

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Gly Asn Val Phe Val Leu Val Ile Leu Leu Thr Ser His Tyr Lys Leu
85 90 95

Thr Val Pro Arg Phe Leu Met Cys Asn Leu Ala Phe Ala Asp Phe Cys
100 105 110

Met Gly Met Tyr Leu Leu Leu Ile Ala Ser Val Asp Leu Tyr
115 120 125

<210> 281
<211> 276
<212> PRT
<213> Sus scrofa

<400> 281
Glu Asp Ser Gly Glu Pro Leu Glu Arg Arg Leu Ser Leu Val Pro Asp
1 5 10 15

Ser Glu His Gly Glu Ala Ile Leu Pro Arg Ser Asn Val Ile Asn Ala
20 25 30

Gly Pro Thr Phe Gln Gly Arg Arg Arg Gln Ser Val Leu Asn Leu Met
35 40 45

Thr Arg Ser Ser Val Asn Gln Gly Gln Ser Ile His Arg Lys Thr Ala
50 55 60

Thr Ser Thr Arg Lys Met Ser Leu Val Pro Gln Ala Asn Leu Thr Glu
65 70 75 80

Ile Asp Ile Tyr Ser Arg Arg Leu Ser Gln Asp Thr Gly Leu Glu Ile
85 90 95

Ser Glu Glu Ile Asn Glu Glu Asp Leu Arg Glu Cys Phe Phe Asp Asp
100 105 110

Val Glu Ser Ile Pro Thr Val Thr Thr Trp Asn Thr Tyr Leu Arg Tyr
115 120 125

Val Thr Val His Lys Ser Leu Ile Phe Val Leu Ile Trp Cys Leu Val
130 135 140

Val Phe Leu Ala Glu Val Ala Ala Cys Leu Val Val Leu Cys Leu Leu
145 150 155 160

Lys Lys Thr Ser Pro Gln Asp Lys Gly Asn Ser Thr Lys Gly Ala Asn
165 170 175

Asn Ser Tyr Ala Val Ile Ile Thr Ser Thr Ser Ala Tyr Tyr Val Phe
180 185 190

Tyr Ile Tyr Val Gly Val Ala Asp Gly Leu Leu Ala Leu Gly Leu Phe
195 200 205

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Arg Gly Leu Pro Leu Val His Thr Leu Ile Thr Val Ser Lys Ile Leu
210 215 220

His Arg Lys Met Leu His Ser Val Leu Gln Ala Pro Met Ser Thr Leu
225 230 235 240

Asn Thr Leu Lys Ala Gly Gly Ile Leu Asn Arg Phe Ser Lys Asp Ile
245 250 255

Ala Val Leu Asp Asp Leu Leu Pro Leu Thr Ile Phe Asp Phe Ile Gln
260 265 270

Leu Leu Leu Ile
275

<210> 282

<211> 76

<212> PRT

<213> Sus scrofa

<400> 282

Arg Ile Glu Lys Ala Asn Asn Leu Leu Tyr Ile Asp Pro Asp Ala Phe
1 5 10 15

Gln Asn Leu Pro Asn Leu Arg Tyr Leu Leu Ile Ser Asn Thr Gly Val
20 25 30

Lys His Leu Pro Ala Val His Lys Ile Gln Ser Leu Gln Lys Val Leu
35 40 45

Leu Asp Ile Gln Asp Asn Ile Asn Ile His Thr Val Glu Arg Asn Ser
50 55 60

Phe Val Gly Leu Ser Phe Glu Ser Met Ile Leu Trp
65 70 75

<210> 283

<211> 76

<212> PRT

<213> Meleagris gallopavo

<400> 283

Val Pro Leu Leu Val Met Ile Phe Val Tyr Val Arg Val Phe Ala Val
1 5 10 15

Ala Thr Arg His Val Gln Leu Ile Gly Lys Asp Lys Val Arg Phe Leu
20 25 30

Gln Glu Asn Pro Ser Leu Ser Ser Arg Gly Gly Arg Trp Arg Arg Pro
35 40 45

Ser Arg Leu Leu Ala Ile Lys Glu His Lys Ala Leu Lys Thr Leu Gly
50 55 60

Ile Ile Met Gly Thr Phe Thr Leu Cys Trp Leu Pro
65 70 75

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<210> 284
 <211> 126
 <212> PRT
 <213> Sus scrofa

<400> 284
 Met Arg Met Leu Leu His Leu Ser Leu Leu Gly Leu Gly Ala Ala Tyr
 1 5 10 15
 Val Ser Ala Ile Ala Val Glu Asn Thr Met Asn Arg Leu Val Ala Glu
 20 25 30
 Thr Leu Thr Leu Leu Ser Ile His Arg Thr Leu Leu Ile Gly Asp Gly
 35 40 45
 Asn Leu Met Ile Ser Thr Pro Val His Thr Asn His Gln Leu Cys Ile
 50 55 60
 Glu Glu Val Phe Gln Gly Ile Asp Thr Leu Lys Asn Gln Thr Ala Arg
 65 70 75 80
 Gly Asp Ala Val Glu Lys Leu Phe Gln Asn Leu Ser Leu Ile Lys Glu
 85 90 95
 Tyr Ile Asp Arg Gln Lys Lys Asn Cys Gly Gly Glu Arg Trp Arg Val
 100 105 110
 Thr Gln Phe Leu Asp Tyr Leu Gln Val Phe Leu Gly Val Ile
 115 120 125

<210> 285
 <211> 76
 <212> PRT
 <213> Solanum tuberosum

<400> 285
 Ala Met Val Val Ile Gln Ile Phe Met Ala Lys Glu Leu Phe Asn
 1 5 10 15
 Leu Leu Arg Arg Ala His Glu Asp Arg His Leu Pro Gly Phe Arg Leu
 20 25 30
 Leu Asn Trp His Phe Phe Phe Thr Ala Met Leu Phe Val Tyr Gly Arg
 35 40 45
 Met Leu Ser Gln Arg Leu Val Asn Thr Val Thr Leu Asp Lys Phe Leu
 50 55 60
 Tyr Lys Leu Val Gly Arg Phe Val Lys Tyr His Met
 65 70 75

<210> 286
 <211> 176
 <212> PRT
 <213> Sus scrofa

<400> 286

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Met Trp Val Leu Leu Val Phe Phe Leu Leu Thr Leu Thr Tyr Leu Phe
1 5 10 15

Trp Pro Lys Thr Lys Gly Ser Gly Ala Lys Tyr Pro Arg Ser Leu Pro
20 25 30

Val Leu Pro Val Val Gly Ser Leu Pro Phe Leu Pro Arg Arg Gly His
35 40 45

Gln His Met Asn Phe Phe Lys Leu Gln Asp Lys Tyr Gly Pro Ile Phe
50 55 60

Ser Phe Arg Leu Gly Ser Lys Thr Thr Val Val Ile Gly Asp His Gln
65 70 75 80

Leu Ala Lys Glu Val Leu Leu Lys Lys Gly Lys Glu Phe Ser Gly Arg
85 90 95

Pro Arg Val Met Thr Leu Asp Ile Leu Ser Asp Asn Gln Lys Gly Ile
100 105 110

Ala Phe Ala Asp His Gly Thr Ser Trp Gln Leu His Arg Lys Leu Ala
115 120 125

Leu Ser Thr Phe Ser Leu Phe Lys Gly Gly Asn Leu Lys Leu Glu Asn
130 135 140

Ile Ile Asn Gln Glu Ile Lys Val Leu Cys Asp Phe Leu Ala Thr Arg
145 150 155 160

Asn Gly Glu Ser Ile Asp Leu Ala Gln Pro Leu Ser Leu Ala Met Thr
165 170 175

<210> 287
<211> 126
<212> PRT
<213> Sus scrofa

<400> 287
Asn Phe Trp Gln Asn Asp Arg Glu Arg Phe His Ala Asp Pro Asp Ile
1 5 10 15

Ile Gly Thr Ile His Gln His Glu Pro Lys Thr Leu Gln Thr Ser Ala
20 25 30

Thr Leu Lys Asp Leu Leu Phe Gly Val Pro Gly Lys His Ser Gly Val
35 40 45

Ser Leu Tyr Thr Arg Lys Arg Leu Val Ser Tyr Thr Ile Thr Leu Val
50 55 60

Phe Gln His Tyr His Ala Lys Phe Leu Gly Ser Leu Arg Ala Arg Leu
65 70 75 80

Met Leu Leu His Pro Ser Pro Asn Cys Ser Leu Arg Ala Glu Ser Leu
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Val His Val His Phe Lys Glu Glu Ile Gly Ile Ala Glu Leu Ile Pro
100 105 110

Leu Val Thr Thr Tyr Ile Ile Leu Phe Ala Tyr Ile Tyr Phe
115 120 125

<210> 288

<211> 101

<212> PRT

<213> Capra hircus

<400> 288

Met Lys Lys Thr Gln Thr Trp Ile Ile Thr Cys Ile Tyr Leu Gln Leu
1 5 10 15

Leu Leu Phe Asn Pro Leu Val His Ser Gln Gly Ile Cys Arg Asn Arg
20 25 30

Val Thr Asp Asp Val Lys Asp Val Thr Lys Leu Val Ala Asn Leu Pro
35 40 45

Lys Asp Tyr Met Ile Thr Leu Lys Tyr Val Pro Gly Met Asp Val Leu
50 55 60

Pro Ser His Cys Trp Ile Ser Glu Met Val Glu Gln Leu Ser Val Ser
65 70 75 80

Leu Thr Asp Leu Leu Asp Lys Phe Ser Asn Ile Ser Glu Gly Leu Ser
85 90 95

Asn Tyr Ser Ile Ile
100

<210> 289

<211> 276

<212> PRT

<213> Sus scrofa

<400> 289

Leu Asp Leu Ser Lys Cys Gln Leu Glu Gln Val Ser Gln Arg Ala Phe
1 5 10 15

His Ser Leu Pro Arg Leu Gln Val Leu Asn Met Ser His Asn Arg Leu
20 25 30

Leu Phe Leu Asp Thr Leu Pro Tyr Lys Pro Leu His Ser Leu Arg Ile
35 40 45

Leu Asp Cys Ser Tyr Asn Leu Ile Val Ala Ser Lys Glu Gln Glu Leu
50 55 60

Gln His Leu Pro Arg Ser Leu Ala Phe Leu Asn Leu Thr Lys Asn Asp
65 70 75 80

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Phe Ser Cys Ala Cys Glu His Gln Thr Phe Leu Gln Trp Val Lys Asp
85 90 95

Gln Lys Gln Leu Leu Val Gly Ala Glu Gln Met Val Cys Thr Gln Pro
100 105 110

Leu Glu Met Gln Asp Leu Pro Val Leu Ser Phe Arg Asn Ala Thr Cys
115 120 125

Gln Ile Ser Glu Ala Val Ile Ser Ala Ser Val Leu Thr Phe Leu Leu
130 135 140

Val Ser Val Ala Gly Ile Leu Val Tyr Lys Phe Tyr Phe His Leu Leu
145 150 155 160

Leu Phe Val Gly Cys Lys Lys Tyr Gly Arg Gly Glu Ser Thr Tyr Asp
165 170 175

Ala Phe Val Ile Tyr Ser Ser Gln Asp Glu Asp Trp Val Arg Asn Glu
180 185 190

Leu Val Lys Asn Leu Glu Glu Gly Val Pro Pro Phe His Leu Cys Leu
195 200 205

His Tyr Arg Asp Phe Ile Pro Gly Val Ala Ile Ala Ala Asn Ile Ile
210 215 220

Gln Glu Gly Phe His Lys Ser Arg Lys Val Ile Val Val Val Ser Gln
225 230 235 240

His Phe Ile Gln Ser Arg Trp Cys Ile Phe Glu Tyr Glu Ile Ala Gln
245 250 255

Thr Trp Gln Phe Leu Arg Ser His Ala Gly Ile Ile Phe Ile Val Leu
260 265 270

Gln Lys Leu Glu
275

<210> 290

<211> 101

<212> PRT

<213> Solanum tuberosum

<400> 290

Thr Leu Leu Gly Lys Arg Val Asp Tyr Ser Gly Arg Ser Val Ile Val
1 5 10 15

Val Gly Pro Ser Leu Ser Leu His Arg Cys Gly Leu Pro Arg Glu Ile
20 25 30

Ala Ile Glu Leu Phe Gln Thr Phe Val Ile Arg Gly Leu Ile Arg Gln
35 40 45

His Leu Ala Ser Asn Ile Gly Val Ala Lys Ser Lys Ile Arg Glu Lys
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50

55

60

Glu Pro Ile Val Trp Glu Ile Leu Gln Glu Val Met Gln Gly His Pro
65 70 75 80

Val Leu Leu Asn Arg Ala Pro Thr Leu His Arg Leu Gly Ile Gln Ala
85 90 95

Phe Gln Pro Val Leu
100

<210> 291

<211> 151

<212> PRT

<213> Capra hircus

<400> 291

Asn Leu Glu Tyr Leu Asp Leu Ser Tyr Asn Arg Leu Ser Asn Leu Ser
1 5 10 15

Ser Ser Trp Phe Arg Ser Leu Tyr Ala Leu Lys Phe Leu Asn Leu Leu
20 25 30

Gly Asn Val Tyr Lys Thr Leu Gly Glu Thr Ser Leu Phe Ser His Leu
35 40 45

Pro Asn Leu Arg Thr Leu Lys Val Gly Asn Ser Asn Ser Phe Thr Glu
50 55 60

Ile His Glu Lys Asp Phe Thr Gly Leu Ile Phe Leu Glu Glu Leu Glu
65 70 75 80

Ile Ser Ala Gln Asn Leu Gln Ile Tyr Val Pro Lys Ser Leu Lys Ser
85 90 95

Ile Gln Asn Ile Ser His Leu Ile Leu His Leu Lys Gln Pro Val Leu
100 105 110

Leu Val Asp Ile Leu Val Asp Ile Val Ser Ser Leu Asp Cys Leu Glu
115 120 125

Leu Arg Asp Thr Asn Leu His Thr Phe His Phe Ser Glu Ala Ser Ile
130 135 140

Ser Glu Met Asn Thr Ser Val
145 150

<210> 292

<211> 76

<212> PRT

<213> Sus scrofa

<400> 292

Asp Pro Met Val Asp Phe Leu Asp Ser Trp Val His Ile Ile Pro Val
1 5 10 15

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Trp Ile Leu Asp Asn Ile Leu Asp Gln Leu Val Phe Pro Lys Leu Gln
20 25 30

Lys Glu Val Glu Asn Trp Asn Pro Leu Thr Asp Thr Val Pro Ile His
35 40 45

Ser Trp Ile His Pro Trp Leu Pro Leu Met Gln Ala Arg Leu Glu Pro
50 55 60

Leu Tyr Ser Pro Ile Arg Ser Lys Leu Ala Ser Ala
65 70 75

<210> 293
<211> 76
<212> PRT
<213> Sus scrofa

<400> 293
Thr Trp His Tyr Phe Leu His Arg Leu Leu His His Lys Arg Ile Tyr
1 5 10 15

Lys Tyr Ile His Lys Ile His His Glu Phe Gln Ala Pro Phe Gly Met
20 25 30

Glu Ala Glu Tyr Ala His Pro Leu Glu Thr Leu Ile Leu Gly Thr Gly
35 40 45

Phe Phe Ile Gly Ile Met Leu Leu Cys Asp His Val Ile Leu Leu Trp
50 55 60

Ala Trp Val Thr Val Arg Leu Ile Glu Thr Ile Asp
65 70 75

<210> 294
<211> 126
<212> PRT
<213> Sus scrofa

<400> 294
Gln Thr Gly Asn Thr Thr Thr Ile Asn Ile Ile Ile Cys Thr Val Asp
1 5 10 15

Tyr Leu Leu Arg Leu Gln Glu Ser Ile Ser Asp Phe Tyr Trp Tyr Tyr
20 25 30

Ser Gly Lys Asp Val Ile Glu Glu Gln Gly Lys Arg Asn Phe Ser Lys
35 40 45

Ala Met Ser Val Ala Lys Gln Val Phe Asn Ser Leu Thr Glu Tyr Ile
50 55 60

Gln Gly Pro Cys Thr Gly Asn Gln Gln Ser Leu Ala His Ser Arg Leu
65 70 75 80

Trp Asp Ala Val Val Gly Phe Leu His Val Phe Ala His Met Met Met
85 90 95

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Lys Leu Ala Gln Asp Ser Ser Gln Ile Glu Leu Leu Lys Glu Leu Leu
100 105 110

Asp Leu Gln Lys Asp Met Val Val Met Leu Leu Ser Leu Leu
115 120 125

<210> 295
<211> 151
<212> PRT
<213> Sus scrofa

<400> 295
Leu Glu Glu Thr Thr Val Pro Glu Ile Gln Arg Thr Ser Leu Gly Asn
1 5 10 15

Val Val Leu Leu Leu Lys Ser Leu Gly Ile His Asp Leu Met His Phe
20 25 30

Asp Phe Leu Asp Pro Pro Pro Tyr Glu Thr Leu Leu Leu Ala Leu Glu
35 40 45

Gln Leu Tyr Ala Leu Gly Ala Leu Asn His Leu Gly Glu Leu Thr Thr
50 55 60

Ser Gly Arg Lys Met Ala Glu Leu Pro Val Asp Pro Met Leu Ser Lys
65 70 75 80

Met Ile Leu Ala Ser Glu Lys Tyr Ser Cys Ser Glu Glu Ile Leu Thr
85 90 95

Val Ala Ala Met Leu Ser Val Asn Asn Ser Ile Phe Tyr Arg Pro Lys
100 105 110

Asp Lys Val Val His Ala Asp Asn Ala Arg Val Asn Phe Phe Leu Pro
115 120 125

Gly Gly Asp His Leu Val Leu Leu Asn Val Tyr Thr Gln Trp Ala Glu
130 135 140

Ser Gly Tyr Ser Ser Gln Trp
145 150

<210> 296
<211> 226
<212> PRT
<213> Sus scrofa

<400> 296
Thr Lys Leu Val Trp Ile Glu Thr Pro Thr Asn Pro Ile Leu Lys Met
1 5 10 15

Ile Asp Ile Glu Ala Cys Ala Gln Ile Val His Lys His Gly Asp Ile
20 25 30

Ile Leu Val Val Asp Asn Thr Phe Met Ser Ala Tyr Phe Gln Arg Pro
35 40 45

Leu Ala Leu Gly Ala Asp Ile Cys Met Tyr Ser Ala Thr Lys Tyr Met
 50 55 60
 Asn Gly His Ser Asp Val Val Met Gly Leu Val Ser Leu Asn Ser Glu
 65 70 75 80
 Thr Leu His Ser Arg Leu Arg Phe Leu Gln Asn Ser Leu Gly Ala Val
 85 90 95
 Pro Ser Pro Ile Asp Cys Tyr Leu Cys Asn Arg Gly Leu Lys Thr Leu
 100 105 110
 Gln Val Arg Met Glu Lys His Phe Glu Asn Gly Met Ala Val Ala Gln
 115 120 125
 Phe Leu Glu Ser His Pro Leu Val Glu Lys Val Ile Tyr Pro Gly Leu
 130 135 140
 Pro Ser His Pro Gln His Glu Leu Ala Lys Arg Gln Cys Thr Gly Cys
 145 150 155 160
 Pro Gly Met Ile Ser Phe Tyr Ile Lys Gly Ser Leu His His Ala Glu
 165 170 175
 Thr Phe Leu Lys Ser Leu Lys Leu Phe Thr Leu Ala Glu Ser Leu Gly
 180 185 190
 Gly Tyr Glu Ser Leu Ala Glu Leu Pro Ala Ile Met Thr His Ser Ser
 195 200 205
 Val Pro Lys Ser Asp Arg Glu Val Leu Gly Ile Arg Asp Thr Leu Ile
 210 215 220
 Arg Leu
 225
 <210> 297
 <211> 176
 <212> PRT
 <213> Prunus persica
 <400> 297
 Met Glu Ala Cys Asn Cys Ile Glu Pro Gln Trp Pro Ala Asp Glu Leu
 1 5 10 15
 Leu Met Lys Tyr Gln Tyr Ile Ser Asp Phe Phe Ile Ala Leu Ala Tyr
 20 25 30
 Phe Ser Ile Pro Leu Glu Leu Ile Tyr Phe Val Lys Lys Ser Ala Val
 35 40 45
 Phe Pro Tyr Arg Trp Val Leu Val Gln Phe Gly Ala Phe Ile Val Leu
 50 55 60

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Cys Gly Ala Thr His Leu Ile Asn Leu Trp Thr Phe Ser Met His Ser
65 70 75 80

Arg Thr Val Ala Ile Val Met Thr Thr Ala Lys Val Leu Thr Ala Val
85 90 95

Val Ser Cys Ala Thr Ala Leu Met Leu Val His Ile Ile Pro Asp Leu
100 105 110

Leu Ser Val Lys Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu
115 120 125

Leu Asp Arg Glu Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg
130 135 140

His Val Arg Met Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His
145 150 155 160

Thr Ile Leu Lys Thr Thr Leu Val Glu Leu Gly Arg Thr Leu Ala Leu
165 170 175

<210> 298

<211> 276

<212> PRT

<213> Sus scrofa

<400> 298

Leu Ile Ile Phe Glu Ile Val His Arg Thr Leu Ala Ala Met Leu Gly
1 5 10 15

Ser Leu Ala Ala Leu Ala Ala Leu Ala Val Ile Gly Asp Arg Pro Thr
20 25 30

Leu Thr Gln Val Val Glu Trp Ile Asp Phe Glu Thr Leu Ala Leu Leu
35 40 45

Phe Gly Met Met Ile Leu Val Ala Ile Phe Ser Glu Thr Gly Phe Phe
50 55 60

Asp Tyr Cys Ala Val Lys Ala Tyr Gln Leu Ser Arg Gly Arg Val Trp
65 70 75 80

Ala Met Ile Ile Met Leu Cys Leu Ile Ala Ala Val Leu Ser Ala Phe
85 90 95

Leu Asp Asn Val Thr Thr Ala Leu Leu Phe Thr Pro Val Thr Ile Arg
100 105 110

Leu Cys Glu Val Leu Asn Leu Asp Pro Arg Gln Val Leu Ile Ala Glu
115 120 125

Val Ile Phe Thr Asn Ile Gly Gly Ala Ala Thr Ala Ile Gly Asp Pro
130 135 140

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Pro Asn Val Ile Ile Val Ser Asn Gln Glu Leu Arg Lys Met Gly Leu
145 150 155 160

Asp Phe Ala Gly Phe Thr Ala His Met Phe Ala Gly Ile Cys Phe Val
165 170 175

Leu Leu Phe Ser Phe Pro Leu Leu Arg Leu Leu Tyr Trp Asn Arg Lys
180 185 190

Leu Tyr Asn Lys Glu Pro Ser Glu Ile Val Glu Leu Lys His Glu Ile
195 200 205

His Val Trp Arg Leu Thr Ala Gln Arg Ile Ser Pro Ala Ser Arg Glu
210 215 220

Glu Thr Ala Val Arg Gly Leu Leu Leu Glu Lys Val Leu Ser Leu Glu
225 230 235 240

Arg Leu Leu Ala Arg Arg Leu His Ser Phe His Arg Gln Ile Ser Gln
245 250 255

Glu Asp Lys Asn Trp Glu Thr Asn Ile Gln Glu Leu Gln Lys Lys His
260 265 270

Arg Ile Ser Asp
275

<210> 299
<211> 101
<212> PRT
<213> Sus scrofa

<400> 299
Tyr Leu Asn Glu Asp Ser Arg Glu Asn Ser Met Pro Lys Arg Pro Met
1 5 10 15

Leu Val His Leu His Gln Thr Ala His Phe Asp Glu Phe Asp Cys Pro
20 25 30

Pro Glu Leu Gln His Lys Gln Glu Leu Phe Pro Lys Trp His Leu Pro
35 40 45

Ile Lys Ile Ala Ala Ile Val Ser Ser Leu Thr Phe Leu Tyr Thr Leu
50 55 60

Leu Arg Glu Val Ile His Pro Phe Val Thr Ser His Gln Gln Tyr Phe
65 70 75 80

Tyr Lys Ile Pro Ile Leu Val Ile Asn Lys Val Leu Pro Met Val Ser
85 90 95

Ile Thr Leu Leu Ala
100

<210> 300

<211> 201

<212> PRT

<213> Sus scrofa

<400> 300

Leu Leu His His Pro Asn Ala Thr His Asn His Gln His Ala Gly Thr
1 5 10 15

Thr Ala Ser Ser Thr Thr Phe Pro Lys Ala Asn Lys Arg Lys Asn Gln
20 25 30

Asn Ile Gly Tyr Lys Leu Gly His Arg Arg Ala Leu Phe Glu Lys Arg
35 40 45

Lys Arg Leu Ser Asp Tyr Ala Leu Ile Phe Gly Met Phe Gly Ile Val
50 55 60

Val Met Val Ile Glu Thr Glu Leu Ser Trp Gly Leu Tyr Ser Lys Asp
65 70 75 80

Ser Met Phe Ser Leu Ala Leu Lys Cys Leu Ile Ser Leu Ser Thr Ile
85 90 95

Ile Leu Leu Gly Leu Ile Ile Ala Tyr His Thr Arg Glu Val Gln Leu
100 105 110

Phe Val Ile Asp Asn Gly Ala Asp Asp Trp Arg Ile Ala Met Thr Tyr
115 120 125

Glu Arg Ile Leu Tyr Ile Ser Leu Glu Met Leu Val Cys Ala Ile His
130 135 140

Pro Ile Pro Gly Glu Tyr Lys Phe Phe Trp Thr Ala Arg Leu Ala Phe
145 150 155 160

Ser Tyr Thr Pro Ser Arg Ala Glu Ala Asp Val Asp Ile Ile Leu Ser
165 170 175

Ile Pro Met Phe Leu Arg Leu Tyr Leu Ile Ala Arg Val Met Leu Leu
180 185 190

His Ser Lys Leu Phe Thr Asp Ala Ser
195 200

<210> 301

<211> 101

<212> PRT

<213> Sus scrofa

<400> 301

His Gly Val Leu Gly Gly Asp Leu His Leu Ser Val Ser Glu Val Leu
1 5 10 15

Ser Phe Arg His Phe Cys Asn Lys Ile Trp Asn Ala Leu Arg Phe Ile
20 25 30

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Leu Asn Ala Leu Gly Glu Lys Phe Ile Pro Gln Pro Leu Glu Glu Leu
35 40 45

Cys Pro Thr Ser Pro Met Asp Ala Trp Ile Leu Ser Cys Leu Ala Arg
50 55 60

Thr Ala Gln Glu Cys Glu Arg Gly Phe Leu Thr Arg Glu Leu Ala Leu
65 70 75 80

Val Thr His Ala Leu His His Phe Trp Leu His Asn Leu Cys Asp Val
85 90 95

Tyr Leu Glu Ala Val
100

<210> 302
<211> 151
<212> PRT
<213> Sus scrofa

<400> 302
Met Glu Ala Thr Ala Pro Arg Arg Arg His Leu Leu Pro Leu Leu Leu
1 5 10 15

Leu Leu Leu Leu Leu Cys Gly Glu Cys Pro Pro Val Ser Gly Cys Asn
20 25 30

Glu Lys Arg Met Leu Ala Met Leu Pro Arg Cys Gly Lys Thr Phe Ala
35 40 45

Glu Met Met Lys Lys Val Glu Val Trp Lys Trp Cys Asn Leu Ser Glu
50 55 60

Phe Ile Val Tyr Tyr Glu Ser Phe Thr Asn Cys Thr Glu Val Glu Thr
65 70 75 80

Asn Val Val Gly Cys Tyr Trp Pro Asn Pro Leu Ala Gln Ser Phe Ile
85 90 95

Thr Gly Val His Arg Arg His Phe His Asn Cys Ser Val Asp Arg Gln
100 105 110

Gln Trp Gln Asp Pro Pro Asp Glu Ile Leu Ile Pro Leu Ile Val Val
115 120 125

Pro Ile Leu Leu Thr Leu Ala Met Thr Gly Leu Val Val Trp Arg Ser
130 135 140

Lys Arg Ala Ala Gln Val Val
145 150

<210> 303
<211> 176
<212> PRT
<213> Solanum tuberosum

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<400> 303

Leu Gly Phe Ser Ser Ser Glu Met His Glu Leu Leu Met Arg Leu Tyr
1 5 10 15

Val Thr Ile His Ser Asp His Glu Gly Gly Asn Val Ser Ala His Thr
20 25 30

Gly His Leu Val Ala Ser Ala Leu Ser Asp Pro Tyr Leu Ser Phe Ala
35 40 45

Ala Ala Leu Asn Gly Leu Ala Gly Pro Leu His Gly Leu Ala Asn Gln
50 55 60

Glu Val Leu Leu Trp Ile Lys Ser Val Val Glu Glu Cys Gly Glu Asn
65 70 75 80

Ile Ser Lys Glu Gln Leu Lys Asp Tyr Val Trp Lys Thr Leu Asn Ser
85 90 95

Gly Lys Val Val Pro Gly Phe Gly His Gly Val Leu Arg Lys Thr Val
100 105 110

Pro Arg Tyr Thr Cys Gln Arg Glu Phe Ala Met Lys His Leu Pro Glu
115 120 125

Asp Pro Leu Phe Gln Leu Val Ser Lys Leu Tyr Glu Val Phe Leu Leu
130 135 140

Phe Leu Gln Asn Leu Ala Lys Leu Lys Pro Trp Pro Asn Val Asp Ala
145 150 155 160

His Ser Gly Val Leu Leu Asn Tyr Tyr Gly Leu Thr Glu Ala Arg Tyr
165 170 175

<210> 304

<211> 76

<212> PRT

<213> Sus scrofa

<400> 304

Val Val Leu Ala Arg Ser Asp Pro Lys Asn Ser Val Val Tyr Arg Leu
1 5 10 15

Leu Ile Pro Trp Ile Gly Cys Gly Leu Leu Leu Leu Asn Gly Gln Thr
20 25 30

Trp Phe Gln Arg Arg Arg Met Leu Thr Pro Ala Phe His Tyr Asp Ile
35 40 45

Leu Lys Pro Tyr Val Gly Leu Met Ala Lys Ser Val Gln Val Met Leu
50 55 60

Asp Lys Trp Glu Gln Leu Val Ala Gln Asp Pro Arg
65 70 75

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<210> 305
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 305
 Val Val Pro Ile Leu Val Ile Thr Val Cys Tyr Gly Leu Met Leu Leu
 1 5 10 15

Arg Leu Arg Ser Val Arg Leu Leu Ser Gly Ser Lys Glu Lys Asp Arg
 20 25 30

Ser Leu Arg Arg Ile Thr Arg Met Val Leu Val Val Val Gly Ala Phe
 35 40 45

Val Val Cys Trp Ala Pro Ile His Ile Phe Val Ile Val Trp Thr Leu
 50 55 60

Val Asp Ile Asp Arg Arg Asp Pro Leu Val Val Ala
 65 70 75

<210> 306
 <211> 126
 <212> PRT
 <213> Malus domestica

<400> 306
 Asp Ile Pro Lys Leu Phe Thr Lys Phe Ala Gln Thr Gln Ala Leu Ala
 1 5 10 15

Thr Arg Asn Ser Gly Gly Ser Gly Leu Gly Leu Ala Ile Cys Lys Arg
 20 25 30

Phe Val Asn Leu Met Glu Gly His Ile Trp Ile Glu Ser Glu Gly Leu
 35 40 45

Gly Lys Gly Cys Thr Ala Thr Phe Ile Val Lys Leu Gly Phe Pro Glu
 50 55 60

Arg Ser Asn Glu Ser Lys Leu Pro Phe Ala Pro Lys Leu Gln Ala Asn
 65 70 75 80

His Val Gln Thr Asn Phe Pro Gly Leu Lys Val Leu Val Met Asp Asp
 85 90 95

Asn Gly Val Ser Arg Ser Val Thr Lys Gly Leu Leu Ala His Leu Gly
 100 105 110

Cys Asp Val Thr Ala Val Ser Leu Ile Asp Glu Leu Leu His
 115 120 125

<210> 307
 <211> 201
 <212> PRT
 <213> Sus scrofa

<400> 307
 Leu Lys His Leu Asp Leu Ser Phe Asn Glu Ile Ile Thr Met Lys Ser

1				5				10				15			
Asn	Phe	Met	Gly 20	Leu	Glu	Gln	Leu	Glu 25	Tyr	Leu	Asp	Phe	Gln 30	His	Ser
Ser	Leu	Lys 35	Gln	Ala	Asn	Asp	Phe 40	Ser	Ile	Phe	Leu	Ser 45	Leu	Arg	Asn
Leu	His 50	Tyr	Leu	Asp	Ile	Ser 55	Tyr	Thr	Asn	Ile	His 60	Val	Val	Phe	Arg
Gly 65	Ile	Phe	Ala	Gly	Leu 70	Val	Ser	Leu	Gln	Thr 75	Leu	Lys	Met	Ala	Gly 80
Asn	Ser	Phe	Gln	Asn 85	Asn	Leu	Leu	Pro	Asp 90	Val	Phe	Thr	Asp	Leu 95	Thr
Asn	Leu	Ile	Leu 100	Leu	Asp	Leu	Ser	Lys 105	Cys	Gln	Leu	Glu	Gln 110	Val	Ser
Gln	Arg	Ala 115	Phe	His	Ser	Leu	Pro 120	Arg	Leu	Gln	Val	Leu 125	Asn	Met	Ser
His	Asn 130	Arg	Leu	Leu	Phe	Leu 135	Asp	Thr	Leu	Pro	Tyr 140	Lys	Pro	Leu	His
Ser 145	Leu	Arg	Ile	Leu	Asp 150	Cys	Ser	Tyr	Asn	Leu 155	Ile	Val	Ala	Ser	Lys 160
Glu	Gln	Glu	Leu	Gln 165	His	Leu	Pro	Arg	Ser 170	Leu	Ala	Phe	Leu	Asn 175	Leu
Thr	Lys	Asn	Asp 180	Phe	Ser	Cys	Ala	Cys 185	Glu	His	Gln	Thr	Phe 190	Leu	Gln
Trp	Val	Lys 195	Asp	Gln	Lys	Gln	Leu 200	Leu							

Phe Asn Asn Leu Asp Tyr Arg Trp Ile Ala Leu Asp Asn Trp Thr Tyr
65 70 75 80

Ile Lys Lys Phe Lys Leu His Ser Asp Met Ser Glu Trp Asn Lys Val
85 90 95

Asn Leu Val Phe Glu
100

<210> 309
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 309
Pro Ser Glu Ser His Leu Asp Ser Leu Val Gly Gln Ala Leu Phe Gly
1 5 10 15

Asp Gly Ala Ala Ala Ile Ile Met Gly Ser Asp Pro Ile Ile Gly Val
20 25 30

Glu Arg Pro Leu Phe Glu Leu Val Ser Ala Ala Gln Thr Leu Val Pro
35 40 45

Asp Ser Glu Gly Ala Ile Asp Gly His Leu Arg Glu Val Gly Leu Thr
50 55 60

Phe His Leu Leu Lys Asp Val Pro Gly Leu Ile Ser Lys Asn Ile Glu
65 70 75 80

Lys Ser Leu Leu Glu Ala Phe Gln Pro Leu Gly Ile Ser Asp Trp Asn
85 90 95

Ser Leu Phe Trp Ile
100

<210> 310
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 310
Pro Ser Glu Ser His Leu Asp Ser Leu Val Gly Gln Ala Leu Phe Gly
1 5 10 15

Asp Gly Ala Ala Ala Ile Ile Met Gly Ser Asp Pro Ile Ile Gly Val
20 25 30

Glu Arg Pro Leu Phe Glu Leu Val Ser Ala Ala Gln Thr Leu Val Pro
35 40 45

Asp Ser Glu Gly Ala Ile Asp Gly His Leu Arg Glu Val Gly Leu Thr
50 55 60

Phe His Leu Leu Lys Asp Val Pro Gly Leu Ile Ser Lys Asn Ile Glu
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Lys Val Ala Arg Pro Tyr Thr Glu Val Thr Met Met Thr Leu Leu Thr
35 40 45

Ser Met Ala Asp Lys Glu Leu Val His Met Ile Ala Trp Ala Lys Lys
50 55 60

Val Pro Gly Phe Gln Glu Leu Ser Leu His Asp Gln Val Gln Leu Leu
65 70 75 80

Glu Ser Ser Trp Leu Glu Val Leu Met Ile Gly Leu Ile Trp Arg Ser
85 90 95

Ile His Cys Pro Gly Lys Leu Ile Phe Ala Gln Asp Leu Ile Leu Asp
100 105 110

Arg Ser Glu Gly Asp Cys Val Glu Gly Met Ala Glu Ile Phe Asp Met
115 120 125

Leu Leu Ala Thr Val Ser Arg Phe Arg Met Leu Lys Leu Lys Pro Glu
130 135 140

Glu Phe Val Cys Leu Lys Ala Ile Ile Leu Leu Asn Ser Gly Ala Phe
145 150 155 160

Ser Phe Cys Ser Asn Ser Val Glu Ser Leu His Asn Ser Ser Ala Val
165 170 175

Glu Ser Met Leu Asp Asn Ile Thr Asp Ala Leu Ile His His Ile Ser
180 185 190

His Ser Gly Ala Ser Val Gln Gln Gln
195 200

<210> 313
<211> 126
<212> PRT
<213> Sus scrofa

<400> 313
Ala Arg Leu Arg Arg Val Lys Thr Ala Val Ala Val Ser Ser Val Val
1 5 10 15

Trp Ala Thr Glu Leu Gly Ala Asn Ser Val Pro Leu Phe His Asp Glu
20 25 30

Leu Phe Arg Asp Arg Tyr Asn His Thr Phe Cys Phe Glu Lys Phe Pro
35 40 45

Met Glu Gly Trp Val Ala Trp Met Asn Leu Tyr Arg Val Phe Val Gly
50 55 60

Phe Leu Phe Pro Trp Ala Leu Met Leu Leu Ser Tyr Arg Gly Ile Leu
65 70 75 80

Arg Ala Val Arg Gly Ser Val Ser Thr Glu Arg Gln Glu Lys Ala Lys
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Ile Lys Arg Leu Ala Leu Ser Leu Ile Ala Ile Val Leu Val Cys Phe
 100 105 110

Ala Pro Tyr His Val Leu Leu Leu Ser Arg Ser Ala Val Tyr
 115 120 125

<210> 314
 <211> 176
 <212> PRT
 <213> Solanum tuberosum

<400> 314
 Glu Tyr Ile Tyr Ala Leu Ala Gln Asp His Gly Leu Asn Arg Asn Arg
 1 5 10 15

Ser Ile Leu Leu Glu Asn Ser Gly Tyr Asn Asn Lys Leu Ser Phe Leu
 20 25 30

Ile Val Lys Arg Leu Ile Thr Arg Met Tyr Gln Gln Asn His Phe Ile
 35 40 45

Ile Ser Thr Asn Asp Ser Asn Lys Asn Pro Phe Leu Gly Cys Asn Lys
 50 55 60

Ser Leu Tyr Ser Gln Met Ile Ser Glu Gly Phe Ala Cys Ile Val Glu
 65 70 75 80

Ile Pro Phe Ser Ile Arg Leu Ile Ser Ser Leu Ser Ser Phe Glu Gly
 85 90 95

Lys Lys Ile Phe Lys Ser His Asn Leu Arg Ser Ile His Ser Thr Phe
 100 105 110

Pro Phe Leu Glu Asp Asn Phe Ala His Leu Asn Tyr Val Leu Asp Ile
 115 120 125

Leu Ile Pro Tyr Pro Val His Leu Glu Ile Leu Val Gln Thr Leu Arg
 130 135 140

Tyr Trp Val Lys Asp Ala Ser Ser Leu His Leu Leu Arg Phe Phe Leu
 145 150 155 160

His Glu Tyr Cys Asn Leu Asn Ser Leu Ile Thr Ser Lys Lys Pro Gly
 165 170 175

<210> 315
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 315
 Ile Met Arg Ile Leu Arg Ile Leu Lys Leu Ala Arg His Ser Thr Gly
 1 5 10 15

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Leu Gln Ser Leu Gly Phe Thr Leu Arg Arg Ser Tyr Asn Glu Leu Gly
20 25 30

Leu Leu Ile Leu Phe Leu Ala Met Gly Ile Met Ile Phe Ser Ser Leu
35 40 45

Val Phe Phe Ala Glu Lys Asp Glu Asp Asp Thr Lys Phe Lys Ser Ile
50 55 60

Pro Ala Ser Phe Trp Trp Ala Thr Ile Thr Met Thr
65 70 75

<210> 316
<211> 76
<212> PRT
<213> Sus scrofa

<400> 316
Met Gly Ile Leu Ser Val Asp Leu Leu Ile Thr Leu Gln Ile Leu Pro
1 5 10 15

Val Phe Phe Ser Asn Cys Leu Phe Leu Ala Leu Tyr Asp Ser Val Ile
20 25 30

Leu Leu Lys His Val Val Leu Leu Leu Ser Arg Ser Lys Ser Thr Arg
35 40 45

Gly Glu Trp Arg Arg Met Leu Thr Ser Glu Gly Met Arg Cys Ile Trp
50 55 60

Lys Ser Phe Leu Leu Asp Ala Tyr Lys Gln Val Lys
65 70 75

<210> 317
<211> 126
<212> PRT
<213> Sus scrofa

<400> 317
Pro Pro Glu Leu Phe Ala Leu Pro Pro Glu Leu Val Leu Glu Val Pro
1 5 10 15

Leu Glu His Pro Thr Leu Glu Trp Phe Ala Ala Leu Gly Leu Arg Trp
20 25 30

Tyr Ala Leu Pro Ala Val Ser Asn Met Leu Leu Glu Ile Gly Gly Leu
35 40 45

Glu Phe Pro Ala Ala Pro Phe Ser Gly Trp Tyr Met Ser Thr Glu Ile
50 55 60

Gly Thr Arg Asn Leu Cys Asp Pro His Arg Tyr Asn Ile Leu Glu Asp
65 70 75 80

Val Ala Val Cys Met Asp Leu Asp Thr Arg Thr Thr Ser Ser Leu Trp
85 90 95

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Lys Asp Lys Ala Ala Val Glu Ile Asn Leu Ala Val Leu His Ser Tyr
100 105 110

Gln Leu Ala Lys Val Thr Ile Val Asp His His Ala Ala Thr
115 120 125

<210> 318
<211> 76
<212> PRT
<213> Salmo salar

<400> 318
Met Ala Asp Leu Gly Val Lys Ala Gly Asp Lys Val Leu Leu Val Trp
1 5 10 15

Ser Gln Pro Ser Ser Pro Thr Thr Leu Lys Lys Leu Ala Glu Ser Leu
20 25 30

Gly Ala Met Val Gly Thr Asp Gly Arg Val Ser Leu Glu Asn Met Glu
35 40 45

Arg Leu Ile Met Ser Ser His Ala Ala Ser Ser Tyr Asp Trp Val Leu
50 55 60

Ser Ser Leu Leu Ser Asp Ser Phe Ser Val His Thr
65 70 75

<210> 319
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 319
His Pro Trp Asn Leu Met Thr Thr Ser Ala Asp Glu Gly Gln Phe Leu
1 5 10 15

Asn Met Leu Leu Lys Leu Ile Asn Ala Lys Asn Thr Met Glu Ile Gly
20 25 30

Val Phe Thr Gly Tyr Ser Leu Leu Ala Thr Ala Met Ala Leu Pro Asp
35 40 45

Asp Gly Lys Ile Leu Ala Met Asp Ile Asn Arg Glu Asn Tyr Glu Ile
50 55 60

Gly Leu Pro Val Ile Glu Lys Ala Gly Leu Ala His
65 70 75

<210> 320
<211> 76
<212> PRT
<213> Sus scrofa

<400> 320
Val Val Leu Ala Arg Ser Glu Pro Lys Ala Pro Val Leu Tyr Arg Leu
1 5 10 15

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Leu Ile Pro Trp Ile Gly Cys Gly Leu Leu Leu Leu Asn Gly Gln Thr
20 25 30

Trp Phe Gln Arg Arg Arg Met Leu Thr Pro Ala Phe His Tyr Asp Ile
35 40 45

Leu Lys Pro Tyr Val Gly Leu Met Ala Lys Ser Val Gln Val Met Leu
50 55 60

Asp Lys Trp Glu Gln Leu Val Ala Gln Asp Pro Arg
65 70 75

<210> 321
<211> 76
<212> PRT
<213> Sus scrofa

<400> 321
Ser Asp Leu Phe Asn Cys Leu Ala Asn Ala Ser Val Ile Ser Leu Leu
1 5 10 15

Ser Leu Asn Leu His Gly Leu Glu Ala Leu Pro Asn Asp Phe Arg Trp
20 25 30

Gln His Leu Glu Val Val Asn Cys Lys Leu Gln Gln Phe Pro Ala Leu
35 40 45

Lys Phe Asn Ser Leu Lys Lys Phe Val Phe Lys Asp Asn Lys His Met
50 55 60

His Thr Phe Thr Glu Ile Asn Leu Pro Asn Leu Gln
65 70 75

<210> 322
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 322
Met Glu Val Leu Met Ala Glu Arg Ala Asn Leu Val Phe His Asn Lys
1 5 10 15

Ala Ile Asp Gly Thr Ala Met Lys Arg Leu Ile Ser Arg Leu Ile Glu
20 25 30

His Phe Gly Met Ala Tyr Thr Ser His Ile Leu Asp Gln Val Lys Thr
35 40 45

Leu Gly Phe Gln Gln Ala Thr Ala Thr Ser Ile Ser Leu Gly Ile Asp
50 55 60

Asp Leu Leu Thr Ile Pro Ser Lys Gly Trp Leu Val
65 70 75

<210> 323
<211> 76
<212> PRT

<213> Sus scrofa

<400> 323

Val Val Leu Ala Arg Ser Glu Pro Lys Ala Pro Val Leu Tyr Arg Leu
 1 5 10 15

Leu Ile Pro Trp Ile Gly Cys Gly Leu Leu Leu Leu Asn Gly Gln Met
 20 25 30

Trp Phe Gln Arg Arg Arg Met Leu Thr Pro Ala Phe His Tyr Asp Ile
 35 40 45

Leu Lys Pro Tyr Val Gly Leu Met Ala Lys Ser Val Gln Val Met Leu
 50 55 60

Asp Lys Trp Glu Gln Leu Val Ala Gln Asp Pro Arg
 65 70 75

<210> 324

<211> 251

<212> PRT

<213> Sus scrofa

<400> 324

Leu Asn Tyr Leu Ser Thr Leu Ile Leu Thr Gly Asn Pro Ile Gln Ser
 1 5 10 15

Leu Ala Leu Gly Ala Phe Ser Gly Leu Pro Ser Leu Gln Lys Leu Val
 20 25 30

Ala Val Glu Thr Asn Leu Ala Ser Leu Glu Asp Phe Pro Ile Gly His
 35 40 45

Leu Lys Thr Leu Asn Glu Leu Asn Val Ala His Asn His Ile His Ser
 50 55 60

Phe Lys Leu Pro Glu Tyr Phe Ser Asn Leu Pro Asn Leu Glu His Leu
 65 70 75 80

Asp Leu Ser Lys Asn Lys Ile Glu Asn Ile Tyr His Glu His Leu Gln
 85 90 95

Val Leu His Gln Val Pro Leu His Asn Leu Ser Leu Asp Leu Ser Leu
 100 105 110

Asn Pro Leu Asn Phe Ile Glu Pro Gly Ala Phe Asn Lys Ile Arg Leu
 115 120 125

Asn Gly Leu Thr Leu Arg Ser Asn Phe Asn Ser Ser Asp Val Met Lys
 130 135 140

Thr Cys Ile Gln Gly Leu Ala Gly Ser Lys Val Asn Gln Leu Val Leu
 145 150 155 160

Gly Glu Phe Lys Asn Glu Arg Asn Leu Glu Ser Phe Asp Lys Ser Val
 165 170 175

Leu Glu Glu Leu Cys Asn Leu Thr Leu Glu Gln Phe Arg Ile Ala His
180 185 190

Phe Gly Glu Phe Pro Asp Asp Val Ser Asp Leu Phe Asn Cys Leu Ala
195 200 205

Asn Ala Ser Val Ile Ser Leu Leu Ser Leu Asn Leu His Gly Leu Glu
210 215 220

Ala Leu Pro Asn Asp Phe Arg Trp Gln His Leu Glu Val Val Asn Cys
225 230 235 240

Lys Leu Gln Gln Phe Pro Ala Leu Lys Phe Asn
245 250

<210> 325

<211> 176

<212> PRT

<213> Sus scrofa

<400> 325

Ala Ala Glu Phe Arg His Leu Gln Leu Lys Glu Gln Lys Asn Ala Gly
1 5 10 15

Ala Arg Thr Asn Glu Gly Pro Leu Ile Val Thr Glu Glu Leu His Ser
20 25 30

Leu Ser Phe Glu Thr Gln Leu Cys Gln Pro Gly Leu Val Ile Asp Leu
35 40 45

Glu Thr Thr Ser Leu Pro Val Val Val Ile Ser Asn Val Ser Gln Leu
50 55 60

Pro Ser Gly Trp Ala Ser Ile Leu Trp Tyr Asn Met Leu Val Ala Glu
65 70 75 80

Pro Arg Asn Leu Ser Phe Phe Leu Asn Pro Pro Cys Ala Arg Trp Ser
85 90 95

Gln Leu Ser Glu Val Leu Ser Trp Gln Phe Ser Ser Val Thr Lys Arg
100 105 110

Gly Leu Asn Val Asp Gln Leu Asn Met Leu Gly Glu Lys Leu Leu Gly
115 120 125

Pro Thr Ala Gly Pro Asp Gly Leu Ile Pro Trp Thr Arg Phe Cys Lys
130 135 140

Glu Asn Ile Asn Asp Lys Asn Phe Pro Phe Trp Leu Trp Ile Glu Ser
145 150 155 160

Ile Leu Glu Leu Ile Lys Lys His Leu Leu Ser Leu Trp Asn Asp Gly
165 170 175

<210> 326
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 326
 Trp Ala Ile Gly Leu Ser Val Ala Asp Leu Ile Glu Ser Met Leu Lys
 1 5 10 15
 Asn Leu Ser Arg Ile His Pro Val Ser Thr Met Val Gln Gly Met Tyr
 20 25 30
 Gly Ile Glu Asn Glu Val Phe Leu Ser Leu Pro Cys Val Leu Asn Ala
 35 40 45
 Arg Gly Leu Thr Ser Val Ile Asn Gln Lys Leu Lys Asp Asp Glu Val
 50 55 60
 Ala Gln Leu Lys Asn Ser Ala Asp Thr Leu Trp Gly
 65 70 75

<210> 327
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 327
 Met Glu Leu Gly Ala Ala Ala Arg Ala Trp Ser Leu Leu Trp Leu Leu
 1 5 10 15
 Leu Pro Leu Leu Gly Leu Val Gly Ala Ser Gly Pro Arg Thr Leu Val
 20 25 30
 Leu Leu Asp Asn Leu Asn Leu Arg Glu Thr His Ser Leu Phe Phe Arg
 35 40 45
 Ser Leu Lys Asp Arg Gly Phe Val Leu Thr Phe Lys Thr Ala Asp Asp
 50 55 60
 Pro Ser Leu Ser Leu Ile Lys Tyr Gly Glu Phe Leu
 65 70 75

<210> 328
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 328
 Met Ala Asn Tyr Thr Ser Ala Pro Glu Asp Asp Tyr Asp Val Phe Ile
 1 5 10 15
 Glu Asp Asp Leu Ser Asn Asp Glu Arg Glu Leu Cys Ser Pro Tyr Asp
 20 25 30
 Pro Gln Ala Leu Leu Ala Gln Leu Val Pro Tyr Leu Phe Ile Thr Val
 35 40 45

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Phe Leu Val Gly Leu Leu Asp Asn Ile Leu Val Val Leu Ile Met Val
50 55 60

Lys Tyr Lys Gly Leu Lys Gln Val Glu Asn Ile Tyr Leu Leu Asn Leu
65 70 75 80

Ala Val Cys Asn Leu Cys Phe Leu Cys Thr Leu Pro Phe Trp Val His
85 90 95

Met Ala Trp His Glu
100

<210> 329
<211> 101
<212> PRT
<213> Sus scrofa

<400> 329
Met Lys Tyr Leu Met Ala Ser Ser Val Phe Val Leu Phe Ile Leu Ala
1 5 10 15

Pro Ser Leu Ala Leu Met Asn Pro Gly Asp Gly His Pro Gln Glu Gly
20 25 30

Ser Val Gly Ser Gln Ser Ile Arg Val Asn Ala Leu Gly Ser Met Ile
35 40 45

Ser Ile Arg Asp Asn Asn Val Leu Ser Glu Trp Asp Gly Ile Leu Asp
50 55 60

Tyr Glu Asn Gly Leu Leu Ala Ala Lys Leu Phe Ser Lys Met Ala Cys
65 70 75 80

Val Leu Thr Lys Met Asp Lys Ala Val Phe Pro Thr Leu Asp Asp Ile
85 90 95

Ser Lys Ala Leu Asp
100

<210> 330
<211> 251
<212> PRT
<213> Prunus persica

<400> 330
Arg Ser Ile His Ser Ile Phe Pro Phe Leu Glu Asp Lys Phe Pro His
1 5 10 15

Leu Asn Tyr Val Ser Asp Val Leu Ile Pro Tyr Pro Ile His Leu Glu
20 25 30

Ile Leu Val Gln Thr Leu Arg Tyr Trp Val Lys Asp Ala Ser Ser Leu
35 40 45

His Leu Leu Arg Leu Phe Leu His Glu Tyr Tyr Asn Trp Asn Ser Leu
50 55 60

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Ile Thr Ser Asn Asn Phe Phe Phe Ser Lys Ser Asn Pro Arg Leu Phe
65 70 75 80

Leu Leu Leu Tyr Asn Ser His Val Cys Glu Tyr Glu Phe Ile Leu Leu
85 90 95

Phe Leu Arg Asn Gln Ser Ser His Leu Gln Leu Thr Ser Ser Gly Ile
100 105 110

Phe Phe Glu Arg Ile His Phe Tyr Glu Lys Ile Lys Tyr Pro Val Glu
115 120 125

Lys Val Phe Ala Asn Asp Phe Pro Ala Ser Ile Leu Trp Phe Phe Lys
130 135 140

Asp Pro Phe Met His Tyr Val Arg Tyr Gln Gly Lys Ser Ile Leu Ala
145 150 155 160

Ser Lys Asp Thr Pro Leu Leu Met Asn Lys Trp Lys Tyr Tyr Leu Val
165 170 175

Asn Leu Trp Gln Cys His Ser Tyr Val Trp Ser Gln Pro Gly Arg Ile
180 185 190

Tyr Ile Asn Lys Leu Ser Lys His Ser Leu Asp Phe Leu Gly Tyr Phe
195 200 205

Ser Ser Ile Arg Pro Asn Leu Ser Val Val Arg Ser Gln Met Leu Glu
210 215 220

Asn Ser Phe Ile Thr Asp Asn Ala Met Lys Lys Leu Asp Thr Leu Val
225 230 235 240

Pro Ile Ile Pro Leu Ile Gly Ser Leu Ala Lys
245 250

<210> 331
<211> 101
<212> PRT
<213> Sus scrofa

<400> 331
Met Ile Asn Lys Ser Phe Phe Glu Ile Met Leu Val Leu Leu Ala Ser
1 5 10 15

Ser Thr Gly Phe Ser Arg Glu Leu Lys Leu Val Leu Ser Gln Gln Arg
20 25 30

Arg Val Asn Arg Glu Ser Leu Lys Leu Leu Asn Lys Leu Gln Thr Ser
35 40 45

Ser Ile Gln Gln Cys Leu Pro His Arg Lys Asn Phe Leu Leu Pro Gln
50 55 60

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Lys Ser Met Asn Pro His Gln Tyr Gln Lys Gln Gln Ala Leu Ala Ile
65 70 75 80

Leu His Glu Met Leu Gln Gln Ile Phe Ser Leu Phe Arg Ala Val Ile
85 90 95

Ser Leu Asp Gly Trp
100

<210> 332
<211> 151
<212> PRT
<213> Sus scrofa

<400> 332
Glu Val Lys Leu Arg Ile Ala Gln Gly Leu Ser Ser Glu Ser Trp Ser
1 5 10 15

Ile Met Lys Asn Met Ala Thr Glu Leu Gly Ile Ile Leu Ile Gly Tyr
20 25 30

Phe Thr Leu Val Pro Ala Ile Gln Glu Phe Cys Leu Phe Ala Val Val
35 40 45

Gly Leu Val Ser Asp Phe Phe Leu Gln Met Pro Phe Phe Thr Thr Val
50 55 60

Leu Ser Ile Asp Ile Arg Arg Met Glu Leu Ala Asp Leu Asn Lys Arg
65 70 75 80

Leu Pro Pro Glu Ala Cys Leu Pro Pro Ala Lys Pro Val Gly Arg Ser
85 90 95

Ala Arg Phe Glu Arg Gln Leu Ala Val Arg Pro Ala Thr Pro His Thr
100 105 110

Ile Thr Leu Gln Pro Ser Ser Phe Arg Asn Leu Arg Leu Pro Lys Arg
115 120 125

Leu Arg Val Ile Tyr Phe Leu Ala Arg Thr Arg Leu Ala Gln Arg Leu
130 135 140

Ile Met Ala Gly Thr Val Val
145 150

<210> 333
<211> 101
<212> PRT
<213> Salmo salar

<400> 333
Asp His Lys Leu Gln Gly Thr Gln Asn Lys Cys Thr Lys Phe Leu Leu
1 5 10 15

Cys Cys Leu Lys Cys Cys Phe Trp Cys Leu Glu Lys Phe Ile Lys Phe
20 25 30

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Ile Asn Arg Asn Ala Tyr Ile Met Val Ala Ile Tyr Gly Lys Asn Phe
35 40 45

Cys Thr Ser Ala Lys Asp Ala Phe Phe Leu Leu Met Arg Asn Met Ile
50 55 60

Arg Val Ala Val Leu Asp Lys Val Thr Asp Phe Leu Leu Phe Leu Gly
65 70 75 80

Lys Leu Leu Ile Val Gly Leu Val Gly Ile Phe Ala Phe Phe Phe Phe
85 90 95

Ser Gly Arg Val Lys
100

<210> 334

<211> 76

<212> PRT

<213> Capra hircus

<400> 334

Ser Leu Glu Lys Thr Gly Glu Leu Leu Leu Thr Leu Lys Asn Leu Asn
1 5 10 15

Asn Leu Asp Ile Ser Lys Asn Asn Phe Leu Ser Met Pro Glu Thr Cys
20 25 30

Gln Trp Pro Gly Lys Met Lys Gln Leu Asn Leu Ser Ser Thr Arg Ile
35 40 45

His Ser Leu Thr Gln Cys Leu Pro Gln Thr Leu Glu Ile Leu Asp Val
50 55 60

Ser Asn Asn Asn Leu Asp Ser Phe Ser Leu Ile Leu
65 70 75

<210> 335

<211> 126

<212> PRT

<213> Sus scrofa

<400> 335

Met Lys Ala Pro Ala Val Leu Ala Pro Gly Ile Leu Val Leu Leu Phe
1 5 10 15

Thr Leu Val Gln Lys Ser Lys Gly Glu Cys Lys Glu Ala Leu Val Lys
20 25 30

Ser Thr Met Asn Leu Asn Met Gln Tyr Gln Leu Pro Asn Phe Thr Ala
35 40 45

Glu Thr Pro Ile Gln Asn Val Val Leu His Lys His His Ile Tyr Leu
50 55 60

Gly Ala Leu Asn Tyr Ile Tyr Val Leu Asn Asp Ile Asp Leu Arg Lys
65 70 75 80

Val Ala Glu Tyr Lys Thr Gly Pro Val Leu Glu His Pro Asp Cys Phe
85 90 95

Pro Cys Gln Asp Cys Ser His Lys Ala Asn Leu Ser Gly Gly Ile Trp
100 105 110

Arg Asp Asn Ile Asn Met Ala Leu Leu Val Asp Thr Tyr Tyr
115 120 125

<210> 336
<211> 76
<212> PRT
<213> Sus scrofa

<400> 336
Met Gly Phe Trp Lys Phe Pro Pro Phe Leu Val Leu Ser Ile Leu Val
1 5 10 15

Leu Tyr Gln Ala Gly Met Phe His Thr Ala Pro Val Arg Leu Pro Leu
20 25 30

Glu Ser Ser Phe Asp Ser Ala Thr Leu Thr Glu Glu Glu Val Ser Leu
35 40 45

Leu Leu Val Ala Met Val Lys Asp Tyr Val Gln Met Lys Ala Thr Val
50 55 60

Leu Glu Gln Glu Ser Glu Asp Phe Ser Ile Thr Ala
65 70 75

<210> 337
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 337
Met Lys Asn Val Thr Asp Ser Phe Val Ser Leu Gly His Trp Pro Ser
1 5 10 15

Ala Gly Ser Phe Gly Phe Asn Thr Asp Ile Leu Ala Thr Asn Pro Ile
20 25 30

Asn Leu Ser Val Val Leu Gly Val Leu Ile Phe Phe Gly Lys Gly Val
35 40 45

Leu Ser Asp Leu Leu Asp Asn Arg Lys Gln Arg Ile Leu Asn Thr Ile
50 55 60

Arg Asn Ser Glu Glu Leu Arg Gly Gly Ala Ile Glu
65 70 75

<210> 338
<211> 126
<212> PRT
<213> Salmo salar

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<400> 338

Met Gly Gln Val Phe Leu Leu Met Pro Val Leu Leu Val Ser Cys Phe
1 5 10 15

Leu Ser Gln Gly Ala Ala Met Glu Asn Gln Arg Leu Phe Asn Ile Ala
20 25 30

Val Asn Arg Val Gln His Leu His Leu Met Ala Gln Lys Met Phe Asn
35 40 45

Asp Phe Glu Gly Thr Leu Leu Pro Asp Glu Arg Arg Gln Leu Asn Lys
50 55 60

Ile Phe Leu Leu Asp Phe Cys Asn Ser Asp Ser Ile Val Ser Pro Ile
65 70 75 80

Asp Lys Leu Glu Thr Gln Lys Ser Ser Val Leu Lys Leu Leu His Ile
85 90 95

Ser Phe Arg Leu Ile Glu Ser Trp Glu Tyr Pro Ser Gln Thr Leu Thr
100 105 110

Ile Ser Asn Ser Leu Met Val Arg Asn Ser Asn Gln Ile Ser
115 120 125

<210> 339

<211> 176

<212> PRT

<213> Sus scrofa

<400> 339

Ser Lys Met Thr His Ile Glu Ile Arg Asn Thr Arg Ser Leu Thr Tyr
1 5 10 15

Ile Asn Pro Gly Ala Leu Lys Asp Leu Pro Leu Leu Lys Phe Leu Gly
20 25 30

Ile Phe Asn Thr Gly Leu Arg Ile Phe Pro Asp Leu Thr Lys Val Tyr
35 40 45

Ser Thr Asp Val Phe Phe Ile Leu Glu Ile Thr Asp Asn Pro Tyr Met
50 55 60

Thr Ser Ile Pro Ala Asn Ala Phe Gln Gly Leu Cys Asn Glu Thr Leu
65 70 75 80

Thr Leu Lys Leu Tyr Asn Asn Gly Phe Thr Ser Val Gln Gly His Ala
85 90 95

Phe Asn Gly Thr Lys Leu Asp Ala Val Tyr Leu Asn Lys Asn Lys Tyr
100 105 110

Leu Thr Val Ile Asp Lys Asp Ala Phe Gly Gly Val Phe Ser Gly Pro
115 120 125

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Thr Leu Leu Asp Val Ser Tyr Thr Ser Val Thr Ala Leu Pro Pro Lys
130 135 140

Gly Leu Glu His Leu Lys Glu Leu Ile Ala Arg Asn Thr Trp Thr Leu
145 150 155 160

Lys Lys Leu Pro Leu Ser Leu Ser Phe Leu His Leu Thr Arg Ala Asp
165 170 175

<210> 340
<211> 176
<212> PRT
<213> Sus scrofa

<400> 340
Ser Asp Leu Phe Asn Cys Leu Ala Asn Ala Ser Val Ile Ser Leu Leu
1 5 10 15

Ser Leu Asn Leu His Gly Leu Glu Ala Leu Pro Asn Asp Phe Arg Trp
20 25 30

Gln His Leu Glu Val Val Asn Cys Lys Leu Gln Gln Phe Pro Ala Leu
35 40 45

Lys Phe Asn Ser Leu Lys Lys Phe Val Phe Lys Asp Asn Lys His Met
50 55 60

His Thr Phe Thr Glu Ile Asn Leu Pro Asn Leu Gln Phe Leu Asp Leu
65 70 75 80

Ser Gly Asn His Leu Ser Phe Lys Gly Cys Cys Ser His Asn Glu Phe
85 90 95

Gly Thr Thr Lys Leu Lys His Leu Asp Leu Ser Phe Asn Glu Ile Ile
100 105 110

Thr Met Lys Ser Asn Phe Met Gly Leu Glu Gln Leu Glu Tyr Leu Asp
115 120 125

Phe Gln His Ser Ser Leu Lys Gln Ala Asn Asp Phe Ser Ile Phe Leu
130 135 140

Ser Leu Arg Asn Leu His Tyr Leu Asp Ile Ser Tyr Thr Asn Ile His
145 150 155 160

Val Val Phe Arg Gly Ile Phe Ala Gly Leu Val Ser Leu Gln Thr Leu
165 170 175

<210> 341
<211> 101
<212> PRT
<213> Sus scrofa

<400> 341
Met Ser Phe Ile Phe Glu Trp Ile Tyr Asn Gly Phe Ser Ser Val Leu
1 5 10 15

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Gln Phe Leu Gly Leu Tyr Lys Lys Ser Gly Lys Leu Val Phe Leu Gly
20 25 30
Leu Asp Asn Ala Gly Lys Thr Thr Leu Leu His Met Leu Lys Asp Asp
35 40 45
Arg Leu Gly Gln His Val Pro Thr Leu His Pro Thr Ser Glu Glu Leu
50 55 60
Thr Ile Ala Gly Met Thr Phe Thr Thr Phe Asp Leu Gly Gly His Glu
65 70 75 80
Gln Ala Arg Arg Val Trp Lys Asn Tyr Leu Pro Ala Ile Asn Gly Ile
85 90 95
Val Phe Leu Val Asp
100

<210> 342
<211> 276
<212> PRT
<213> Sus scrofa

<400> 342
Ser Asp Leu Phe Asn Cys Leu Ala Asn Ala Ser Val Ile Ser Leu Leu
1 5 10 15
Ser Leu Asn Leu His Gly Leu Glu Ala Leu Pro Asn Asp Phe Arg Trp
20 25 30
Gln His Leu Glu Val Val Asn Cys Lys Leu Gln Gln Phe Pro Ala Leu
35 40 45
Lys Phe Asn Ser Leu Lys Lys Phe Val Phe Lys Asp Asn Lys His Met
50 55 60
His Thr Phe Thr Glu Ile Asn Leu Pro Asn Leu Gln Phe Leu Asp Leu
65 70 75 80
Ser Gly Asn His Leu Ser Phe Lys Gly Cys Cys Ser His Asn Glu Phe
85 90 95
Gly Thr Thr Lys Leu Lys His Leu Asp Leu Ser Phe Asn Glu Ile Ile
100 105 110
Thr Met Lys Ser Asn Phe Met Gly Leu Glu Gln Leu Glu Tyr Leu Asp
115 120 125
Phe Gln His Ser Ser Leu Lys Gln Ala Asn Asp Phe Ser Ile Phe Leu
130 135 140
Ser Leu Arg Asn Leu His Tyr Leu Asp Ile Ser Tyr Thr Asn Ile His
145 150 155 160

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Val Val Phe Arg Gly Ile Phe Ala Gly Leu Val Ser Leu Gln Thr Leu
165 170 175

Lys Met Ala Gly Asn Ser Phe Gln Asn Asn Leu Leu Pro Asp Val Phe
180 185 190

Thr Asp Leu Thr Asn Leu Ile Leu Leu Asp Leu Ser Lys Cys Gln Leu
195 200 205

Glu Gln Val Ser Gln Arg Ala Phe His Ser Leu Pro Arg Leu Gln Val
210 215 220

Leu Asn Met Ser His Asn Arg Leu Leu Phe Leu Asp Thr Leu Pro Tyr
225 230 235 240

Lys Pro Leu His Ser Leu Arg Ile Leu Asp Cys Ser Tyr Asn Leu Ile
245 250 255

Val Ala Ser Lys Glu Gln Glu Leu Gln His Leu Pro Arg Ser Leu Ala
260 265 270

Phe Leu Asn Leu
275

<210> 343
<211> 251
<212> PRT
<213> Sus scrofa

<400> 343
Phe Ser Ser Phe Val Phe Ser Thr Val Val Ile His Phe Leu Asp Lys
1 5 10 15

Glu Leu Thr Gly Leu Asn Glu Ala Leu Pro Phe Phe Leu Leu Ile
20 25 30

Asp Leu Ser Arg Ala Ser Ala Leu Ala Lys Phe Ala Leu Ser Ser Asn
35 40 45

Ser Gln Asp Glu Val Arg Glu Asn Ile Ala Arg Gly Met Ala Ile Leu
50 55 60

Gly Pro Thr Phe Thr Leu Asp Ala Leu Val Glu Cys Leu Val Ile Gly
65 70 75 80

Val Gly Thr Met Ser Gly Val Arg Gln Leu Glu Ile Met Cys Cys Phe
85 90 95

Gly Cys Met Ser Val Leu Ala Thr Tyr Phe Val Phe Met Thr Phe Phe
100 105 110

Pro Ala Cys Val Ser Leu Val Leu Glu Leu Ser Arg Glu Ser Arg Glu
115 120 125

Gly Arg Pro Ile Trp Gln Leu Ser His Phe Ala Arg Val Leu Glu Gly

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130		135		140													
Glu	Glu	Asn	Lys	Pro	Asn	Pro	Val	Thr	Gln	Arg	Val	Lys	Ile	Ile	Met		
145					150					155					160		
Ser	Leu	Gly	Leu	Val	Leu	Val	His	Ala	His	Ser	Arg	Trp	Ile	Ala	Asp		
				165					170					175			
Pro	Ser	Pro	Gln	Asn	Ser	Thr	Ala	Asp	Asn	Ser	Lys	Val	Ser	Leu	Gly		
			180					185					190				
Leu	Asp	Glu	Asn	Val	Ser	Lys	Arg	Ile	Glu	Pro	Ser	Val	Ser	Leu	Trp		
		195					200					205					
Gln	Phe	Tyr	Leu	Ser	Lys	Met	Ile	Ser	Met	Asp	Ile	Glu	Gln	Val	Ile		
	210					215					220						
Thr	Leu	Thr	Leu	Ala	Leu	Leu	Leu	Ala	Val	Lys	Tyr	Ile	Phe	Phe	Glu		
225					230					235					240		
Gln	Ala	Glu	Thr	Glu	Ser	Thr	Leu	Ser	Leu	Lys							
				245						250							

<210> 344
 <211> 176
 <212> PRT
 <213> Sus scrofa

<400> 344
 Gly Gly Gly His Ser Pro Ser Asp Ile Ala Cys Thr Asp Gly Phe Met
 1 5 10 15

Ile	His	Met	Gly	Lys	Met	Asn	Arg	Val	Leu	Lys	Val	Asp	Met	Glu	Lys
			20					25					30		
Lys	Gln	Val	Thr	Val	Glu	Ala	Gly	Ile	Leu	Leu	Ala	Asp	Leu	His	Pro
		35					40					45			
Gln	Leu	Asp	Lys	His	Gly	Leu	Ala	Leu	Ser	Asn	Leu	Gly	Ala	Val	Ser
	50					55					60				
Asp	Val	Thr	Ala	Gly	Gly	Val	Ile	Gly	Ser	Gly	Thr	His	Asn	Thr	Gly
65					70					75					80
Ile	Lys	His	Gly	Ile	Leu	Ala	Thr	Gln	Val	Val	Glu	Leu	Thr	Leu	Leu
				85					90					95	
Thr	Pro	Asp	Gly	Thr	Val	Leu	Val	Cys	Ser	Glu	Ser	Ser	Asn	Ala	Glu
			100					105					110		
Val	Phe	Gln	Ala	Ala	Arg	Val	His	Leu	Gly	Cys	Leu	Gly	Val	Ile	Leu
		115					120					125			
Thr	Val	Thr	Leu	Gln	Cys	Val	Pro	Gln	Phe	His	Leu	Gln	Glu	Thr	Thr
	130					135					140				

Phe Pro Ser Thr Leu Lys Glu Val Leu Asp Asn Leu Asp Ser His Leu
145 150 155 160

Lys Lys Ser Glu Tyr Phe Arg Phe Leu Trp Phe Pro His Ser Glu Asn
165 170 175

<210> 345
<211> 176
<212> PRT
<213> Sus scrofa

<400> 345
Val Ala Glu Pro Asp Ser Lys Asn Val Tyr Arg Phe Glu Leu Asp Thr
1 5 10 15

Ser Glu Arg Lys Ile Glu Phe Asp Ser Ala Ser Gly Thr Tyr Thr Leu
20 25 30

Tyr Leu Ile Ile Gly Asp Ala Thr Leu Lys Asn Pro Ile His Trp Asn
35 40 45

Val Ala Asp Val Val Ile Arg Phe Pro Glu Glu Asp Ala Pro Ser Thr
50 55 60

Val Leu Ser Lys Asn Leu Phe Thr Ala Lys Gln Glu Ile Gln His Leu
65 70 75 80

Phe Arg Asp Pro Glu Lys Arg Pro Pro Thr Val Val Ser Asn Thr Phe
85 90 95

Thr Gly Leu Ile Leu Ser Pro Leu Leu Leu Phe Ala Leu Trp Ile
100 105 110

Arg Ile Gly Ala Lys Ile Ser Asn Phe Thr Phe Gly Leu Thr Ile Ile
115 120 125

Phe His Leu Gly His Ala Met Leu Ala Met Tyr Val Tyr Trp Thr Gln
130 135 140

Leu Asn Met Phe Gln Thr Leu Lys Tyr Leu Ala Ile Leu Gly Ser Val
145 150 155 160

Thr Phe Leu Ala Gly Asn Arg Met Leu Ala Gln Gln Ala Ile Lys Arg
165 170 175

<210> 346
<211> 201
<212> PRT
<213> Sus scrofa

<400> 346
Ser Leu Ile Leu Ala Ser Gln Leu Ile Cys Val Ala Asp Pro Val Thr
1 5 10 15

Cys Asn Ala Thr His Val Thr Leu Ala Ile Pro Glu Phe Pro Gly Lys
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20

25

30

Leu Lys Ser Val Asn Leu Gly Ser Gly Asn Ile Ala Val Ser Gln Leu
 35 40 45

His Lys His Gly Ile Glu Met Glu Thr Thr Asn Gly Leu Arg Leu His
 50 55 60

Phe Asn Gln Thr Leu Leu Lys Thr Asn Val Ser Glu Lys Cys Leu Pro
 65 70 75 80

His Gln Leu Tyr Leu Ser Ser Leu Lys Leu Thr Phe His Ser Gln Leu
 85 90 95

Glu Ala Val Ser Met Val Ile Tyr Pro Glu Cys Leu Cys Glu Ser Thr
 100 105 110

Val Ser Leu Val Ser Glu Glu Leu Cys Thr Gln Asp Gly Phe Met Asp
 115 120 125

Val Lys Val His Ser His Gln Thr Lys Pro Ala Leu Asn Leu Asp Thr
 130 135 140

Leu Arg Val Gly Asp Ser Ser Cys Gln Pro Thr Phe Lys Ala Pro Ala
 145 150 155 160

Gln Gly Leu Val Gln Phe Arg Ile Pro Leu Asn Gly Cys Gly Thr Arg
 165 170 175

His Lys Phe Lys Asn Asp Lys Val Ile Tyr Glu Asn Glu Ile His Ala
 180 185 190

Leu Trp Ala Asp Pro Pro Ser Ala Val
 195 200

<210> 347

<211> 276

<212> PRT

<213> Prunus persica

<400> 347

Met Glu Ala Cys Asn Cys Ile Glu Pro Gln Trp Pro Ala Asp Glu Leu
 1 5 10 15

Leu Met Lys Tyr Gln Tyr Ile Ser Asp Phe Phe Ile Ala Leu Ala Tyr
 20 25 30

Phe Ser Ile Pro Leu Glu Leu Ile Tyr Phe Val Lys Lys Ser Ala Val
 35 40 45

Phe Pro Tyr Arg Trp Val Leu Val Gln Phe Gly Ala Phe Ile Val Leu
 50 55 60

Cys Gly Ala Thr His Leu Ile Asn Leu Trp Thr Phe Ser Met His Ser
 65 70 75 80

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Arg Thr Val Ala Ile Val Met Thr Thr Ala Lys Val Leu Thr Ala Val
85 90 95

Val Ser Cys Ala Thr Ala Leu Met Leu Val His Ile Ile Pro Asp Leu
100 105 110

Leu Ser Val Lys Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu
115 120 125

Leu Asp Arg Glu Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg
130 135 140

His Val Arg Met Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His
145 150 155 160

Thr Ile Leu Lys Thr Thr Leu Val Glu Leu Gly Arg Thr Leu Ala Leu
165 170 175

Glu Glu Cys Ala Leu Trp Met Pro Thr Arg Thr Gly Leu Glu Leu Gln
180 185 190

Leu Ser Tyr Thr Leu Arg Gln Gln Asn Pro Val Gly Tyr Thr Val Pro
195 200 205

Ile His Leu Pro Val Ile Asn Gln Val Phe Ser Ser Asn Arg Ala Leu
210 215 220

Lys Ile Ser Pro Asn Ser Pro Val Ala Arg Met Arg Pro Leu Ala Gly
225 230 235 240

Lys His Met Pro Gly Glu Val Val Ala Val Arg Val Pro Leu Leu His
245 250 255

Leu Ser Asn Phe Gln Ile Asn Asp Trp Pro Glu Leu Ser Thr Lys Arg
260 265 270

Tyr Ala Leu Met
275

<210> 348
<211> 101
<212> PRT
<213> Sus scrofa

<400> 348
Lys Phe Leu Ser Asp Ser His Arg Leu Ser Tyr Thr Thr Leu Leu Leu
1 5 10 15

Val Leu Gln Tyr Phe Gly Pro Leu Cys Phe Ile Phe Ile Cys Tyr Phe
20 25 30

Lys Ile Tyr Ile Arg Leu Lys Arg Arg Asn Asn Met Met Asp Lys Met
35 40 45

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Arg Asp Asn Lys Tyr Arg Ser Ser Glu Thr Lys Arg Ile Asn Val Met
50 55 60

Leu Leu Ser Ile Val Val Ala Phe Ala Val Cys Trp Leu Pro Leu Thr
65 70 75 80

Ile Phe Asn Thr Val Phe Asp Trp Asn His Gln Ile Ile Ala Thr Cys
85 90 95

Asn His Asn Leu Leu
100

<210> 349

<211> 101

<212> PRT

<213> Capra hircus

<400> 349

Met Arg Cys Gly Pro Leu Tyr Arg Phe Leu Trp Leu Trp Pro Tyr Leu
1 5 10 15

Ser Tyr Val Glu Ala Val Pro Ile Arg Lys Val Gln Asp Asp Thr Lys
20 25 30

Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr
35 40 45

Gln Ser Val Ser Ser Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro
50 55 60

Gly Leu His Pro Leu Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala
65 70 75 80

Ile Tyr Gln Gln Ile Leu Ala Ser Leu Pro Ser Arg Asn Val Ile Gln
85 90 95

Ile Ser Asn Asp Leu
100

<210> 350

<211> 201

<212> PRT

<213> Sus scrofa

<400> 350

Met Glu Asp Asn Thr Pro Arg Gln Arg Asp Pro Ile Ser Leu Thr Ser
1 5 10 15

Val Ala Asn Gly Leu Glu Asn Met Gly Ala Glu Leu Leu Glu Ser Leu
20 25 30

Glu Glu Gly Arg Ala Pro Gly Ser Asp Ser Ser Pro Ala Glu Val Gly
35 40 45

Gly Gly Trp Ser Lys Ala Gly Pro Glu His Leu Gly Arg Arg Ser Leu
50 55 60

Gln Pro Ala Leu Arg Val Arg Arg Phe Cys Arg Glu His Thr Gln Leu
65 70 75 80

Phe Arg Trp Ile Cys Thr Gly Leu Leu Cys Thr Ala Phe Ala Ala Phe
85 90 95

Leu Leu Ile Ala Cys Leu Leu Asp Phe Gln Arg Ala Leu Ala Leu Phe
100 105 110

Val Leu Phe Cys Val Val Leu Phe Phe Leu Ala His Ser Leu Leu Lys
115 120 125

Arg Leu Leu Gly Pro Lys Leu Leu Arg Cys Val Lys Pro Leu Arg His
130 135 140

Pro Cys Leu Asn Leu Trp Phe Lys Arg Gly Leu Ala Leu Ala Ala Phe
145 150 155 160

Leu Gly Leu Val Leu Trp Leu Val Leu Asp Thr Ala Gln Arg Pro Glu
165 170 175

Gln Leu Val Ser Phe Gly Gly Ile Cys Val Phe Ile Leu Leu Leu Phe
180 185 190

Ala Gly Ser Lys His His Arg Ala Val
195 200

<210> 351
<211> 101
<212> PRT
<213> Sus scrofa

<400> 351
Ile Pro Arg Ser Asn Val Ser Val Ala Ile Phe Met Leu Asp Thr Val
1 5 10 15

Thr Leu Cys Gly Asn Ser Asp Asp Phe Val Ser Gln Gln Pro Glu Arg
20 25 30

Pro Arg Asn Leu Ala Leu Ala Arg Thr Gln Leu Ala Trp Ile Lys Lys
35 40 45

Gln Leu Ala Ala Ala Lys Glu Asp Tyr Val Leu Val Ala Gly His Tyr
50 55 60

Pro Val Trp Ser Ile Ala Glu His Gly Pro Thr His Cys Leu Val Lys
65 70 75 80

Gln Leu Leu Pro Leu Leu Thr Thr His Lys Val Thr Ala Tyr Leu Cys
85 90 95

Gly His Asp His Asn
100

<210> 352
 <211> 276
 <212> PRT
 <213> Sus scrofa

<400> 352

Met Ser Leu Thr Pro Leu Leu Gln Leu Ala Leu Leu Leu Ala Leu Pro
 1 5 10 15

Arg Ser Leu Arg Gly Lys Gly Cys Pro Ser Pro Pro Cys Glu Cys His
 20 25 30

Gln Glu Asp Asp Phe Arg Val Thr Cys Lys Asp Ile His Ser Ile Pro
 35 40 45

Pro Leu Pro Pro Asn Thr Gln Thr Leu Lys Phe Ile Glu Thr His Leu
 50 55 60

Lys Thr Ile Pro Ser Arg Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
 65 70 75 80

Ile Tyr Leu Ser Ile Asp Ala Thr Leu Gln Gln Leu Glu Ser Gln Ser
 85 90 95

Phe Tyr Asn Leu Ser Lys Met Thr His Ile Glu Ile Arg Asn Thr Arg
 100 105 110

Ser Leu Thr Tyr Ile Asn Pro Gly Ala Leu Lys Asp Leu Pro Leu Leu
 115 120 125

Lys Phe Leu Gly Ile Phe Asn Thr Gly Leu Arg Ile Phe Pro Asp Leu
 130 135 140

Thr Lys Val Tyr Ser Thr Asp Val Phe Phe Ile Leu Glu Ile Thr Asp
 145 150 155 160

Asn Pro Tyr Met Thr Ser Ile Pro Ala Asn Ala Phe Gln Gly Leu Cys
 165 170 175

Asn Glu Thr Leu Thr Leu Lys Leu Tyr Asn Asn Gly Phe Thr Ser Val
 180 185 190

Gln Gly His Ala Phe Asn Gly Thr Lys Leu Asp Ala Val Tyr Leu Asn
 195 200 205

Lys Asn Lys Tyr Leu Thr Val Ile Asp Lys Asp Ala Phe Gly Gly Val
 210 215 220

Phe Ser Gly Pro Thr Leu Leu Asp Val Ser Tyr Thr Ser Val Thr Ala
 225 230 235 240

Leu Pro Pro Lys Gly Leu Glu His Leu Lys Glu Leu Ile Ala Arg Asn
 245 250 255

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Thr Trp Thr Leu Lys Lys Leu Pro Leu Ser Leu Ser Phe Leu His Leu
260 265 270

Thr Arg Ala Asp
275

<210> 353
<211> 176
<212> PRT
<213> Salmo salar

<400> 353
Met Ala His Pro Ser Gln Leu Gly Phe Gln Asp Ala Ala Ser Pro Val
1 5 10 15

Met Glu Glu Leu Leu His Phe His Asp His Ala Leu Met Ile Val Leu
20 25 30

Leu Ile Ser Thr Leu Val Leu Tyr Ile Ile Val Ala Met Val Ser Thr
35 40 45

Lys Leu Thr Asn Lys Tyr Ile Leu Asp Ser Gln Glu Ile Glu Ile Val
50 55 60

Trp Thr Val Leu Pro Ala Val Ile Leu Ile Leu Ile Ala Leu Pro Ser
65 70 75 80

Leu Arg Ile Leu Tyr Leu Met Asp Glu Ile Asn Asp Pro His Leu Thr
85 90 95

Ile Lys Ala Met Gly His Gln Trp Tyr Trp Ser Tyr Glu Tyr Thr Asp
100 105 110

Tyr Glu Asp Leu Gly Phe Asp Ser Tyr Met Val Pro Thr Gln Asp Leu
115 120 125

Thr Pro Gly Gln Phe Arg Leu Leu Glu Thr Asp His Arg Met Val Val
130 135 140

Pro Val Glu Ser Pro Ile Arg Val Leu Val Ser Ala Glu Asp Val Leu
145 150 155 160

His Ser Trp Ala Val Pro Ser Leu Gly Val Lys Met Asp Ala Ser Pro
165 170 175

<210> 354
<211> 126
<212> PRT
<213> Sus scrofa

<400> 354
Arg Thr Leu Thr Gly Thr Ala Leu Ala Gly Phe Thr Ile Ile Val Met
1 5 10 15

Pro Leu Glu Leu Glu Trp Leu Asp Val Gly His Arg Thr Val Ala Gly
20 25 30

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Val Leu Ser Ser Thr Phe Trp Thr Gly Gly Val Met Leu Leu Ala Leu
35 40 45

Val Gly Tyr Leu Ile Arg Asp Trp Arg Trp Leu Leu Leu Ala Val Thr
50 55 60

Leu Pro Cys Ala Pro Gly Ile Leu Ser Leu Trp Trp Val Pro Glu Ser
65 70 75 80

Ala Arg Trp Leu Leu Thr Gln Gly Arg Val Glu Asp Ala His Arg Tyr
85 90 95

Leu Leu Arg Cys Ala Arg Leu Asn Gly Arg Pro Val Gly Glu Asp Gly
100 105 110

Leu Ser Arg Glu Ala Leu Ser Lys Val Ala Ala Ala Glu Arg
115 120 125

<210> 355
<211> 151
<212> PRT
<213> Sus scrofa

<400> 355
Arg Leu Val Leu Asn Thr Pro Ser Phe Pro Ser Asn Tyr Trp Asp Lys
1 5 10 15

Phe Val Lys Arg Lys Val Leu Asp Lys His Gly Asp Ile Tyr Gly Arg
20 25 30

Glu Arg Ile Ala Glu Leu Leu Gly Met Asp Leu Ala Thr Leu Glu Ile
35 40 45

Thr Ala His Asn Glu Arg Lys Pro Glu Pro Pro Pro Gly Leu Leu Thr
50 55 60

Trp Leu Met Ser Ile Asp Val Lys Tyr Gln Ile Trp Lys Phe Gly Val
65 70 75 80

Ile Phe Thr Asp Asn Ser Phe Leu Tyr Leu Gly Trp Tyr Met Val Met
85 90 95

Ser Leu Leu Gly His Tyr Asn Asn Phe Phe Phe Ala Ala His Leu Leu
100 105 110

Asp Ile Ala Met Gly Val Lys Thr Leu Arg Thr Ile Leu Ser Ser Val
115 120 125

Thr His Asn Gly Lys Gln Leu Val Met Thr Val Gly Leu Leu Ala Val
130 135 140

Val Val Tyr Leu Tyr Thr Val
145 150

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<210> 356

<211> 101

<212> PRT

<213> Prunus persica

<400> 356

Val Arg Tyr Gln Gly Lys Ser Ile Leu Ala Ser Lys Asp Thr Pro Leu
1 5 10 15

Leu Met Asn Lys Trp Lys Tyr Tyr Leu Val Asn Leu Trp Gln Cys His
20 25 30

Ser Tyr Val Trp Ser Gln Pro Gly Arg Ile Tyr Ile Asn Lys Leu Ser
35 40 45

Lys His Ser Leu Asp Phe Leu Gly Tyr Phe Ser Ser Ile Arg Pro Asn
50 55 60

Leu Ser Val Val Arg Ser Gln Met Leu Glu Asn Ser Phe Ile Thr Asp
65 70 75 80

Asn Ala Met Lys Lys Leu Asp Thr Leu Val Pro Ile Ile Pro Leu Ile
85 90 95

Gly Ser Leu Ala Lys
100

<210> 357

<211> 176

<212> PRT

<213> Capra hircus

<400> 357

Met Ala Tyr Pro Met Gln Leu Gly Phe Gln Asp Ala Thr Ser Pro Ile
1 5 10 15

Met Glu Glu Leu Leu His Phe His Asp His Thr Leu Met Ile Val Phe
20 25 30

Leu Ile Ser Ser Leu Val Leu Tyr Ile Ile Ser Leu Met Leu Thr Thr
35 40 45

Lys Leu Thr His Thr Ser Thr Met Asp Ala Gln Glu Val Glu Thr Val
50 55 60

Trp Thr Ile Leu Pro Ala Ile Ile Leu Ile Met Ile Ala Leu Pro Ser
65 70 75 80

Leu Arg Ile Leu Tyr Met Met Asp Glu Ile Asn Asn Pro Ser Leu Thr
85 90 95

Val Lys Thr Met Gly His Gln Trp Tyr Trp Ser Tyr Glu Tyr Thr Asp
100 105 110

Tyr Glu Asp Leu Ser Phe Asp Ser Tyr Met Ile Pro Thr Ser Glu Leu
115 120 125

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Lys Pro Gly Glu Leu Arg Leu Leu Glu Val Asp Asn Arg Val Val Leu
130 135 140

Pro Met Glu Met Thr Ile Arg Met Leu Ile Ser Ser Glu Asp Val Leu
145 150 155 160

His Ser Trp Ala Val Pro Ser Leu Gly Leu Lys Thr Asp Ala Ile Pro
165 170 175

<210> 358
<211> 176
<212> PRT
<213> Sus scrofa

<400> 358
Met Ala Tyr Pro Phe Gln Leu Gly Phe Gln Asp Ala Thr Ser Pro Ile
1 5 10 15

Met Glu Glu Leu Leu His Phe His Asp His Thr Leu Met Ile Val Phe
20 25 30

Leu Ile Ser Ser Leu Val Leu Tyr Ile Ile Ser Leu Met Leu Thr Thr
35 40 45

Lys Leu Thr His Thr Ser Thr Met Asp Ala Gln Glu Val Glu Thr Ile
50 55 60

Trp Thr Ile Leu Pro Ala Ile Ile Leu Ile Leu Ile Ala Leu Pro Ser
65 70 75 80

Leu Arg Ile Leu Tyr Met Met Asp Glu Ile Asn Asn Pro Ala Leu Thr
85 90 95

Val Lys Thr Met Gly His Gln Trp Tyr Trp Ser Tyr Glu Tyr Thr Asp
100 105 110

Tyr Glu Asp Leu Thr Phe Asp Ser Tyr Met Ile Pro Thr Ser Asp Leu
115 120 125

Lys Pro Gly Glu Met Arg Leu Leu Glu Val Asp Asn Arg Val Val Leu
130 135 140

Pro Met Glu Met Thr Ile Arg Met Leu Val Ser Ser Glu Asp Val Leu
145 150 155 160

His Ser Trp Ala Val Pro Ser Leu Gly Leu Lys Thr Asp Ala Ile Pro
165 170 175

<210> 359
<211> 76
<212> PRT
<213> Sus scrofa

<400> 359
Met Thr Tyr Glu Arg Ile Leu Tyr Ile Ser Leu Glu Met Leu Val Cys
1 5 10 15

Ala Ile His Pro Ile Pro Gly Glu Tyr Lys Phe Phe Trp Thr Ala Arg
20 25 30

Leu Ala Phe Ser Tyr Thr Pro Ser Arg Ala Glu Ala Asp Val Asp Ile
35 40 45

Ile Leu Ser Ile Pro Met Phe Leu Arg Leu Tyr Leu Ile Ala Arg Val
50 55 60

Met Leu Leu His Ser Lys Leu Phe Thr Asp Ala Ser
65 70 75

<210> 360
<211> 76
<212> PRT
<213> Sus scrofa

<400> 360
Lys Glu Pro Cys Phe Arg Glu Glu Asn Ala His Phe Asn Arg Ile Phe
1 5 10 15

Leu Pro Thr Val Tyr Ser Ile Ile Phe Leu Thr Gly Ile Val Gly Asn
20 25 30

Gly Leu Val Ile Leu Val Met Gly Tyr Gln Lys Lys Leu Arg Ser Met
35 40 45

Thr Asp Lys Tyr Arg Leu His Leu Ser Val Ala Asp Leu Leu Phe Val
50 55 60

Leu Thr Leu Pro Phe Trp Ala Val Asp Ala Val Ala
65 70 75

<210> 361
<211> 176
<212> PRT
<213> Sus scrofa

<400> 361
Leu Ser Thr Ile Ala Leu Ser Leu Asn Thr Leu Pro Glu Leu Gln Ser
1 5 10 15

Leu Asp Glu Phe Gly Gln Thr Thr Asp Asn Pro Gln Leu Ala His Val
20 25 30

Glu Ala Val Cys Ile Ala Trp Phe Thr Met Glu Tyr Leu Leu Arg Phe
35 40 45

Leu Ser Ser Pro Lys Lys Trp Lys Phe Phe Lys Gly Pro Leu Asn Ala
50 55 60

Ile Asp Leu Leu Ala Ile Leu Pro Tyr Tyr Val Thr Ile Phe Leu Thr
65 70 75 80

Glu Ser Asn Lys Ser Val Leu Gln Phe Gln Asn Val Arg Arg Val Val
Page 220

Gln Ile Phe Arg Ile Met Arg Ile Leu Arg Ile Leu Lys Leu Ala Arg
100 105 110

His Ser Thr Gly Leu Gln Ser Leu Gly Phe Thr Leu Arg Arg Ser Tyr
115 120 125

Asn Glu Leu Gly Leu Leu Ile Leu Phe Leu Ala Met Gly Ile Met Ile
130 135 140

Phe Ser Ser Leu Val Phe Phe Ala Glu Lys Asp Glu Asp Asp Thr Lys
145 150 155 160

Phe Lys Ser Ile Pro Ala Ser Phe Trp Trp Ala Thr Ile Thr Met Thr
165 170 175

<210> 362

<211> 226

<212> PRT

<213> Malus domestica

<400> 362

Met Leu Ala Cys Asn Cys Ile Glu Pro Gln Trp Pro Ala Asp Glu Leu
1 5 10 15

Leu Met Lys Tyr Gln Tyr Ile Ser Asp Phe Phe Ile Ala Leu Ala Tyr
20 25 30

Phe Ser Ile Pro Leu Glu Leu Ile Tyr Phe Val Lys Lys Ser Ala Val
35 40 45

Phe Pro Tyr Arg Trp Val Leu Val Gln Phe Gly Ala Phe Ile Val Leu
50 55 60

Cys Gly Ala Thr His Leu Ile Asn Leu Trp Thr Phe Ser Ile His Ser
65 70 75 80

Arg Thr Val Ala Met Val Met Thr Thr Ala Lys Val Leu Thr Ala Val
85 90 95

Val Ser Cys Ala Thr Ala Leu Met Leu Val His Ile Ile Pro Asp Leu
100 105 110

Leu Ser Val Lys Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu
115 120 125

Leu Asp Arg Glu Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg
130 135 140

His Val Arg Met Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His
145 150 155 160

Thr Ile Leu Lys Thr Thr Leu Val Glu Leu Gly Arg Thr Leu Ala Leu
165 170 175

Glu Glu Cys Ala Leu Trp Met Pro Thr Arg Thr Gly Leu Glu Leu Gln
180 185 190

Leu Ser Tyr Thr Leu Arg Gln Gln Asn Pro Val Gly Tyr Thr Val Pro
195 200 205

Ile His Leu Pro Val Ile Asn Gln Val Phe Ser Ser Asn Arg Ala Val
210 215 220

Lys Ile
225

<210> 363
<211> 76
<212> PRT
<213> Capra hircus

<400> 363
Gly Phe Phe Phe Ser His Val Gly Trp Leu Leu Val Arg Lys His Pro
1 5 10 15

Ala Val Arg Glu Lys Gly Ala Thr Leu Asp Leu Ser Asp Leu Arg Ala
20 25 30

Glu Lys Leu Val Met Phe Gln Arg Arg Tyr Tyr Lys Pro Gly Val Leu
35 40 45

Leu Leu Cys Phe Ile Leu Pro Thr Leu Val Pro Trp Tyr Leu Trp Gly
50 55 60

Glu Thr Phe Gln Asn Ser Leu Phe Phe Ala Thr Leu
65 70 75

<210> 364
<211> 126
<212> PRT
<213> Sus scrofa

<400> 364
Ala Ser Leu Ile Arg Tyr Glu Val Asn Ile Ser Thr Glu Asn Ala Ala
1 5 10 15

Gly Gly Val Gln Arg Val Glu Ile Leu Asp Gly Arg Thr Glu Cys Val
20 25 30

Leu Ser Asn Leu Arg Gly Gly Thr Arg Tyr Thr Phe Met Val Arg Ala
35 40 45

Arg Met Ala Glu Pro Ser Phe Gly Gly Phe Trp Ser Ala Trp Ser Glu
50 55 60

Pro Ala Ser Leu Leu Thr Ala Ser Asp Leu Asp Pro Leu Ile Leu Thr
65 70 75 80

Leu Ser Leu Ile Leu Val Leu Ile Leu Leu Leu Leu Ala Val Leu Ala
Page 222

Leu Leu Ser His Arg Arg Thr Leu Lys Gln Lys Ile Trp Pro Gly Ile
 100 105 110

Pro Ser Pro Glu Gly Glu Phe Glu Gly Leu Phe Thr Thr His
 115 120 125

<210> 365
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 365
 Ala Thr Val Lys Val Pro Met Met Phe Gln Ser Arg Ala Met Lys Tyr
 1 5 10 15

Leu Asn Asp Ser Leu Leu Pro Cys Gln Leu Val Gln Leu Glu Tyr Thr
 20 25 30

Gly Asn Glu Thr Ala Phe Phe Ile Leu Pro Val Lys Gly Glu Met Asp
 35 40 45

Thr Val Ile Ala Gly Leu Ser Arg Asp Thr Ile Gln Arg Trp Ser Lys
 50 55 60

Ser Leu Ile Pro Ser Gln Val Asp Leu Tyr Val Pro Lys Val Ser Ile
 65 70 75 80

Ser Gly Ala Tyr Asp Leu Gly Ser Ile Leu Gly Asp Met Gly Ile Val
 85 90 95

Asp Leu Leu Ser His
 100

<210> 366
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 366
 Met Lys Leu Ala Ala Pro Ser Leu Ala Leu Leu Leu Ser Thr Ala Thr
 1 5 10 15

Leu Val Ser Gly Ala Trp Asn Arg Arg Ser Arg Ser Cys Gly Gly Val
 20 25 30

Leu Arg Asp Pro Pro Gly Lys Ile Phe Asn Ser Asp Gly Pro Gln Lys
 35 40 45

Asp Cys Val Trp Thr Ile Lys Val Lys Pro His Phe His Val Val Leu
 50 55 60

Ala Ile Pro Pro Leu Asn Leu Ser Cys Gly Lys Glu
 65 70 75

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<210> 367
<211> 76
<212> PRT
<213> Sus scrofa

<400> 367
Val His Ala Asp Asn Ile Ala Gly Lys Ala Phe Val Ser Ala Val Asn
1 5 10 15

Ser Leu Val Phe Gln Gln Thr Gly Ala Asn Trp Asn Ile Gln Cys Trp
20 25 30

Met Lys Glu Asp Leu Lys Leu Phe Ile Cys Tyr Met Glu Ser Leu Phe
35 40 45

Lys Asn Pro Phe Lys Asn Tyr Asp Leu Lys Val His Leu Leu Tyr Val
50 55 60

Leu Leu Glu Val Leu Glu Gly Ser Pro Leu Leu Pro
65 70 75

<210> 368
<211> 101
<212> PRT
<213> Sus scrofa

<400> 368
Ile Cys Asp Gly Thr Ala Ser Ile Gln Ala Arg Gln Thr Cys Ala Thr
1 5 10 15

Cys Phe Gly Val Cys Cys Phe Ile Ala Thr Asp Asp Ile Thr Glu Leu
20 25 30

Tyr Ser Thr Leu Gln Cys Leu Glu Asn Ile Phe Thr Lys Ser Tyr Leu
35 40 45

Lys Glu Lys Asp Ser Asn Val Ile Cys Ser Thr Pro Asn Thr Ala Leu
50 55 60

His Ile Ser Ser Leu Leu Ala Trp Thr Leu Leu Leu Thr Ile Cys Pro
65 70 75 80

Leu Ser Glu Val Lys Lys Lys Leu Glu Met His Val His Lys Leu Pro
85 90 95

Ser Leu Leu Ser Ser
100

<210> 369
<211> 76
<212> PRT
<213> Sus scrofa

<400> 369
Arg Ser Leu Glu Ala Ala Gly His Thr Leu Ile Pro Phe Leu Pro Ala
1 5 10 15

Asn Ile Pro His Ala Leu Glu Ala Leu Ser Thr Gly Gly Leu Phe Ser
Page 224

20

25

30

Asp Gly Gly Lys Arg Leu Leu Gln Asn Phe Glu Gly Asp Tyr Val Asp
 35 40 45

Ser Cys Leu Gly Asp Leu Ile Ser Ile Leu Arg Leu Pro Lys Trp Leu
 50 55 60

Lys Gly Leu Leu Ala Phe Met Leu Arg Pro Leu Leu
 65 70 75

<210> 370
 <211> 176
 <212> PRT
 <213> Sus scrofa

<400> 370
 Met Val Leu Val Trp Leu Leu Leu Leu Leu Thr Leu Leu Ala Gly Ala
 1 5 10 15

Arg Leu Leu Trp Gly Gln Trp Lys Leu Arg Asn Leu His Leu Pro Pro
 20 25 30

Leu Val Pro Gly Phe Leu His Leu Leu Gln Pro Asn Leu Pro Ile Tyr
 35 40 45

Leu Leu Gly Leu Thr Gln Arg Leu Gly Pro Ile Tyr Arg Leu Arg Leu
 50 55 60

Gly Leu Gln Asp Val Val Val Leu Asn Ser Lys Arg Thr Ile Glu Glu
 65 70 75 80

Ala Leu Val Arg Lys Trp Val Asp Phe Ala Gly Arg Pro Gln Ile Pro
 85 90 95

Ser Tyr Lys Leu Ala Ser Gln His Cys Pro Asp Ile Ser Leu Gly Asp
 100 105 110

Tyr Ser Leu Phe Trp Lys Ala His Lys Lys Leu Thr Arg Ser Ala Leu
 115 120 125

Leu Leu Gly Val Arg Ser Ser Met Glu Pro Arg Val Glu Gln Leu Thr
 130 135 140

Gln Glu Phe Cys Glu Arg Met Arg Ala Gln Ala Gly Thr Pro Val Thr
 145 150 155 160

Ile Gln Lys Glu Phe Ser Val Leu Thr Cys Ser Ile Ile Cys Cys Leu
 165 170 175

<210> 371
 <211> 201
 <212> PRT
 <213> Sus scrofa

<400> 371

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Lys Ser Arg Asp Arg Asp Arg His Arg Glu Ile Thr Asn Lys Ser Lys
1 5 10 15

Glu Ser Thr Trp Ala Leu Ile His Ser Val Ser Asp Ala Phe Ser Gly
20 25 30

Trp Leu Leu Met Leu Leu Ile Gly Leu Leu Ser Gly Ser Leu Ala Gly
35 40 45

Leu Ile Asp Ile Ser Ala His Trp Met Thr Asp Leu Lys Glu Gly Ile
50 55 60

Cys Thr Glu Gly Leu Trp Phe Asn His Glu His Cys Cys Trp Asn Ser
65 70 75 80

Lys His Val Thr Phe Lys Asp Arg Asp Lys Cys Pro Glu Trp Asn Ser
85 90 95

Trp Ser Gln Leu Ile Ile Ser Ala Asp Glu Gly Ala Phe Ala Tyr Ile
100 105 110

Val Asn Tyr Phe Met Tyr Val Leu Trp Ala Leu Leu Phe Ala Phe Leu
115 120 125

Ala Val Ser Leu Val Lys Val Phe Ala Pro Tyr Ala Cys Gly Ser Gly
130 135 140

Ile Pro Glu Ile Lys Thr Ile Leu Ser Gly Phe Ile Ile Arg Gly Tyr
145 150 155 160

Leu Gly Lys Trp Thr Leu Ile Ile Lys Thr Ile Thr Leu Val Leu Ala
165 170 175

Val Ser Ser Gly Leu Ser Leu Gly Lys Glu Gly Pro Leu Val His Val
180 185 190

Ala Cys Cys Cys Gly Asn Ile Leu Cys
195 200

<210> 372

<211> 76

<212> PRT

<213> Sus scrofa

<400> 372

Val Leu Leu Ala His Ser Pro His Arg Asp Leu Gly Ile Phe Trp Leu
1 5 10 15

Asn Ala Ala Glu Thr Trp Val Asp Ile Ser Ser Asn Thr Ala Gly Lys
20 25 30

Thr Leu Phe Gly Lys Met Leu Asp Tyr Leu Gln Gly Ser Gly Glu Thr
35 40 45

Pro Gln Thr Asp Val Arg Trp Met Ser Glu Ser Gly Ile Ile Asp Val

50

55

60

Phe Leu Leu Leu Gly Pro Ser Val Phe Asp Val Phe
65 70 75

<210> 373
<211> 76
<212> PRT
<213> Sus scrofa

<400> 373
Asn Ile Thr Leu Glu Ser Ser Ile Leu Leu Gln Ile Lys His Ile Ile
1 5 10 15

Arg Ser Cys Leu Leu Ser Val Glu Pro Ala Ile Ser Thr Arg His Leu
20 25 30

Pro Tyr Gln Ser Phe Gln Leu Phe Gly Phe Asp Phe Met Val Asp Glu
35 40 45

Asp Leu Lys Val Trp Leu Ile Glu Val Asn Gly Ala Pro Ala Cys Ala
50 55 60

Gln Lys Leu Tyr Ala Glu Leu Cys Gln Gly Ile Val
65 70 75

<210> 374
<211> 76
<212> PRT
<213> Meleagris gallopavo

<400> 374
Asn Tyr Ile Glu Ile Pro Asn Asp Phe Arg Val Lys Asp Met Ile Val
1 5 10 15

Trp Ile Val Leu Gly Val Leu Ser Ser Leu Ile Cys Leu Ile Met Ser
20 25 30

Trp Thr Met Val Leu Lys Gly Tyr Arg Met Ile Thr Phe Ile Leu Pro
35 40 45

Pro Val Pro Gly Pro Lys Ile Lys Gly Ile Asp Thr His Leu Leu Glu
50 55 60

Thr Gly Lys Ser Glu Glu Leu Leu Ser Ala Leu Gly
65 70 75

<210> 375
<211> 101
<212> PRT
<213> Sus scrofa

<400> 375
Val Met Leu His Arg Arg Leu Trp Asn Lys Leu Glu Trp Thr Leu Gln
1 5 10 15

Tyr Asn Leu Thr His Asp Val Thr Ser Val Val Arg Pro Val Leu Trp
20 25 30

Leu Leu Leu Gly Pro Arg Thr Leu Thr Thr Gly Leu Arg Gln Arg Ser
35 40 45

Gly Leu Glu Leu Gln His Arg Pro Val Val Leu Phe Arg Glu Leu Gly
50 55 60

Gly Thr Val Gln Asn Gly Pro Gly Pro Arg Lys Gln Glu Pro Val Thr
65 70 75 80

Leu Pro Pro Ser Leu His Leu Gln Ile Leu Ser Ile Pro Gly Trp Lys
85 90 95

Tyr Ser Ser Asn His
100

<210> 376
<211> 201
<212> PRT
<213> Sus scrofa

<400> 376
Met Thr Val Pro Ala Leu Ala Ser Ala Ser Gly Leu Leu Gln Val Ala
1 5 10 15

Ser Leu Leu Gly Leu Leu Leu Leu Leu Leu Lys Ala Ala Gln Leu Tyr
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Leu Arg Arg Gln Trp Leu Leu Lys Ala Leu Gln Gln Phe Pro Ser Pro
35 40 45

Pro Ser His Trp Leu Tyr Gly His Ser Arg Glu Phe Gln Glu Glu Ser
50 55 60

Glu Leu Gln Pro Leu Leu Lys Arg Val Glu Lys Tyr Pro Ser Ala Cys
65 70 75 80

Ala Arg Trp Leu Trp Gly Thr Arg Ala Met Val Leu Val Tyr Asp Pro
85 90 95

Asp Tyr Met Lys Val Val Leu Ala Arg Ser Glu Pro Lys Ala Pro Val
100 105 110

Leu Tyr Arg Leu Leu Ile Pro Trp Ile Gly Cys Gly Leu Leu Leu Leu
115 120 125

Asn Gly Gln Thr Trp Phe Gln Arg Arg Arg Met Leu Thr Pro Ala Phe
130 135 140

His Tyr Asp Ile Leu Lys Pro Tyr Val Gly Leu Met Ala Lys Ser Val
145 150 155 160

Gln Val Met Leu Asp Lys Trp Glu Gln Leu Val Ala Gln Asp Pro Arg
165 170 175

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Leu Glu Ile Val Gly Pro Val Ser Leu Met Thr Leu Asp Thr Ile Met
180 185 190

Lys Cys Ala Phe Ser His Gln Gly Ser
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Phe Ser Ser Phe Val Phe Ser Thr Val Val Ile His Phe Leu Asp Lys
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Glu Leu Thr Gly Leu Asn Glu Ala Leu Pro Phe Phe Leu Leu Leu Ile
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Asp Leu Ser Arg Ala Ser Ala Leu Ala Lys Phe Ala Leu Ser Ser Asn
35 40 45

Ser Gln Asp Glu Val Arg Glu Asn Ile Ala Arg Gly Met Ala Ile Leu
50 55 60

Gly Pro Thr Phe Thr Leu Asp Ala Leu Val Glu Cys Leu Val Ile Gly
65 70 75 80

Val Gly Thr Met Ser Gly Val Arg Gln Leu Glu Ile Met Cys Cys Phe
85 90 95

Gly Cys Met Ser Val Leu Ala Thr Tyr Phe Val Phe Met Thr Phe Phe
100 105 110

Pro Ala Cys Val Ser Leu Val Leu Glu Leu Ser Arg Glu Ser Arg Glu
115 120 125

Gly Arg Pro Ile Trp Gln Leu Ser His Phe Ala Arg Val Leu Glu Gly
130 135 140

Glu Glu Asn Lys Pro Asn Pro
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Met Pro Leu Leu Trp Leu Arg Gly Phe Leu Leu Ala Ser Cys Trp Ile
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Ile Val Arg Ser Ser Pro Thr Pro Gly Ser Gly Gly His Ser Ala Ala
20 25 30

Pro Asp Cys Pro Ser Cys Ala Leu Ala Thr Leu Pro Lys Asp Val Pro
35 40 45

Asn Ser Gln Pro Glu Met Val Glu Ala Val Lys Lys His Ile Leu Asn
50 55 60

Met Leu His Leu Lys Lys Arg Pro Asp Val Thr Gln Pro Val Pro Lys
65 70 75 80

Ala Ala Leu Leu Asn Ala Ile Arg Lys Leu His Val Gly Lys Val Gly
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Glu Asn Gly Tyr Val
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Phe Gly Ala Leu Ile Leu Thr Leu Val Gln Ile Ala Arg Ala Ile Leu
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Glu Tyr Ile Asp His Lys Leu Arg Gly Ala Gln Asn Pro Val Ala Arg
20 25 30

Cys Ile Met Cys Cys Phe Lys Cys Cys Leu Trp Cys Leu Glu Lys Phe
35 40 45

Ile Lys Phe Leu Asn Arg Asn Ala Tyr Ile Met Ile Ala Ile Tyr Gly
50 55 60

Lys Asn Phe Cys Val Ser Ala Lys Asn Ala Phe Met Leu Leu Met Arg
65 70 75 80

Asn Ile Val Arg Val Val Val Leu Asp Lys Val Thr Asp Leu Leu Leu
85 90 95

Phe Phe Gly Lys Leu
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Met Thr Val Pro Ala Leu Ala Ser Val Ser Gly Leu Leu Gln Val Ala
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Ser Leu Leu Gly Leu Leu Leu Leu Leu Lys Ala Ala Gln Leu Tyr
20 25 30

Leu Arg Arg Gln Trp Leu Leu Lys Ala Leu Gln Gln Phe Pro Ser Pro
35 40 45

Pro Ser His Trp Leu Tyr Gly His Ser Arg Glu Phe Gln Glu Glu Ser
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50		55		60												
Glu	Leu	Gln	Pro	Leu	Leu	Lys	Arg	Val	Glu	Lys	Tyr	Pro	Ser	Ala	Cys	
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Ala	Arg	Trp	Leu	Trp	Gly	Thr	Arg	Ala	Met	Val	Leu	Val	Tyr	Asp	Pro	
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Asp	Tyr	Met	Lys	Val	Val	Leu	Ala	Arg	Ser	Glu	Pro	Lys	Ala	Pro	Val	
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Leu	Tyr	Arg	Leu	Leu	Ile	Pro	Trp	Ile	Gly	Cys	Gly	Leu	Leu	Leu	Leu	
		115					120					125				
Asn	Gly	Gln	Met	Trp	Phe	Gln	Arg	Arg	Arg	Met	Leu	Thr	Pro	Ala	Phe	
	130					135					140					
His	Tyr	Asp	Ile	Leu	Lys	Pro	Tyr	Val	Gly	Leu	Met	Ala	Lys	Ser	Val	
145					150					155					160	
Gln	Val	Met	Leu	Asp	Lys	Trp	Glu	Gln	Leu	Val	Ala	Gln	Asp	Pro	Arg	
			165						170					175		
Leu	Glu	Ile	Val	Gly	Pro	Val	Ser	Leu	Met	Thr	Leu	Asp	Thr	Ile	Met	
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Lys	Cys	Ala	Phe	Ser	His	Gln	Gly	Ser								
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 Ser Leu Tyr Lys Tyr Ile Phe Pro Ala His Leu Gln Lys Pro Thr Leu
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Ala Val Ile Gly Leu Ile Lys Pro Leu Gly Ser Leu Leu Pro Thr Gly
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Asp Thr Gln Ala Arg Trp Ala Val Arg Val Leu Lys Gly Val Asn Lys
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Leu Pro Pro Ser Ser Val Met Ile Gln Glu Val Asn Thr Arg Lys Glu
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Asn Lys Pro Ser Gly Phe Gly Leu Cys Tyr Cys Lys
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<400> 382

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Met Gly Pro Ile Gly Ala Glu Ala Asp Glu Asn Gln Thr Val Glu Glu
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Met Lys Met Glu Pro Ser Gly Pro Gly His Thr Thr Pro Arg Gly Glu
20 25 30

Leu Ala Pro Asp Ser Glu Pro Glu Leu Lys Asp Ser Thr Lys Leu Ile
35 40 45

Glu Val Gln Ile Ile Leu Ile Leu Ala Tyr Cys Ser Ile Ile Leu Leu
50 55 60

Gly Val Val Gly Asn Ser Leu Val Ile His Val Val Ile Lys Phe Lys
65 70 75 80

Ser Met Arg Thr Val Thr Asn Phe Phe Ile Ala Asn Leu Ala Val Ala
85 90 95

Asp Leu Leu Val Asn Thr Leu Cys Leu Pro Phe Thr Leu Thr Tyr Thr
100 105 110

Leu Met Gly Glu Trp Lys Met Gly Pro Val Leu Cys His Leu
115 120 125

<210> 383
<211> 76
<212> PRT
<213> Sus scrofa

<400> 383
Met Gly Lys Leu Leu Leu Trp Val Gly Leu Val Leu Val Leu Lys His
1 5 10 15

His Asn Gly Ala Ala His Lys Leu Val Cys Tyr Phe Ala Asn Trp Ala
20 25 30

Phe Ser Arg Pro Gly Pro Ala Ser Ile Leu Pro Arg Asp Leu Asp Pro
35 40 45

Phe Leu Cys Thr His Leu Val Phe Ala Phe Ala Ser Met Asn Asp Ser
50 55 60

Gln Ile Val Ala Lys Asp Ala Arg Asp Glu Ser Ile
65 70 75

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<213> Solanum tuberosum

<400> 384
Ile Lys Arg Trp Tyr Asn Asn Leu Lys Tyr Phe Leu Leu Asp Asn Trp
1 5 10 15

Arg Arg Val Trp Val Leu Leu Leu Trp Ile Gly Val Met Ala Gly Leu
20 25 30

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Phe Ala Tyr Lys Tyr Val Gln Tyr Lys Asn Lys Ala Ala Phe Asn Val
35 40 45

Met Gly His Cys Val Cys Val Ala Lys Gly Ala Ala Glu Val Leu Lys
50 55 60

Leu Asn Met Ala Leu Ile Leu Leu Pro Val Cys Arg Asn Thr Ile Thr
65 70 75 80

Trp Leu Arg Asn Lys Thr Lys Leu Gly Gly Ala Val Pro Phe Asp Asp
85 90 95

Asn Ile Asn Phe His
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<211> 76
<212> PRT
<213> Salmo salar

<400> 385
Lys Lys Met Ser Leu His Ser His Ala His Ala Leu Glu Leu Pro Ala
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Gly Ala Ala His Gln Val Glu Leu Phe Leu Gly Ser Asp Thr Val Gln
20 25 30

Glu Glu Asn Ile Lys Val Asn Ile Trp Met Gly Ser Val Ala Glu Thr
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Lys Gly Gln Tyr Ser Val Leu Thr Thr Val Gly Glu Cys Leu Pro Leu
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Ser Thr Phe Tyr Ser Thr Asp Ser Ile Thr Leu Leu
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<213> Sus scrofa

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Met Lys Leu Gly Ser Ala Ile Pro Trp Ala Leu Leu Phe Ser Thr Ala
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Thr Leu Ile Ser Thr Gly Trp Gly Leu Asp Tyr His Ala Cys Gly Gly
20 25 30

Arg Leu Thr Asp Asp Tyr Gly Thr Ile Phe Thr Tyr Lys Gly Pro Lys
35 40 45

Thr Glu Cys Val Trp Thr Leu Gln Val Asp Pro Lys Tyr Lys Leu Leu
50 55 60

Val Ser Ile Pro Thr Leu Asn Leu Thr Cys Gly Lys Glu Tyr Val Glu
65 70 75 80

Ile Leu Glu Gly Ala Pro Gly Ser Lys Ser Leu Gly Lys Phe Cys Glu
85 90 95

Gly Leu Ser Ile Leu
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<213> Sus scrofa

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Asp Ala Leu Phe Gly Tyr Gln Phe Leu Asn Gly Thr Asn Pro Met Leu
1 5 10 15

Leu Arg His Ser Val Glu Leu Pro Ala Arg Leu Lys Phe Pro Pro Gly
20 25 30

Met Glu Glu Leu Gln Ala Gln Leu Glu Lys Glu Leu Gln Gly Gly Thr
35 40 45

Leu Phe Glu Ala Asp Phe Ser Leu Leu Asp Gly Ile Lys Ala Asn Val
50 55 60

Ile Leu Cys Ser Gln Gln Tyr Leu Ala Val Pro Leu Val Met Leu Lys
65 70 75 80

Leu Gln Pro Asp Gly Lys Leu Leu Pro Met Val Ile Gln Leu Gln Leu
85 90 95

Pro Arg Glu Gly Ser Pro Leu Pro Pro Leu Phe Leu Pro Thr Asp Pro
100 105 110

Pro Met Val Trp Leu Leu Ala Lys Cys Trp Val Arg Ser Ser Asp Phe
115 120 125

Gln Leu His Glu Leu His Ser His Leu Leu Arg Gly His Leu Met Ala
130 135 140

Glu Val Ile Ala Val Ala Thr
145 150

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<213> Salmo salar

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Trp Lys Glu Arg Lys Thr Cys Ala Ala Gln Leu Leu Ser Tyr Pro Gly
1 5 10 15

Lys Asn Lys Ile Pro Leu Asn Tyr His Ile Val Glu Val Ile Phe Gly
20 25 30

Glu Leu Phe Gln Leu Pro Cys Pro Pro His Ile Asp Val Met Tyr Thr
Page 234

35

40

45

Thr Leu Leu Ile Glu Leu Cys Lys Leu Gln Pro Gly Ser Leu Pro Gln
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Val Leu Ala Gln Ala Thr Glu Met Met Tyr Val Arg
 65 70 75

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 Lys Glu Pro Cys Phe Arg Glu Glu Asn Ala His Phe Asn Arg Ile Phe
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Leu Pro Thr Val Tyr Ser Ile Ile Phe Leu Thr Gly Ile Val Gly Asn
 20 25 30

Gly Leu Val Ile Leu Val Met Gly Tyr Gln Lys Lys Leu Arg Ser Met
 35 40 45

Thr Asp Lys Tyr Arg Leu His Leu Ser Val Ala Asp Leu Leu Phe Val
 50 55 60

Leu Thr Leu Pro Phe Trp Ala Val Asp Ala Val Ala Asn Trp Tyr Phe
 65 70 75 80

Gly Lys Phe Leu Cys Lys Ala Val His Val Ile Tyr Thr Val Asn Leu
 85 90 95

Tyr Ser Ser Val Leu Ile Leu Ala Phe Ile Ser Leu Asp Arg Tyr Leu
 100 105 110

Ala Ile Val His Ala Thr Asn Ser Gln Arg Pro Arg Lys Leu Leu Ala
 115 120 125

Glu Lys Val Val Tyr Val Gly Val Trp Ile Pro Ala Leu Leu Leu Thr
 130 135 140

Ile Pro Asp Phe Ile Phe Ala Asn Val Arg Glu Gly Asp Gly Arg Tyr
 145 150 155 160

Ile Cys Asp Arg Phe Tyr Pro Asn Asp Leu Trp Leu Val Val Phe Gln
 165 170 175

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 <213> Sus scrofa

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 Met Thr Val Pro Ala Leu Ala Ser Ala Ser Gly Leu Leu Gln Val Ala
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Ser Leu Leu Gly Leu Leu Leu Leu Leu Lys Ala Ala Gln Leu Tyr
20 25 30

Leu His Arg Gln Trp Leu Leu Lys Ala Leu Gln Gln Phe Pro Ser Pro
35 40 45

Pro Ser His Trp Leu Tyr Gly His Ser Arg Glu Phe Gln Glu Glu Ser
50 55 60

Glu Leu Pro Pro Leu Leu Lys Arg Val Glu Lys Tyr Pro Ser Ala Cys
65 70 75 80

Ala Leu Trp Arg Trp Gly Thr Arg Ala Met Val Leu Val Tyr Asp Pro
85 90 95

Asp Tyr Met Lys Val Val Leu Ala Arg Ser Asp Pro Lys Asn Ser Val
100 105 110

Val Tyr Arg Leu Leu Ile Pro Trp Ile Gly Cys Gly Leu Leu Leu Leu
115 120 125

Asn Gly Gln Thr Trp Phe Gln Arg Arg Arg Met Leu Thr Pro Ala Phe
130 135 140

His Tyr Asp Ile Leu Lys Pro Tyr Val Gly Leu Met Ala Lys Ser Val
145 150 155 160

Gln Val Met Leu Asp Lys Trp Glu Gln Leu Val Ala Gln Asp Pro Arg
165 170 175

Leu Glu Ile Val Gly Pro Val Ser Leu Met Thr Leu Asp Thr Ile Met
180 185 190

Lys Cys Ala Phe Ser His Gln Gly Ser
195 200

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<212> PRT

<213> Solanum tuberosum

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Ser Leu Cys Leu Lys Lys Cys Val Glu Lys Gly Gln Met Tyr Arg Thr
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Phe Gln Arg Asp Ser Ala Phe Ser Thr Leu Ser Lys Trp Asn Leu Phe
20 25 30

Gln Thr Tyr Met Pro Trp Phe Leu Thr Ser Thr Gly Tyr Lys Tyr Leu
35 40 45

Asn Leu Ile Phe Leu Asp Thr Phe Ser Asp Leu Leu Pro Ile Leu Ser
50 55 60

Ser Ser Gln Lys Phe Val Ser Ile Phe Pro Asp Ile Met His Gly Ser
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65				70				75				80			
Gly	Ile	Ser	Trp	Arg 85	Ile	Leu	Gln	Lys	Lys 90	Leu	Cys	Leu	Pro	Gln 95	Trp
Asn	Leu	Ile	Ser 100	Glu	Ile	Ser	Ser	Lys 105	Cys	Leu	His	Asn	Leu 110	Leu	Leu
Ser	Glu	Glu 115	Met	Ile	His	Arg	Asn 120	Asn	Glu	Ser	Pro	Leu 125	Ile	Ser	Thr
His	Leu 130	Arg	Ser	Pro	Asn	Ala 135	Arg	Glu	Phe	Leu	Tyr 140	Ser	Ile	Leu	Phe
Leu 145	Leu	Leu	Val	Ala	Gly 150	Tyr									
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<212> PRT															
<213> Solanum tuberosum															
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Glu	Tyr	Ala	Ala 20	Met	Ile	Met	Glu	Glu 25	Leu	Asp	Pro	Asn	Asn 30	Leu	Gly
Tyr	Ile	Met 35	Ile	Glu	Asn	Leu	Glu 40	Met	Leu	Leu	Leu	Gln 45	Ala	Pro	Asn
Gln	Ser 50	Val	Gln	Arg	Gly	Gly 55	Glu	Ser	Arg	Asn	Leu 60	Ser	Gln	Met	Leu
Ser 65	Gln	Lys	Leu	Lys	His 70	Thr	Gln	Glu	Pro	Asn 75	Pro	Leu	Val	Arg	Trp 80
Tyr	Lys	Ser	Phe	Met 85	Tyr	Phe	Leu	Leu	Asp 90	Asn	Trp	Gln	Arg	Val 95	Trp
Val	Leu	Leu	Leu 100	Trp	Ile	Gly	Ile	Met 105	Ala	Val	Leu	Phe	Thr 110	Trp	Lys
Tyr	Ile	Gln 115	Tyr	Lys	Gln	Lys	Ala 120	Ala	Tyr	Asp	Val	Met 125	Gly	Pro	Cys
Val	Cys 130	Leu	Ala	Lys	Gly	Ala 135	Ala	Glu	Thr	Ile	Lys 140	Leu	Asn	Met	Ala
Ile 145	Ile	Leu	Leu	Pro	Val 150	Cys	Arg	Asn	Thr	Ile 155	Thr	Trp	Leu	Arg	Asn 160
Lys	Thr	Arg	Leu	Gly 165	Ser	Ala	Val	Pro	Phe 170	Asp	Asp	Asn	Leu	Asn 175	Phe

His Lys Val Ile Ala Val Ala Ile Ala Leu Gly Val Ala Ile His Gly
180 185 190

Leu Ala His Leu Thr Cys Asp Phe Pro
195 200

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Val Arg Tyr Gln Gly Lys Ser Ile Leu Ser Ser Lys Asp Thr Pro Leu
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Leu Met Asn Lys Trp Lys Tyr Tyr Leu Val Asn Leu Trp Gln Cys His
20 25 30

Ser Tyr Val Trp Ser Gln Pro Gly Arg Ile Tyr Ile Asn Gln Leu Ser
35 40 45

Lys His Ser Leu Asp Phe Leu Gly Tyr Phe Ser Ser Met Arg Pro Asn
50 55 60

Leu Ser Val Val Arg Gly Gln Met Leu Glu Asn Ser Phe Ile Met Asp
65 70 75 80

Asn Ala Met Lys Lys Leu Asp Thr Leu Val Pro Ile Ile Pro Leu Ile
85 90 95

Gly Ser Leu Ala Lys
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Met Ser Phe Ile Phe Asp Trp Ile Tyr Ser Gly Phe Ser Ser Val Leu
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Gln Phe Leu Gly Leu Tyr Lys Lys Thr Gly Lys Leu Val Phe Leu Gly
20 25 30

Leu Asp Asn Ala Gly Lys Thr Thr Leu Leu His Met Leu Lys Asp Asp
35 40 45

Arg Leu Gly Gln His Val Pro Thr Leu His Pro Thr Ser Glu Glu Leu
50 55 60

Thr Ile Ala Gly Met Thr Phe Thr Thr Phe Asp Leu Gly Gly His Val
65 70 75 80

Gln Ala Arg Arg Val Trp Lys Asn Tyr Leu Pro Ala Ile Asn Gly Ile
Page 238

Val Phe Leu Val Asp
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<213> Sus scrofa

<400> 395
Leu Glu Leu Ile Ala Lys Ser Gln Leu Thr Ser Leu Ser Gly Ile Ala
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Gln Lys Asn Phe Met Asn Ile Leu Glu Lys Val Val Leu Lys Val Leu
20 25 30

Glu Asp Gln Gln Asn Ile Arg Leu Ile Arg Glu Leu Leu Gln Thr Leu
35 40 45

Tyr Thr Ser Leu Cys Thr Leu Val Gln Arg Val Gly Lys Ser Val Leu
50 55 60

Val Gly Asn Ile Asn Met Trp Val Tyr Arg Met Glu Thr Ile Leu His
65 70 75 80

Trp Gln Gln Gln Leu Asn Asn Ile Gln Ile Thr Arg Pro Ala Phe Lys
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Gly Leu Thr Phe Thr
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<213> Sus scrofa

<400> 396
Met Glu Val Leu Gly Phe Leu Ser Pro Glu Leu Asn Gly Pro Met Val
1 5 10 15

Thr Met Ala Leu Ala Val Val Leu Leu Ala Leu Leu Lys Trp Tyr Ser
20 25 30

Thr Ser Ala Phe Ser Arg Leu Glu Lys Leu Gly Ile Arg His Pro Lys
35 40 45

Pro Ser Pro Phe Ile Gly Asn Leu Thr Phe Phe Arg Gln Gly Phe Trp
50 55 60

Glu Ser His Met Glu Leu Arg Lys Gln Tyr Gly Pro Leu Ser Gly Tyr
65 70 75 80

Tyr Leu Gly Arg Arg Met Ile Val Val Ile Ser Asp Pro Asp Met Ile
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Lys Gln Val Leu Ala
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<213> Sus scrofa

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Arg Arg Arg Pro Tyr Ile Leu Ala Leu Gly Val Met Met Leu Leu Gly
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Met Ala Leu Tyr Leu Asn Gly Asp Thr Ile Ile Ser Ala Leu Ile Ala
20 25 30

Asp Pro Arg Arg Lys Pro Ile Trp Ala Ile Ser Ile Thr Met Thr Gly
35 40 45

Val Val Leu Phe Asp Phe Ala Ala Asp Phe Ile Asp Gly Pro Ile Lys
50 55 60

Ala Tyr Leu Phe Asp Val Cys Thr His Gln Asp Lys Glu Arg Gly Leu
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His Tyr His Ala Leu Phe Thr Gly Leu Gly Gly Ala Leu Gly Tyr Leu
85 90 95

Leu Gly Ala Ile Asp
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<213> Sus scrofa

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Ile Ser Arg Asn Ile Thr Ser Ile His Ile Glu Asn Trp Arg Gly Leu
1 5 10 15

His Thr Leu Asn Ala Val Asp Met Glu Leu Tyr Thr Gly Leu Gln Lys
20 25 30

Leu Thr Ile Lys Asn Ser Gly Leu Arg Ser Ile Gln Pro Arg Ala Phe
35 40 45

Ala Lys Asn Pro His Leu Arg Tyr Ile Asn Leu Ser Ser Asn Arg Leu
50 55 60

Thr Thr Leu Ser Trp Gln Leu Phe Gln Thr Leu Ser
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<213> Sus scrofa

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Met Gly Pro Ile Gly Ala Glu Ala Asp Glu Asn Gln Thr Val Glu Glu
Page 240

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 Met Lys Met Glu Pro Ser Gly Pro Gly His Thr Thr Pro Arg Gly Glu
 20 25 30
 Leu Ala Pro Asp Ser Glu Pro Glu Leu Lys Asp Ser Thr Lys Leu Ile
 35 40 45
 Glu Val Gln Ile Ile Leu Ile Leu Ala Tyr Cys Ser Ile Ile Leu Leu
 50 55 60
 Gly Val Val Gly Asn Ser Leu Val Ile His Val Val Ile Lys Phe Lys
 65 70 75 80
 Ser Met Arg Thr Val Thr Asn Phe Phe Ile Ala Asn Leu Ala Val Ala
 85 90 95
 Asp Leu Leu Val Asn Thr Leu Cys Leu Pro Phe Thr Leu Thr Tyr Thr
 100 105 110
 Leu Met Gly Glu Trp Lys Met Gly Pro Val Leu Cys His Leu Val Pro
 115 120 125
 Tyr Ala Gln Gly Leu Ala Val Gln Val Ser Thr Ile Thr Leu Thr Val
 130 135 140
 Ile Ala Leu Asp Arg His Arg Cys Ile Val Tyr His Leu Glu Ser Lys
 145 150 155 160
 Ile Ser Lys Arg Ile Ser Phe Leu Ile Ile Gly Leu Ala Trp Gly Ile
 165 170 175
 Ser Ala Leu Leu Ala Ser Pro Leu Ala Ile Phe Arg Glu Tyr Ser Leu
 180 185 190
 Ile Glu Ile Ile Pro Asp Phe Glu Ile Val Ala Cys Thr Glu Lys Trp
 195 200 205
 Pro Gly Glu Glu Lys Ser Ile Tyr Gly Thr Val Tyr Ser Leu Ser Ser
 210 215 220
 Leu Leu
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 Arg Ser Ile Ala Ile Tyr Leu Gly Val Gly Leu Cys Leu Leu Phe Ile
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Val Arg Thr Leu Leu Leu His Pro Ala Ile Phe Gly Pro His His Ile
35 40 45

Gly Met Gln Met Arg Ile Ala Met Phe Ser Leu Ile Tyr Lys Lys Thr
50 55 60

Leu Lys Leu Ser Ser Arg Val Leu Asp Lys Ile Ser Ile Gly Gln Leu
65 70 75 80

Val Ser Leu Leu Ser Asn Asn Leu Asn Lys Phe Asp Glu Gly Leu Ala
85 90 95

Leu Ala His Phe Val Trp Ile Ala Pro Leu Gln Val Thr Leu Leu Met
100 105 110

Gly Leu Leu Trp Glu Leu Leu Gln Ala Ser Ala Phe Cys Gly Leu Ala
115 120 125

Phe Leu Val Val Leu Ala Leu Phe Gln Ala Gly Leu Gly Lys Met Met
130 135 140

Met Lys Tyr Arg Asp Gln Arg Ala Gly Lys Ile Asn Glu Arg Leu Val
145 150 155 160

Ile Thr Ser Glu Met Ile Glu Asn Ile Gln Ser Val Lys Ala Tyr Cys
165 170 175

Trp Glu Glu Ala Met Glu Lys Met Ile Glu Asn Leu Arg Gln Thr Glu
180 185 190

Leu Lys Leu Thr Arg Lys Ala Ala Tyr Val Arg Tyr Phe Asn Ser Ser
195 200 205

Ala Phe Phe Phe Ser Gly Leu Phe Val Val Phe Leu Ser Val Leu Pro
210 215 220

Tyr Ala
225

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<212> PRT
<213> Solanum tuberosum

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Trp Tyr Ser His His Leu Phe Ile Ile Val Tyr Thr Leu Leu Ile Val
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His Gly Glu Lys Leu Tyr Ile Thr Lys Asp Trp Tyr Lys Arg Ser Thr
20 25 30

Trp Met Tyr Leu Thr Val Pro Leu Val Leu Tyr Ala Gly Glu Arg Leu
35 40 45

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Leu Arg Ala Phe Arg Ser Ser Ile Lys Ala Val Lys Ile Leu Lys Val
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Ala Val Tyr Pro Gly Asn Val Leu Ala Leu His Met
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Glu Leu Val Pro Gly His Asn Arg Thr Trp Ala Asn Tyr Ser Glu Cys
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Val Lys Phe Leu Thr Asn Glu Thr Arg Glu Arg Glu Val Phe Asp Arg
20 25 30

Leu Gly Met Ile Tyr Thr Val Gly Tyr Ser Val Ser Leu Ala Ser Leu
35 40 45

Thr Val Ala Val Leu Ile Leu Ala Tyr Phe Arg Arg Leu His Cys Thr
50 55 60

Arg Asn Tyr Ile His Met His Leu Phe Leu Ser Phe Met Leu Arg Ala
65 70 75 80

Val Ser Ile Phe Val Lys Asp Ala Val Leu Tyr Ser Gly Ala Thr Leu
85 90 95

Asp Glu Ala Glu Arg Leu Thr Glu Glu Glu Leu Arg Ala Ile Ala Gln
100 105 110

Ala Pro Leu Pro Pro Val Ala Ala Thr Ser Tyr Val Gly Cys Arg Val
115 120 125

Ala Val Thr Phe Phe Leu Tyr Phe Leu Ala Thr Asn Tyr Tyr Trp Ile
130 135 140

Leu Val Glu Gly Leu Tyr Leu His Ser Leu Ile Phe Met Ala Phe Phe
145 150 155 160

Ser Glu Lys Lys Tyr Leu Trp Gly Phe Thr Val Phe Gly Trp Gly Leu
165 170 175

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<213> Sus scrofa

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Asn Phe Trp Gln Asn Asp Arg Glu Arg Phe His Ala Asp Pro Asp Ile
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Ile Gly Thr Ile His Gln His Glu Pro Lys Thr Leu Gln Thr Ser Ala
20 25 30

Thr Leu Lys Asp Leu Leu Phe Gly Val Pro Gly Lys His Ser Gly Val
 35 40 45
 Ser Leu Tyr Thr Arg Lys Arg Leu Val Ser Tyr Thr Ile Thr Leu Val
 50 55 60
 Phe Gln His Tyr His Ala Lys Phe Leu Gly Ser Leu Arg Ala Arg Leu
 65 70 75 80
 Met Leu Leu His Pro Ser Pro Asn Cys Ser Leu Arg Ala Glu Ser Leu
 85 90 95
 Val His Val His Phe Lys Glu Glu Ile Gly Ile Ala Glu Leu Ile Pro
 100 105 110
 Leu Val Thr Thr Tyr Ile Ile Leu Phe Ala Tyr Ile Tyr Phe Ser Thr
 115 120 125
 Arg Lys Ile Asp Met Val Lys Ser Lys Trp Gly Leu Ala Leu Ala Ala
 130 135 140
 Val Val Thr Val Leu Ser Ser Leu Leu Met Ser Val Gly Leu Cys Thr
 145 150 155 160
 Leu Phe Gly Leu Thr Pro Thr Leu Asn Gly Gly Glu Ile Phe Pro Tyr
 165 170 175
 Leu Val Val Val Ile Gly Leu Glu Asn Val Leu Val Leu Thr Lys Ser
 180 185 190
 Val Val Ser Thr Pro Val Asp Leu Glu Val Lys Leu Arg Ile Ala Gln
 195 200 205
 Gly Leu Ser Ser Glu Ser Trp Ser Ile Met Lys Asn Met Ala Thr Glu
 210 215 220
 Leu Gly
 225
 <210> 404
 <211> 76
 <212> PRT
 <213> Sus scrofa
 <400> 404
 Asp Asn Thr Met Phe Leu Leu Tyr Thr Ser Val Asp Thr Ser Lys Tyr
 1 5 10 15
 Lys Val Leu Leu Thr Tyr Asp Thr Arg Lys Asn Tyr Thr Asn Pro Val
 20 25 30
 Asp Lys Ser Pro Thr Phe Ile Trp Lys Asn His Lys Leu Pro Asn Asp
 35 40 45

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Ile Pro Gly Arg Gly Pro Gln Ile Leu Met Ile Ala Val Phe Thr Leu
50 55 60

Thr Gly Thr Ile Val Leu Leu Leu Ile Ala Leu
65 70 75

<210> 405
<211> 126
<212> PRT
<213> Meleagris gallopavo

<400> 405
Ile Leu Val Ser Ile Leu Val Asn Phe Ile Leu Phe Ile Cys Ile Ile
1 5 10 15

Arg Ile Leu Val Gln Lys Leu His Ser Pro Asp Val Gly His Asn Glu
20 25 30

Thr Ser Gln Tyr Ser Arg Leu Ala Lys Ser Thr Leu Leu Leu Ile Pro
35 40 45

Leu Phe Gly Ile His Tyr Ile Met Phe Ala Phe Phe Pro Asp Asn Phe
50 55 60

Lys Ala Gln Val Lys Leu Val Phe Glu Leu Val Val Gly Ser Phe Gln
65 70 75 80

Gly Phe Val Val Ala Val Leu Tyr Cys Phe Leu Asn Gly Glu Val Gln
85 90 95

Ala Glu Leu Lys Arg Lys Trp Arg Arg Trp His Leu Glu Arg Phe Leu
100 105 110

Gly Ser Asp Met Lys Tyr His His Pro Ser Leu Gly Ser Asn
115 120 125

<210> 406
<211> 176
<212> PRT
<213> Sus scrofa

<400> 406
Pro Ser Pro Lys Gly Gly Thr Arg Ala Gln Leu Val Cys Lys Leu Phe
1 5 10 15

Asn Leu Tyr Gln Gly Thr Leu Glu Ile Ile His Lys Leu Leu Ser Asp
20 25 30

Thr Cys Pro Arg Phe Val Leu Gly Leu Leu Asp Ala Gly Lys Ala Asp
35 40 45

Leu Gln Arg Gln Val Arg Pro Glu Ala Trp Leu Ser Ser Gly Pro Asn
50 55 60

Pro Ser Pro Gly His Leu Met Leu Val Cys His Val Ser Gly Phe Tyr
65 70 75 80

Pro Lys Pro Ile Trp Val Met Trp Met Arg Asp Glu Gln Glu Gln Pro
85 90 95

Gly Thr Gln Gln Gly Asp Ile Leu Pro Asn Ala Asp Gly Thr Trp Tyr
100 105 110

Leu Arg Val Thr Leu Asp Val Ala Ala Gly Glu Ala Ser Gly Leu Ser
115 120 125

Cys Arg Val Lys His Ser Ser Leu Gly Gly Gln Asp Ile Ile Leu Tyr
130 135 140

Trp Glu Gln His Ser Ser Val Gly Trp Ile Leu Leu Ala Val Ile Val
145 150 155 160

Pro Leu Val Leu Leu Thr Gly Leu Ala Phe Trp His Arg Lys His Trp
165 170 175

<210> 407
<211> 101
<212> PRT
<213> Sus scrofa

<400> 407
Met Tyr Val Gly Glu Val Ser Pro Thr Ala Leu Arg Gly Ala Leu Gly
1 5 10 15

Thr Leu His Gln Leu Gly Ile Val Val Gly Ile Leu Ile Ala Gln Val
20 25 30

Phe Gly Leu Asp Ser Ile Met Gly Asn Glu Glu Leu Trp Pro Leu Leu
35 40 45

Leu Ser Val Ile Phe Ile Pro Ala Leu Leu Gln Cys Val Leu Leu Pro
50 55 60

Phe Cys Pro Glu Ser Pro Arg Phe Leu Leu Ile Asn Arg Asn Glu Glu
65 70 75 80

Asn Arg Ala Lys Ser Val Leu Lys Lys Leu Arg Gly Thr Ala Asp Val
85 90 95

Thr Arg Asp Leu Gln
100

<210> 408
<211> 101
<212> PRT
<213> Salmo salar

<400> 408
Thr Leu Val Ile Ser Glu Asn Ser Leu Ile Val Asn Pro Ser Leu Thr
1 5 10 15

Ile Ala Asn Leu Glu Ala Leu Leu Leu Arg Arg Thr Val Thr Val Val
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Asp Val Cys His Ser Leu Glu Gln Pro Ala Ile Thr Glu Leu Gln Trp
 35 40 45

Gly Ala Ile Arg Asp Met Ile Gln Ala Leu Leu Ala His Ile Arg Gln
 50 55 60

Phe Gly Gln His Ser Ala Met Arg Asn Val Pro His Arg Ile Glu Lys
 65 70 75 80

Arg His Cys Glu Thr Trp Asn Leu Cys Thr Leu Phe Gly Ile Leu Leu
 85 90 95

Gly Tyr Pro Ser Thr
 100

<210> 409
 <211> 251
 <212> PRT
 <213> Sus scrofa

<400> 409
 Tyr Leu Asn Glu Asp Ser Arg Glu Asn Ser Met Pro Lys Arg Pro Met
 1 5 10 15

Leu Val His Leu His Gln Thr Ala His Phe Asp Glu Phe Asp Cys Pro
 20 25 30

Pro Glu Leu Gln His Lys Gln Glu Leu Phe Pro Lys Trp His Leu Pro
 35 40 45

Ile Lys Ile Ala Ala Ile Val Ser Ser Leu Thr Phe Leu Tyr Thr Leu
 50 55 60

Leu Arg Glu Val Ile His Pro Phe Val Thr Ser His Gln Gln Tyr Phe
 65 70 75 80

Tyr Lys Ile Pro Ile Leu Val Ile Asn Lys Val Leu Pro Met Val Ser
 85 90 95

Ile Thr Leu Leu Ala Leu Val Tyr Leu Pro Gly Val Ile Ala Ala Ile
 100 105 110

Val Gln Leu His Asn Gly Thr Lys Tyr Lys Lys Phe Pro His Trp Leu
 115 120 125

Asp Arg Trp Met Val Thr Arg Lys Gln Phe Gly Leu Leu Ser Phe Phe
 130 135 140

Phe Ala Val Leu His Ala Val Tyr Ser Leu Ser Tyr Pro Met Arg Arg
 145 150 155 160

Ser Tyr Arg Tyr Lys Leu Leu Asn Trp Ala Tyr Gln Gln Val Gln Gln
 165 170 175

Asn Lys Glu Asp Ala Trp Ile Glu His Asp Val Trp Arg Met Glu Ile
180 185 190

Tyr Val Ser Leu Gly Ile Val Thr Leu Ala Ile Leu Ala Leu Leu Ala
195 200 205

Val Thr Ser Ile Pro Ser Val Ser Asp Ser Leu Thr Trp Arg Glu Phe
210 215 220

His Tyr Ile Gln Ser Thr Leu Gly Ile Val Ser Leu Leu Leu Gly Thr
225 230 235 240

Ile His Ala Leu Ile Phe Ala Trp Asn Lys Trp
245 250

<210> 410
<211> 101
<212> PRT
<213> Salmo salar

<400> 410
Gly Gly Gly Trp Cys Gly Pro Arg Ile Thr Met Pro Pro Glu Gln Val
1 5 10 15

Leu Phe Leu Leu Gln Gly Ala Glu Pro Pro Ala Leu Cys Ser Arg Gln
20 25 30

Lys Val Ala Arg Pro Tyr Thr Glu Val Thr Met Met Thr Leu Leu Thr
35 40 45

Ser Met Ala Asp Lys Glu Leu Val His Met Ile Ala Trp Ala Lys Lys
50 55 60

Val Pro Gly Phe Gln Glu Leu Ser Leu His Asp Gln Val Gln Leu Leu
65 70 75 80

Glu Ser Ser Trp Leu Glu Val Leu Met Ile Gly Leu Ile Trp Arg Ser
85 90 95

Ile His Cys Pro Gly
100

<210> 411
<211> 76
<212> PRT
<213> Sus scrofa

<400> 411
Asp Ala Ser Asn Ile Met Arg Val Ile Ser Ile Lys Asn Tyr His Pro
1 5 10 15

Lys Ile Arg Ile Ile Thr Gln Met Leu Gln Tyr His Asn Lys Ala His
20 25 30

Leu Leu Asn Ile Pro Ser Trp Asn Trp Lys Glu Gly Asp Asp Ala Ile
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Cys Leu Ala Glu Leu Lys Leu Gly Phe Ile Ala Gln Ser Cys Leu Ala
 50 55 60

Gln Gly Leu Ser Thr Met Leu Ala Asn Leu Phe Ser
 65 70 75

<210> 412
 <211> 201
 <212> PRT
 <213> Sus scrofa

<400> 412
 Phe Gly Ala Leu Ile Leu Thr Leu Val Gln Ile Ala Arg Ala Ile Leu
 1 5 10 15

Glu Tyr Ile Asp His Lys Leu Arg Gly Ala Gln Asn Pro Val Ala Arg
 20 25 30

Cys Ile Met Cys Cys Phe Lys Cys Cys Leu Trp Cys Leu Glu Lys Phe
 35 40 45

Ile Lys Phe Leu Asn Arg Asn Ala Tyr Ile Met Ile Ala Ile Tyr Gly
 50 55 60

Lys Asn Phe Cys Val Ser Ala Lys Asn Ala Phe Met Leu Leu Met Arg
 65 70 75 80

Asn Ile Val Arg Val Val Val Leu Asp Lys Val Thr Asp Leu Leu Leu
 85 90 95

Phe Phe Gly Lys Leu Leu Val Val Gly Gly Val Gly Val Leu Ser Phe
 100 105 110

Phe Phe Phe Thr Gly Arg Ile Gln Gly Leu Gly Lys Asp Phe Glu Ser
 115 120 125

Pro Gln Leu Asn Tyr Tyr Trp Leu Pro Ile Met Thr Ser Ile Met Gly
 130 135 140

Ala Tyr Val Ile Ala Ser Gly Phe Phe Ser Val Phe Gly Met Cys Val
 145 150 155 160

Asp Thr Leu Phe Leu Cys Phe Leu Glu Asp Leu Glu Arg Asn Asp Gly
 165 170 175

Ser Leu Asp Arg Pro Tyr Tyr Met Ser Lys Ala Leu Leu Lys Ile Leu
 180 185 190

Gly Lys Lys Asn Glu Val Pro Ser Gly
 195 200

<210> 413
 <211> 101

<212> PRT

<213> Sus scrofa

<400> 413

Met Glu Arg Lys Leu Met Ser Leu Leu Pro Ser Ile Ser Leu Ser Glu
 1 5 10 15

Met Glu Pro Asn Ser Thr Leu Gly Asn His Asn Ser Asn Arg Ser Cys
 20 25 30

Thr Thr Glu Asn Phe Lys Arg Glu Phe Tyr Pro Ile Val Tyr Leu Val
 35 40 45

Ile Phe Ile Trp Gly Ala Leu Gly Asn Gly Phe Ser Ile Tyr Val Phe
 50 55 60

Leu Lys Pro Tyr Lys Lys Ser Thr Ser Val Asn Val Phe Met Leu Asn
 65 70 75 80

Leu Ala Ile Ser Asp Leu Leu Phe Thr Ile Thr Leu Pro Phe Arg Val
 85 90 95

Asp Tyr Tyr Leu Arg
 100

<210> 414

<211> 101

<212> PRT

<213> Solanum tuberosum

<400> 414

Met Asp Val Arg Arg Arg Pro Val Lys Pro Leu Tyr Pro Ser Glu His
 1 5 10 15

Ile Ser Ser Gly Glu Pro Leu Lys Pro His Asn Gln Asp Ser Ser Val
 20 25 30

Lys Ala Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Asn Gly Leu
 35 40 45

Phe Phe Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu His Arg Trp
 50 55 60

Arg Glu Lys Ile Arg Asn Gly Ile Pro Leu His Val Leu Asn Phe Ser
 65 70 75 80

Glu Leu Val Ala Met Val Ser Leu Ile Ala Ser Val Ile Tyr Leu Leu
 85 90 95

Gly Phe Phe Gly Ile
 100

<210> 415

<211> 101

<212> PRT

<213> Solanum tuberosum

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<400> 415

Met Asp Val Arg Arg Arg Pro Val Lys Pro Leu Tyr Thr Ser Lys Asp
1 5 10 15

Ala Ser Ala Gly Glu Pro Leu Lys Gln Glu Val Ser Ser Pro Lys
20 25 30

Ala Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Asn Gly Leu Phe
35 40 45

Phe Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Val Arg Trp Arg
50 55 60

Glu Lys Ile Arg Asn Ser Ile Pro Leu His Val Val Thr Leu Ser Glu
65 70 75 80

Leu Leu Ala Met Val Ser Leu Ile Ala Ser Val Ile Tyr Leu Leu Gly
85 90 95

Phe Phe Gly Ile Gly
100

<210> 416

<211> 76

<212> PRT

<213> Sus scrofa

<400> 416

Met Val Leu Trp Gly Pro Val Leu Gly Val Leu Leu Val Ala Ile Val
1 5 10 15

Gly Tyr Leu Cys Leu Gln Gly Leu Leu Arg Gln Arg Arg Pro Glu Glu
20 25 30

Pro Pro Leu Asp Lys Gly Ser Val Pro Trp Leu Gly His Ala Met Thr
35 40 45

Phe Arg Lys Asn Met Leu Glu Phe Leu Lys His Met Trp Ala Arg His
50 55 60

Gly Asp Ile Phe Thr Val Gln Leu Gly Gly Gln Tyr
65 70 75

<210> 417

<211> 76

<212> PRT

<213> Sus scrofa

<400> 417

Ala Ala Leu Leu Val Asn Leu Phe Phe Leu Leu Asn Ile Val Arg Val
1 5 10 15

Leu Ile Thr Lys Leu Lys Val Thr His Gln Ala Glu Ser Asn Leu Tyr
20 25 30

Met Lys Ala Val Arg Ala Thr Leu Ile Leu Val Pro Leu Leu Gly Ile
35 40 45

Glu Phe Val Leu Ile Pro Trp Arg Pro Glu Gly Lys Ile Ala Glu Glu
50 55 60

Val Tyr Asp Tyr Ile Met His Ile Leu Val His Tyr
65 70 75

<210> 418
<211> 201
<212> PRT
<213> Sus scrofa

<400> 418
Met Ala Asn Tyr Thr Ser Ala Pro Glu Asp Asp Tyr Asp Val Phe Ile
1 5 10 15

Glu Asp Asp Leu Ser Asn Asp Glu Arg Glu Leu Cys Ser Pro Tyr Asp
20 25 30

Pro Gln Ala Leu Leu Ala Gln Leu Val Pro Tyr Leu Phe Ile Thr Val
35 40 45

Phe Leu Val Gly Leu Leu Asp Asn Ile Leu Val Val Leu Ile Met Val
50 55 60

Lys Tyr Lys Gly Leu Lys Gln Val Glu Asn Ile Tyr Leu Leu Asn Leu
65 70 75 80

Ala Val Cys Asn Leu Cys Phe Leu Cys Thr Leu Pro Phe Trp Val His
85 90 95

Met Ala Trp His Glu Gly Asp Pro Gly Glu Pro Leu Cys Lys Ile Leu
100 105 110

Leu Val Leu Tyr Ser Val Gly Leu Phe Ser Glu Ala Phe Phe Asn Val
115 120 125

Leu Leu Thr Val Gln Arg Tyr Gln Lys Phe Phe Gln Met Arg Gly Phe
130 135 140

Phe Ser Ala Thr Arg Met Val Ala Gly Ser Ile Phe Pro Ser Ala Leu
145 150 155 160

Val Trp Val Ile Ala Val Leu Val Met Leu Pro Glu Leu Ala Phe Tyr
165 170 175

Lys Pro Gln Met Glu Asn Gln Lys Tyr Lys Cys Phe Phe Gly Arg Pro
180 185 190

Leu Phe Leu Pro Ala Asp Glu Thr Phe
195 200

<210> 419
<211> 176
<212> PRT

<213> Sus scrofa

<400> 419

Lys Leu Val Pro Phe Ile Gln Lys Ala Ser Val Gly Ile Thr Val Leu
 1 5 10 15

Ser Leu Cys Ala Leu Ser Ile Asp Arg Tyr Arg Ala Val Ala Ser Trp
 20 25 30

Ser Arg Ile Lys Gly Ile Gly Val Pro Lys Trp Thr Ala Val Glu Ile
 35 40 45

Val Leu Ile Trp Val Val Ser Val Val Leu Ala Val Pro Glu Ala Leu
 50 55 60

Gly Phe Asp Met Ile Thr Thr Asp Tyr Lys Gly Asn Arg Leu Arg Ile
 65 70 75 80

Cys Leu Leu His Pro Thr Gln Lys Thr Ala Phe Met Gln Phe Tyr Lys
 85 90 95

Thr Ala Lys Asp Trp Trp Leu Phe Ser Phe Tyr Phe Cys Leu Pro Leu
 100 105 110

Ala Ile Thr Ala Phe Phe Tyr Thr Leu Met Thr Cys Glu Met Leu Arg
 115 120 125

Lys Lys Ser Gly Met Gln Ile Ala Leu Asn Asp His Leu Lys Gln Arg
 130 135 140

Arg Glu Val Ala Lys Thr Val Phe Cys Leu Val Leu Val Phe Ala Leu
 145 150 155 160

Cys Trp Leu Pro Leu His Leu Ser Arg Ile Leu Lys Leu Thr Leu Tyr
 165 170 175

<210> 420

<211> 76

<212> PRT

<213> Capra hircus

<400> 420

Met Arg Gly Ala Arg Gly Ala Trp Asp Phe Leu Phe Val Leu Leu Leu
 1 5 10 15

Leu Leu Leu Val Gln Thr Gly Ser Ser Gln Pro Ser Val Ser Pro Gly
 20 25 30

Glu Leu Ser Leu Pro Ser Ile His Pro Ala Lys Ser Glu Leu Ile Val
 35 40 45

Ser Val Gly Asp Glu Ile Arg Leu Leu Cys Thr Asp Pro Gly Phe Val
 50 55 60

Lys Trp Thr Phe Glu Ile Leu Gly Gln Leu Ser Glu
 65 70 75

<210> 421
 <211> 226
 <212> PRT
 <213> Sus scrofa

<400> 421
 Met Val Leu Glu Met Leu Asn Pro Met Asn Ile Ser Ser Met Val Ser
 1 5 10 15
 Glu Ala Val Leu Phe Gly Ser Ile Ala Ile Leu Leu Leu Ile Gly Leu
 20 25 30
 Leu Leu Trp Val Trp Asn Tyr Glu Asp Thr Ser Ser Ile Pro Gly Pro
 35 40 45
 Gly Tyr Phe Leu Gly Ile Gly Pro Leu Ile Ser His Phe Arg Phe Leu
 50 55 60
 Trp Met Gly Ile Gly Ser Ala Cys Asn Tyr Tyr Asn Lys Met Tyr Gly
 65 70 75 80
 Glu Phe Met Arg Val Trp Ile Gly Gly Glu Glu Thr Leu Ile Ile Ser
 85 90 95
 Lys Ser Ser Ser Ile Phe His Ile Met Lys His Asn His Tyr Thr Cys
 100 105 110
 Arg Phe Gly Ser Lys Leu Gly Leu Glu Cys Ile Gly Met His Glu Lys
 115 120 125
 Gly Ile Met Phe Asn Asn Asn Pro Ala Leu Trp Lys Ala Val Arg Pro
 130 135 140
 Phe Phe Thr Lys Ala Leu Ser Gly Pro Gly Leu Val Arg Met Val Thr
 145 150 155 160
 Val Cys Ala Asp Ser Ile Thr Lys His Leu Asp Lys Leu Glu Glu Val
 165 170 175
 Arg Asn Asp Leu Gly Tyr Val Asp Val Leu Thr Leu Met Arg Arg Ile
 180 185 190
 Met Leu Asp Thr Ser Asn Asn Leu Phe Leu Gly Ile Pro Leu Asp Glu
 195 200 205
 Ser Ala Leu Val His Lys Val Gln Gly Tyr Phe Asp Ala Trp Gln Ala
 210 215 220
 Leu Leu
 225

<210> 422
 <211> 101
 <212> PRT

<213> Sus scrofa

<400> 422

Leu Ser Gly Glu Glu Ile Phe Arg Lys Lys Ala Val Glu Leu Gly Val
 1 5 10 15

Lys Leu Leu Pro Ala Phe Tyr Thr Pro Ser Gly Ile Pro Trp Ala Leu
 20 25 30

Leu Asn Ile Lys Ser Gly Ile Gly Arg Asn Trp Pro Trp Ala Ser Gly
 35 40 45

Gly Ser Ser Ile Leu Ala Glu Phe Gly Thr Leu His Leu Glu Phe Ile
 50 55 60

His Leu Ser Tyr Leu Ser Gly Asn Pro Phe Phe Ala Glu Lys Val Met
 65 70 75 80

Asn Ile Arg Lys Val Leu Asn Asn Leu Glu Lys Pro Gln Gly Leu Tyr
 85 90 95

Pro Asn Tyr Leu Asn
 100

<210> 423

<211> 201

<212> PRT

<213> Sus scrofa

<400> 423

Leu Phe Ile Ile Leu Leu Trp Arg Thr Leu Lys Tyr Leu Trp Thr Val
 1 5 10 15

Cys Cys His Cys Gly Gly Lys Thr Lys Glu Ala Gln Lys Ile Asn Asn
 20 25 30

Gly Ala Ser Gln Ala Asp Gly Thr Leu Lys Pro Val Asp Glu Lys Glu
 35 40 45

Glu Val Val Ala Ala Glu Val Gly Trp Met Thr Ser Val Lys Asp Trp
 50 55 60

Ala Gly Val Met Ile Ser Ala Gln Thr Leu Thr Gly Arg Val Leu Val
 65 70 75 80

Val Leu Val Phe Ala Leu Ser Ile Gly Ala Leu Val Ile Tyr Phe Ile
 85 90 95

Asp Ser Ser Asn Pro Ile Glu Ser Cys Gln Asn Phe Tyr Lys Asp Phe
 100 105 110

Thr Leu Gln Ile Asp Met Ala Phe Asn Val Phe Phe Leu Leu Tyr Phe
 115 120 125

Gly Leu Arg Phe Ile Ala Ala Asn Asp Lys Leu Trp Phe Trp Leu Glu
 130 135 140

Val Asn Ser Val Val Asp Phe Phe Thr Val Pro Pro Val Phe Val Ser
145 150 155 160

Val Tyr Leu Asn Arg Ser Trp Leu Gly Leu Arg Phe Leu Arg Ala Leu
165 170 175

Arg Leu Ile Gln Phe Ser Glu Ile Leu Gln Phe Leu Asn Ile Leu Lys
180 185 190

Thr Ser Asn Ser Ile Lys Leu Val Asn
195 200

<210> 424
<211> 226
<212> PRT
<213> Sus scrofa

<400> 424
Leu Asn Asp Glu Asp Pro Val Val Val Thr Lys Ala Ala Met Ile Val
1 5 10 15

Asn Gln Leu Ser Lys Lys Glu Ala Ser Arg Arg Ala Leu Met Gly Ser
20 25 30

Pro Gln Leu Val Ala Ala Val Val Arg Thr Met Gln Asn Thr Ser Asp
35 40 45

Leu Asp Thr Ala Arg Cys Thr Thr Ser Ile Leu His Asn Leu Ser His
50 55 60

His Arg Glu Gly Leu Leu Ala Ile Phe Lys Ser Gly Gly Ile Pro Ala
65 70 75 80

Leu Val Arg Met Leu Ser Ser Pro Val Glu Ser Val Leu Phe Tyr Ala
85 90 95

Ile Thr Thr Leu His Asn Leu Leu Leu Tyr Gln Glu Gly Ala Lys Met
100 105 110

Ala Val Arg Leu Ala Asp Gly Leu Gln Lys Met Val Pro Leu Leu Asn
115 120 125

Lys Asn Asn Pro Lys Phe Leu Ala Ile Thr Thr Asp Cys Leu Gln Leu
130 135 140

Leu Ala Tyr Gly Asn Gln Glu Ser Lys Leu Ile Ile Leu Ala Asn Gly
145 150 155 160

Gly Pro Gln Ala Leu Val Gln Ile Met Arg Asn Tyr Ser Tyr Glu Lys
165 170 175

Leu Leu Trp Thr Thr Ser Arg Val Leu Lys Val Leu Ser Val Cys Pro
180 185 190

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Ser Asn Lys Pro Ala Ile Val Glu Ala Gly Gly Met Gln Ala Leu Gly
195 200 205

Lys His Leu Thr Ser Asn Ser Pro Arg Leu Val Gln Asn Cys Leu Trp
210 215 220

Thr Leu
225

<210> 425
<211> 276
<212> PRT
<213> Sus scrofa

<400> 425
Gly Arg Met Ala Gly Pro Pro Ala Arg Thr Leu Thr Pro Pro Pro Cys
1 5 10 15

Glu Gly Pro Ile Glu Ile Lys Asp Thr Phe Lys Tyr Ile Asn Thr Val
20 25 30

Val Ser Cys Leu Val Phe Val Leu Gly Ile Ile Gly Asn Ser Thr Leu
35 40 45

Leu Arg Ile Ile Tyr Lys Asn Lys Cys Met Arg Asn Gly Pro Asn Ile
50 55 60

Leu Ile Ala Ser Leu Ala Leu Gly Asp Leu Leu His Ile Ile Ile Asp
65 70 75 80

Ile Pro Ile Asn Val Tyr Lys Leu Leu Ala Glu Asp Trp Pro Phe Gly
85 90 95

Val Glu Met Cys Lys Leu Val Pro Phe Ile Gln Lys Ala Ser Val Gly
100 105 110

Ile Thr Val Leu Ser Leu Cys Ala Leu Ser Ile Asp Arg Tyr Arg Ala
115 120 125

Val Ala Ser Trp Ser Arg Ile Lys Gly Ile Gly Val Pro Lys Trp Thr
130 135 140

Ala Val Glu Ile Val Leu Ile Trp Val Val Ser Val Val Leu Ala Val
145 150 155 160

Pro Glu Ala Leu Gly Phe Asp Met Ile Thr Thr Asp Tyr Lys Gly Asn
165 170 175

Arg Leu Arg Ile Cys Leu Leu His Pro Thr Gln Lys Thr Ala Phe Met
180 185 190

Gln Phe Tyr Lys Thr Ala Lys Asp Trp Trp Leu Phe Ser Phe Tyr Phe
195 200 205

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Cys Leu Pro Leu Ala Ile Thr Ala Phe Phe Tyr Thr Leu Met Thr Cys
210 215 220

Glu Met Leu Arg Lys Lys Ser Gly Met Gln Ile Ala Leu Asn Asp His
225 230 235 240

Leu Lys Gln Arg Arg Glu Val Ala Lys Thr Val Phe Cys Leu Val Leu
245 250 255

Val Phe Ala Leu Cys Trp Leu Pro Leu His Leu Ser Arg Ile Leu Lys
260 265 270

Leu Thr Leu Tyr
275

<210> 426
<211> 76
<212> PRT
<213> Sus scrofa

<400> 426
Pro Gly Val His Leu Asp Leu Gly Trp Ile Ala Ile Leu Gly Ala Ile
1 5 10 15

Trp Leu Leu Ile Leu Ala Asp Ile His Asp Phe Glu Ile Ile Leu His
20 25 30

Arg Val Glu Trp Ala Thr Leu Leu Phe Phe Ala Ala Leu Phe Ile Leu
35 40 45

Met Glu Ala Leu Ala His Leu His Leu Ile Glu Tyr Val Gly Glu Gln
50 55 60

Thr Ala Leu Leu Ile Lys Met Val Pro Glu Asp Gln
65 70 75

<210> 427
<211> 76
<212> PRT
<213> Sus scrofa

<400> 427
Met Thr Val Leu Ser Gly His Val Val Val Cys Ile Phe Gly Asp Val
1 5 10 15

Ser Ser Ala Leu Ile Gly Leu Arg Asn Leu Val Met Pro Leu Arg Ala
20 25 30

Ser Asn Phe His Tyr His Glu Leu Lys His Ile Val Phe Val Gly Ser
35 40 45

Ile Glu Tyr Leu Lys Arg Glu Trp Glu Thr Leu His Asn Phe Pro Lys
50 55 60

Val Ser Ile Leu Pro Gly Thr Pro Leu Ser Arg Ala
65 70 75

<210> 428
 <211> 101
 <212> PRT
 <213> Solanum tuberosum

<400> 428
 His Phe Val Lys Gly Val Glu Gly Val Ser Gly Ile Ile Met Val Val
 1 5 10 15
 Leu Met Ser Ile Ala Phe Thr Leu Ala Ser Gln Arg Phe Arg Arg Asn
 20 25 30
 Lys Ile Arg Leu Pro Arg Pro Leu Asn Lys Leu Thr Gly Phe Asn Ala
 35 40 45
 Phe Trp Tyr Ser His His Leu Phe Val Ile Val Tyr Ser Leu Leu Ile
 50 55 60
 Val His Gly Ile Glu Leu Tyr Leu Thr Lys Glu Trp Tyr Lys Lys Thr
 65 70 75 80
 Thr Trp Met Tyr Leu Ala Ile Pro Ile Ile Leu Tyr Ser Gly Glu Arg
 85 90 95
 Leu Leu Arg Ala Phe
 100

<210> 429
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 429
 Gly Leu Ser Val Thr Ala Ser Ser Leu Phe Thr Ser Gly Arg Phe Ala
 1 5 10 15
 Ile Asp Pro Glu Leu Arg Gly Ala Glu Phe Glu Arg Ile Ile Gln Asn
 20 25 30
 Leu Asp Val His Phe Trp Lys Ala Phe Trp Asn Ile Thr Glu Ile Glu
 35 40 45
 Val Leu Ser Ser Leu Ala Asn Met Ala Ser Ala Thr Val Arg Val Ser
 50 55 60
 Arg Leu Leu Ser Leu Pro Pro Lys Ala Phe Glu Met Pro Leu Thr Ala
 65 70 75 80
 Asp Pro Lys Leu Thr Val Thr Ile Ser Pro Pro Leu Ala His Thr Gly
 85 90 95
 Pro Gly Pro Val Leu
 100

<210> 430
 <211> 176

<212> PRT

<213> Sus scrofa

<400> 430

Cys His Cys Phe Asn Lys Tyr Arg Lys Asn Glu Ala Lys Arg Arg Glu
1 5 10 15

Val Leu Ser Ala Ala Ala Ala Ala Gly Val Ser Val Ala Phe Gly Ala
20 25 30

Pro Ile Gly Gly Val Leu Phe Ser Leu Glu Glu Val Ser Tyr Tyr Phe
35 40 45

Pro Leu Lys Thr Leu Trp Arg Ser Phe Phe Ala Ala Leu Val Ala Ala
50 55 60

Phe Thr Leu Arg Ser Ile Asn Pro Phe Gly Asn Ser Arg Leu Val Leu
65 70 75 80

Phe Tyr Val Glu Phe His Thr Pro Trp His Leu Phe Glu Leu Val Pro
85 90 95

Phe Ile Leu Leu Gly Ile Phe Gly Gly Leu Trp Gly Ala Leu Phe Ile
100 105 110

Arg Thr Asn Ile Ala Trp Cys Arg Lys Arg Lys Thr Thr Gln Leu Gly
115 120 125

Lys Tyr Pro Val Ile Glu Val Leu Val Val Thr Ala Ile Thr Ala Ile
130 135 140

Leu Ala Phe Pro Asn Glu Tyr Thr Arg Met Ser Thr Ser Glu Leu Ile
145 150 155 160

Ser Glu Leu Phe Asn Asp Cys Gly Leu Leu Asp Ser Ser Lys Leu Cys
165 170 175

<210> 431

<211> 76

<212> PRT

<213> Capsicum annuum

<400> 431

Pro His Lys Gln Gln Gln Glu Glu Asp Asn Thr Leu Leu Ile Asp Ala
1 5 10 15

Ser Asp Ala Leu Pro Leu Pro Leu Tyr Phe Thr Asn Gly Leu Phe Phe
20 25 30

Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Ser Arg Trp Arg Glu
35 40 45

Lys Ile Arg Asn Ser Thr Pro Leu His Val Val Thr Leu Ser Glu Leu
50 55 60

Gly Ala Ile Val Ser Leu Ile Ala Ser Val Ile Tyr

65

70

75

<210> 432

<211> 76

<212> PRT

<213> Solanum tuberosum

<400> 432

Glu Asn Arg Met Asp Thr Ile Leu His Phe Ser Thr Asn Ile Ile Trp
 1 5 10 15

Phe Gly Ile Leu Ser Gly Tyr Ser Ile Leu Gly Lys Glu Lys Leu Val
 20 25 30

Ile Leu Asn Ser Trp Ala Gln Glu Phe Leu Tyr Asn Leu Ser Asp Thr
 35 40 45

Ala Lys Ala Leu Cys Leu Leu Leu Val Thr Glu Phe Phe Leu Gly Tyr
 50 55 60

His Ser Pro Pro Gly Trp Glu Phe Ala Ile Arg Ser
 65 70 75

<210> 433

<211> 76

<212> PRT

<213> Sus scrofa

<400> 433

Met Lys Leu Met Ala Leu Gln Leu Leu Leu Trp His Ile Ala Leu Trp
 1 5 10 15

Met Val Pro Glu Ala Ala Pro Leu Ser Pro Ala Ser Ser Leu Pro Gln
 20 25 30

Ser Phe Leu Leu Lys Cys Leu Glu Gln Val Arg Lys Ile Gln Ala Asp
 35 40 45

Gly Ala Glu Leu Gln Glu Arg Leu Cys Ala Thr His Lys Leu Cys His
 50 55 60

Pro Gln Glu Leu Val Leu Leu Gly His Ser Leu Gly
 65 70 75

<210> 434

<211> 226

<212> PRT

<213> Sus scrofa

<220>

<221> MOD_RES

<222> (5)..(5)

<223> Any amino acid

<400> 434

Arg Gly Ser Asn Xaa Ile Phe Gly Asp Thr Pro Cys Arg Ile Met Ser
 1 5 10 15

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Tyr Ser Met Tyr Val Asn Met Tyr Ser Ser Ile Tyr Phe Leu Thr Val
20 25 30

Leu Ser Val Val Arg Phe Leu Ala Thr Val His Pro Phe Arg Leu Leu
35 40 45

His Thr Thr Ser Ile Lys Asn Ala Trp Ile Leu Cys Gly Val Ile Trp
50 55 60

Ile Phe Ile Met Ala Ser Ser Thr Val Leu Leu Lys Asn Gly Ser Glu
65 70 75 80

Gln Lys Asp Asn Val Thr Leu Cys Leu Glu Leu Asn Ser Asn Lys Val
85 90 95

Thr Lys Leu Lys Thr Met Asn Tyr Val Ala Leu Val Val Gly Phe Val
100 105 110

Leu Pro Phe Gly Thr Leu Ser Ile Cys Tyr Leu Leu Ile Ile Arg Ala
115 120 125

Leu Leu Lys Val Glu Val Pro Glu Ser Gly Leu Arg Leu Ser His Arg
130 135 140

Lys Ala Leu Ile Thr Val Ile Ile Ala Leu Ile Ile Phe Leu Leu Cys
145 150 155 160

Phe Leu Pro Tyr His Val Leu Arg Thr Leu His Leu Leu Glu Trp Lys
165 170 175

Ala Asp Lys Cys Lys Asp Arg Leu His Lys Ala Val Ala Val Thr Leu
180 185 190

Ala Leu Ala Ala Ala Asn Ser Cys Phe Asn Pro Phe Leu Tyr Tyr Phe
195 200 205

Ala Gly Glu Asn Phe Lys Asp Arg Leu Lys Ser Ala Leu Arg Lys Gly
210 215 220

Arg Pro
225

<210> 435
<211> 251
<212> PRT
<213> Sus scrofa

<400> 435
Met Gly Asn Gly Thr Trp Glu Gly Cys His Val Asp Ser Arg Val Asp
1 5 10 15

His Leu Phe Pro Pro Ser Leu Tyr Ile Phe Val Ile Gly Val Gly Leu
20 25 30

Pro Thr Asn Cys Leu Arg Leu Trp Ala Ala Tyr Arg Gln Val Arg Gln
Page 262

Arg Asn Glu Leu Gly Val Tyr Leu Met Asn Leu Ser Ile Ala Asp Leu
50 55 60

Leu Tyr Ile Cys Thr Leu Pro Leu Trp Val Asp Tyr Phe Leu His His
65 70 75 80

Asp Asn Trp Ile His Gly Pro Gly Ser Cys Lys Leu Phe Gly Phe Ile
85 90 95

Phe Tyr Thr Asn Ile Tyr Ile Ser Ile Ala Phe Leu Cys Cys Ile Ser
100 105 110

Val Asp Arg Tyr Leu Ala Val Ala His Pro Leu Arg Phe Ala Arg Leu
115 120 125

Arg Arg Val Lys Thr Ala Val Ala Val Ser Ser Val Val Trp Ala Thr
130 135 140

Glu Leu Gly Ala Asn Ser Val Pro Leu Phe His Asp Glu Leu Phe Arg
145 150 155 160

Asp Arg Tyr Asn His Thr Phe Cys Phe Glu Lys Phe Pro Met Glu Gly
165 170 175

Trp Val Ala Trp Met Asn Leu Tyr Arg Val Phe Val Gly Phe Leu Phe
180 185 190

Pro Trp Ala Leu Met Leu Leu Ser Tyr Arg Gly Ile Leu Arg Ala Val
195 200 205

Arg Gly Ser Val Ser Thr Glu Arg Gln Glu Lys Ala Lys Ile Lys Arg
210 215 220

Leu Ala Leu Ser Leu Ile Ala Ile Val Leu Val Cys Phe Ala Pro Tyr
225 230 235 240

His Val Leu Leu Leu Ser Arg Ser Ala Val Tyr
245 250

<210> 436

<211> 101

<212> PRT

<213> Sus scrofa

<400> 436

Pro Glu Glu Glu Thr Asp Trp Ile Glu Lys His Cys Val Lys Ile Asn
1 5 10 15

Asn Asp Leu Leu Ile Ser Lys Val Phe Tyr Phe Phe Phe Tyr Ser Ala
20 25 30

Tyr Gly Ser Leu Tyr Pro Leu Leu Pro Val Tyr Tyr Lys Gln Leu Gly
35 40 45

Met Ser Pro Ser Gln Ser Gly Leu Leu Val Gly Ile Arg Tyr Phe Ile
50 55 60

Glu Phe Cys Ser Ala Pro Phe Trp Gly Val Val Ala Asp Arg Phe Lys
65 70 75 80

Lys Gly Lys Val Val Leu Leu Phe Ser Leu Leu Cys Trp Val Leu Phe
85 90 95

Asn Leu Gly Ile Gly
100

<210> 437
<211> 201
<212> PRT
<213> Sus scrofa

<400> 437
Met Val Leu Leu Gly Leu Leu Gln Ala Gly Gly Ser Val Leu Gly Gln
1 5 10 15

Ala Met Glu Gln Val Thr Gly Val Asn Leu Leu Ser Ser Leu Leu Leu
20 25 30

Ala Cys Ala Phe Thr Leu Ile Leu Val Tyr Leu Phe Arg Gln Ala Ile
35 40 45

Gly His Leu Ala Pro Leu Pro Ala Gly Ala Lys Ser Pro Pro Tyr Ile
50 55 60

Phe Ser Pro Ile Pro Phe Leu Gly His Ala Ile Ala Phe Gly Lys Ser
65 70 75 80

Pro Ile Glu Phe Leu Glu Asn Ala Tyr Glu Lys Tyr Gly Pro Val Phe
85 90 95

Ser Phe Thr Met Val Gly Lys Thr Phe Thr Tyr Leu Leu Gly Ser Asp
100 105 110

Ala Ala Ala Leu Leu Phe Asn Ser Lys Asn Glu Asp Leu Asn Ala Glu
115 120 125

Asp Val Tyr Ser Arg Leu Thr Thr Pro Val Phe Gly Lys Gly Val Ala
130 135 140

Tyr Asp Val Pro Asn Pro Val Phe Leu Glu Gln Lys Lys Met Leu Lys
145 150 155 160

Ser Gly Leu Asn Ile Ala His Phe Arg Gln His Val Ser Ile Ile Glu
165 170 175

Lys Glu Thr Lys Glu Tyr Phe Gln Ser Trp Gly Glu Ser Gly Glu Arg
180 185 190

Asn Leu Phe Glu Ala Leu Ser Glu Leu
195 200

<210> 438
<211> 101
<212> PRT
<213> Salmo salar

<400> 438
Ala Leu Tyr Val Asn Pro Thr Asp Cys Tyr Asn Val His Trp Pro Ile
1 5 10 15

Ser Arg Gly Gln Leu Asn Val His Gly Gly Val Gly Gly Ser Leu Thr
20 25 30

Ala Val Leu Ala Asp Leu Glu Ala Ile Trp Ser His Val Ile Gln Lys
35 40 45

Gln Leu Glu Ile Pro Leu Lys Asp Leu Lys Tyr Tyr Arg Cys Ile Leu
50 55 60

Leu Val Pro Asp Ile Tyr Asn Arg His His Ile Lys Glu Leu Val Asn
65 70 75 80

Met Leu Leu Leu Asn Met Gly Phe Ser Ala Ile Val Val His Gln Glu
85 90 95

Ser Val Cys Ala Thr
100

<210> 439
<211> 126
<212> PRT
<213> Sus scrofa

<400> 439
Met Thr Thr Ala Ile Leu Gln Arg Leu Ser Thr Leu Ser Val Ser Gly
1 5 10 15

Gln His Leu Arg Arg Leu Pro Lys Ile Leu Glu Asp Gly Leu Pro Lys
20 25 30

Met Pro Gly Thr Val Pro Glu Thr Asp Val Pro Gln Leu Phe Arg Glu
35 40 45

Pro Tyr Ile Arg Ala Gly Tyr Arg Pro Ile Gly His Glu Trp Arg Tyr
50 55 60

Tyr Phe Phe Ser Leu Phe Gln Lys His Asn Glu Val Val Asn Val Trp
65 70 75 80

Thr His Leu Leu Ala Ala Leu Ala Val Leu Leu Arg Phe Trp Ala Phe
85 90 95

Val Glu Thr Glu Gly Leu Pro Trp Thr Ser Ala His Thr Leu Pro Leu
100 105 110

Leu Leu Tyr Val Leu Ser Ser Ile Thr Tyr Leu Thr Phe Ser
115 120 125

<210> 440
<211> 176
<212> PRT
<213> Sus scrofa

<400> 440
Ile Ile Lys His Ile Ala Lys Lys Asn Gly Lys Ser Leu Pro Ala Ser
1 5 10 15

Leu Gln Ser Leu Arg Pro Asp Glu Glu Val Gly Glu Lys Leu Lys Pro
20 25 30

Ser Phe Leu Asp Leu Val Arg Thr Pro Gln Ile Arg Lys His Thr Leu
35 40 45

Ile Leu Met Tyr Asn Trp Phe Thr Ser Ala Val Leu Tyr Gln Gly Leu
50 55 60

Val Met His Met Gly Leu Ala Gly Ser Asn Leu Tyr Leu Asp Phe Phe
65 70 75 80

Tyr Ser Ala Leu Val Glu Phe Pro Ala Ala Leu Leu Ile Leu Leu Thr
85 90 95

Ile Asp Arg Leu Gly Arg Arg His Pro Trp Ala Ala Ser Asn Val Val
100 105 110

Ala Gly Ala Ala Cys Leu Ala Ser Val Phe Ile Pro Glu Asp Pro His
115 120 125

Trp Leu Arg Ile Thr Val Leu Cys Leu Gly Arg Met Gly Ile Thr Met
130 135 140

Ala Tyr Glu Met Val Cys Leu Val Asn Ala Glu Leu Tyr Pro Thr Phe
145 150 155 160

Ile Arg Asn Leu Gly Val Leu Val Cys Ser Ser Met Cys Asp Ile Gly
165 170 175

<210> 441
<211> 101
<212> PRT
<213> Sus scrofa

<400> 441
Tyr Glu Pro Pro Pro Thr Ala Pro Thr Leu Leu Thr Val Leu Ala Tyr
1 5 10 15

Ser Leu Leu Pro Ile Gly Gly Leu Ser Leu Ile Val Leu Leu Ala Phe
20 25 30

Trp Met Tyr Arg His Arg Lys Pro Pro Tyr Gly His Val Asp Ile His
Page 266

35

40

45

Glu Asp Pro Gly Pro Pro Pro Pro Ser Pro Leu Val Gly Leu Lys Pro
 50 55 60

Leu Gln Leu Leu Glu Ile Lys Ala Arg Gly Arg Phe Gly Cys Val Trp
 65 70 75 80

Lys Ala Gln Leu Met Asn Asp Phe Val Ala Val Lys Ile Phe Pro Leu
 85 90 95

Gln Asp Lys Gln Ser
 100

<210> 442

<211> 226

<212> PRT

<213> Sus scrofa

<400> 442

Met Asp Glu Ser Ser Gly Gln Pro Asp Val His Thr Tyr Lys Ser Leu
 1 5 10 15

Ala Glu Asp Gly Pro Phe Cys Ser Val Glu Pro Pro Lys Arg Pro Thr
 20 25 30

Gly Ser Leu Val Met His Ser Met Ala Met Phe Gly Arg Glu Phe Cys
 35 40 45

Tyr Ala Val Glu Ala Ala Tyr Val Thr Pro Val Leu Leu Ser Val Gly
 50 55 60

Leu Pro Lys Ser Leu Tyr Ser Val Val Trp Leu Leu Ser Pro Val Leu
 65 70 75 80

Gly Phe Leu Leu Gln Pro Val Val Gly Ser Ala Ser Asp His Cys Arg
 85 90 95

Ala Arg Trp Gly Arg Arg Arg Pro Tyr Ile Leu Ala Leu Gly Val Met
 100 105 110

Met Leu Leu Gly Met Ala Leu Tyr Leu Asn Gly Asp Thr Ile Ile Ser
 115 120 125

Ala Leu Ile Ala Asp Pro Arg Arg Lys Pro Ile Trp Ala Ile Ser Ile
 130 135 140

Thr Met Thr Gly Val Val Leu Phe Asp Phe Ala Ala Asp Phe Ile Asp
 145 150 155 160

Gly Pro Ile Lys Ala Tyr Leu Phe Asp Val Cys Thr His Gln Asp Lys
 165 170 175

Glu Arg Gly Leu His Tyr His Ala Leu Phe Thr Gly Leu Gly Gly Ala
 180 185 190

Leu Gly Tyr Leu Leu Gly Ala Ile Asp Trp Ala His Leu Glu Leu Gly
195 200 205

Arg Leu Leu Gly Thr Glu Phe Gln Val Met Phe Phe Phe Ser Ser Leu
210 215 220

Val Leu
225

<210> 443
<211> 151
<212> PRT
<213> Sus scrofa

<400> 443
Ile Thr Ala Val Ile Val Asn Arg Lys Glu His Lys Leu Lys Lys Gly
1 5 10 15

Ala Gly Tyr His Leu Asp Leu Phe Trp Val Ala Ile Leu Met Val Val
20 25 30

Cys Ser Phe Met Ala Leu Pro Trp Tyr Val Ala Ala Thr Val Ile Ser
35 40 45

Ile Ala His Ile Asp Ser Leu Lys Met Glu Thr Glu Thr Ser Ala Pro
50 55 60

Gly Glu Gln Pro Lys Phe Leu Gly Val Arg Glu Gln Arg Val Thr Gly
65 70 75 80

Thr Leu Val Phe Ile Leu Thr Gly Leu Ser Val Phe Met Ala Pro Ile
85 90 95

Leu Lys Phe Ile Pro Met Pro Val Leu Tyr Gly Val Phe Leu Tyr Met
100 105 110

Gly Val Ala Ser Leu Asn Gly Val Gln Phe Met Asp Arg Leu Lys Leu
115 120 125

Leu Leu Met Pro Leu Lys His Gln Pro Asp Phe Ile Tyr Leu Arg His
130 135 140

Val Pro Leu Arg Arg Val His
145 150

<210> 444
<211> 76
<212> PRT
<213> Sus scrofa

<400> 444
Met Glu His Leu Glu Arg Cys Ala Trp Val Leu Arg Gly Thr Leu Val
1 5 10 15

Arg Ala Ala Val Arg Arg Tyr Leu Pro Trp Ala Leu Ala Ala Ser Met
Page 268

20

25

30

Leu Ala Gly Ser Leu Leu Lys Glu Leu Ser Pro Leu Pro Glu Ser Tyr
 35 40 45

Leu Ser Asn Lys Arg Asn Val Leu Asn Val Tyr Phe Val Lys Val Ala
 50 55 60

Trp Ala Trp Thr Phe Cys Leu Leu Leu Pro Phe Ile
 65 70 75

<210> 445
 <211> 151
 <212> PRT
 <213> Sus scrofa

<400> 445
 Asn Ile Phe Ile Leu Val Gln Thr Tyr Gln Arg Asp Glu Arg Leu Gln
 1 5 10 15

Gly Glu Thr Leu Asp Gln Gln Leu Gly Arg Val Leu Gly Glu Val Ala
 20 25 30

Pro Ser Met Phe Leu Ser Ser Phe Ser Glu Thr Val Ala Phe Phe Leu
 35 40 45

Gly Gly Leu Ser Val Val Pro Ala Val His Thr Phe Ser Leu Phe Ala
 50 55 60

Gly Met Ala Val Leu Ile Asp Phe Leu Leu Gln Ile Thr Cys Phe Val
 65 70 75 80

Ser Leu Leu Gly Leu Asp Ile Lys Arg Gln Glu Lys Asn Arg Leu Asp
 85 90 95

Val Val Cys Cys Val Gln Gly Ala Glu Asp Gly Ala Gly Val Gln Ala
 100 105 110

Ser Glu Ser Cys Leu Phe Arg Phe Phe Lys Asn Ser Tyr Ala Pro Leu
 115 120 125

Leu Leu Lys Asp Trp Met Arg Pro Ile Val Ile Ala Val Phe Val Gly
 130 135 140

Val Leu Ser Phe Ser Ile Ala
 145 150

<210> 446
 <211> 76
 <212> PRT
 <213> Salmo salar

<400> 446
 Val Ile Phe Leu Asp Thr Gln Pro Ile Leu Ser Pro Ser Ile Leu Asp
 1 5 10 15

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His Leu Ile Asn Asn Asp Arg Lys Leu Pro Pro Glu Tyr Asn Leu Pro
20 25 30

His Thr Tyr Val Glu Met Gln Ser Leu Gln Ile Thr Ala Phe Leu Phe
35 40 45

Thr Val Cys His Val Val Ile Val Ile Gln Asp Trp Phe Thr Asp Ile
50 55 60

Asn Leu Tyr Arg Phe Leu Gln Thr Ala Glu Met Leu
65 70 75

<210> 447
<211> 201
<212> PRT
<213> Salmo salar

<400> 447
Ile Leu Ser Ser Gly Leu Cys Pro Ala Met Leu Thr Pro Ser Lys Pro
1 5 10 15

Phe Thr Arg Arg Cys Phe Pro Ala Leu Asp Gln Lys Lys Gly Gly Glu
20 25 30

Ile Thr Val Gly Asn Asn Ser Lys Phe Asp Asp Gly Glu Gly Asn Ile
35 40 45

Arg Asp Ala Lys Asp Leu Val Ala Gly Val Lys Asn Ala Thr Val Val
50 55 60

Ile Glu Ala Arg Gln Val Val Met Lys Ile Phe Glu Asp Tyr Thr Gln
65 70 75 80

Ser Trp Tyr Trp Ile Leu Ile Gly Leu Val Ile Ala Met Leu Ile Ser
85 90 95

Leu Leu Phe Ile Val Leu Leu Arg Phe Leu Ala Gly Ile Met Val Trp
100 105 110

Val Met Ile Val Met Val Ile Leu Val Ile Gly Tyr Gly Ile Phe His
115 120 125

Cys Ser Met Glu Tyr Val Ser Leu Lys Ser Glu Ala Gly Ser Asn Val
130 135 140

Thr Leu Lys Asp Leu Gly Phe Gln Thr Asp Phe Ser Val Tyr Leu His
145 150 155 160

Ile Arg Gln Thr Trp Leu Ala Phe Ile Ile Ile Leu Ala Ile Val Glu
165 170 175

Val Val Ile Ile Leu Leu Leu Ile Phe Leu Arg Asn Arg Ile Leu Ile
180 185 190

Ala Ile Ala Leu Ile Lys Glu Ala Ser

195

<210> 448
<211> 76
<212> PRT
<213> Sus scrofa

<400> 448
Arg Val Ser Arg Ser Ile Met Arg Leu Arg Lys Arg Ser Arg Ser Val
1 5 10 15

Phe Tyr Arg Leu Thr Val Leu Ile Leu Val Phe Ala Val Ser Trp Met
20 25 30

Pro Leu His Leu Phe His Val Val Thr Asp Phe Asn Asp Asn Leu Ile
35 40 45

Ser Asn Arg His Phe Lys Leu Val Tyr Cys Ile Cys His Leu Leu Gly
50 55 60

Met Met Ser Cys Cys Leu Asn Pro Ile Leu Tyr Gly
65 70 75

<210> 449
<211> 76
<212> PRT
<213> Sus scrofa

<400> 449
Gly Met Ala His Gln Val Asn Leu Glu Tyr Leu Ser Arg Val Val Phe
1 5 10 15

Glu Glu Lys Asp Leu Leu Phe Pro Asp Ser Val Val Gly Thr Asp Ser
20 25 30

His Ile Thr Met Val Asn Gly Leu Gly Ile Leu Gly Trp Gly Val Gly
35 40 45

Gly Ile Glu Thr Glu Ala Val Met Leu Gly Leu Pro Val Ser Leu Thr
50 55 60

Leu Pro Glu Val Val Gly Cys Glu Leu Thr Gly Ser
65 70 75

<210> 450
<211> 226
<212> PRT
<213> Sus scrofa

<400> 450
Arg Thr Leu Thr Gly Thr Ala Leu Ala Gly Phe Thr Ile Ile Val Met
1 5 10 15

Pro Leu Glu Leu Glu Trp Leu Asp Val Gly His Arg Thr Val Ala Gly
20 25 30

Val Leu Ser Ser Thr Phe Trp Thr Gly Gly Val Met Leu Leu Ala Leu
35 40 45

Val Gly Tyr Leu Ile Arg Asp Trp Arg Trp Leu Leu Leu Ala Val Thr
50 55 60

Leu Pro Cys Ala Pro Gly Ile Leu Ser Leu Trp Trp Val Pro Glu Ser
65 70 75 80

Ala Arg Trp Leu Leu Thr Gln Gly Arg Val Glu Asp Ala His Arg Tyr
85 90 95

Leu Leu Arg Cys Ala Arg Leu Asn Gly Arg Pro Val Gly Glu Asp Gly
100 105 110

Leu Ser Arg Glu Ala Leu Ser Lys Val Ala Ala Ala Glu Arg Val Val
115 120 125

Arg Arg Pro Ser Tyr Val Asp Leu Phe Arg Thr Pro Arg Leu Arg His
130 135 140

Ile Ser Leu Cys Cys Met Val Val Trp Phe Gly Val Asn Phe Ser Tyr
145 150 155 160

Tyr Gly Leu Ser Leu Asp Val Ser Gly Leu Gly Leu Asn Val Tyr Gln
165 170 175

Thr Gln Leu Leu Phe Gly Ala Val Glu Leu Pro Ser Lys Leu Leu Val
180 185 190

Tyr Leu Ser Val Arg His Ala Gly Arg Arg Leu Thr Leu Ala Gly Thr
195 200 205

Leu Leu Gly Thr Ser Leu Ser Leu Gly Phe Arg Leu Leu Val Ser Ser
210 215 220

Glu Met
225

<210> 451
<211> 76
<212> PRT
<213> Sus scrofa

<400> 451
Leu Ser Thr Ile Ala Leu Ser Leu Asn Thr Leu Pro Glu Leu Gln Ser
1 5 10 15

Leu Asp Glu Phe Gly Gln Thr Thr Asp Asn Pro Gln Leu Ala His Val
20 25 30

Glu Ala Val Cys Ile Ala Trp Phe Thr Met Glu Tyr Leu Leu Arg Phe
35 40 45

Leu Ser Ser Pro Lys Lys Trp Lys Phe Phe Lys Gly Pro Leu Asn Ala
50 55 60

Ile Asp Leu Leu Ala Ile Leu Pro Tyr Tyr Val Thr
65 70 75

<210> 452
<211> 176
<212> PRT
<213> Sus scrofa

<400> 452
Lys Gly Glu Ala Pro Ala Lys Ser Ser Thr His Arg His Asp Glu Glu
1 5 10 15

Leu Gly Met Ala Ser Ala Glu Thr Leu Thr Val Phe Leu Lys Leu Leu
20 25 30

Ala Ala Gly Phe Tyr Gly Val Ser Ser Phe Leu Ile Val Val Val Asn
35 40 45

Lys Ser Val Leu Thr Asn Tyr Arg Phe Pro Ser Ser Leu Cys Val Gly
50 55 60

Leu Gly Gln Met Val Ala Thr Val Ala Val Leu Trp Val Gly Lys Ala
65 70 75 80

Leu Arg Val Val Lys Phe Pro Asp Phe Asp Arg Asn Val Pro Arg Lys
85 90 95

Thr Phe Pro Leu Pro Leu Leu Tyr Phe Gly Asn Gln Ile Thr Gly Leu
100 105 110

Phe Ser Thr Lys Lys Leu Asn Leu Pro Met Phe Thr Val Leu Arg Arg
115 120 125

Phe Ser Ile Leu Phe Thr Met Phe Ala Glu Gly Val Leu Leu Lys Lys
130 135 140

Thr Phe Ser Trp Gly Ile Lys Met Thr Val Phe Ala Met Ile Ile Gly
145 150 155 160

Ala Phe Val Ala Ala Ser Ser Asp Leu Ala Phe Asp Leu Glu Gly Tyr
165 170 175

<210> 453
<211> 101
<212> PRT
<213> Sus scrofa

<400> 453
Met Ala Pro Ala Leu Pro Ile Thr Leu Pro Ser Lys Met Ser Leu Arg
1 5 10 15

Ser Leu Lys Trp Ser Leu Leu Leu Leu Ser Leu Leu Ser Phe Leu Val
20 25 30

Met Trp Tyr Leu Ser Leu Pro His Tyr Asn Val Ile Glu Arg Val Asn
35 40 45

Trp Met Tyr Phe Tyr Glu Tyr Glu Pro Ile Tyr Arg Gln Asp Phe His
50 55 60

Phe Thr Leu Arg Glu His Ser Asn Cys Ser His Gln Asn Pro Phe Leu
65 70 75 80

Val Ile Leu Val Thr Ser His Pro Ala Asp Val Lys Ala Arg Gln Ala
85 90 95

Ile Arg Val Thr Trp
100

<210> 454
<211> 76
<212> PRT
<213> Sus scrofa

<400> 454
Ala Leu Glu Gly Val Arg Asn Glu Pro Leu Ser Lys Gln Gln Cys His
1 5 10 15

Gly Gln Gly Gly Phe Trp His Gly Phe Asp Ile Ser Gly His Ser Phe
20 25 30

Leu Leu Thr Phe Cys Ala Leu Met Ile Val Glu Glu Met Ala Val Leu
35 40 45

His Glu Val Lys Thr Asp Arg Ser His Cys Leu His Val Ala Ile Thr
50 55 60

Ala Leu Val Val Ala Leu Gly Phe Leu Thr Phe Ile
65 70 75

<210> 455
<211> 101
<212> PRT
<213> Sus scrofa

<400> 455
Met Ala Asn Ser Ala Ser Pro Glu Gln Asn Gln Asn His Cys Ser Ala
1 5 10 15

Ile Asn Ser Ser Ile Leu Leu Thr Gln Gly Asn Leu Pro Thr Leu Thr
20 25 30

Leu Ser Gly Lys Ile Arg Val Thr Val Thr Phe Phe Leu Phe Leu Leu
35 40 45

Ser Thr Ala Phe Asn Ala Ser Phe Leu Leu Lys Leu Gln Lys Trp Thr
50 55 60

Gln Arg Lys Glu Lys Gly Lys Lys Leu Ser Arg Met Lys Val Leu Leu
65 70 75 80

Lys His Leu Thr Leu Ala Asn Leu Leu Glu Thr Leu Ile Val Met Pro
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85

90

95

Leu Asp Gly Met Trp
100

<210> 456
<211> 76
<212> PRT
<213> Sus scrofa

<400> 456
Thr Lys Ser Leu Pro Ser Asp Gln Val Thr Leu Val Tyr Asp Gln Gln
1 5 10 15

Glu Val Glu Ala Ile Phe Leu Val Ile Leu Val Val Val Ile Ile Gly
20 25 30

Glu Phe Phe Ser Ala Ser Ser Val Thr Ile Val Asp Thr Val Thr Leu
35 40 45

Gln Tyr Leu Gly Lys His Arg Asp Arg Tyr Gly Leu Gln Arg Met Trp
50 55 60

Gly Ser Leu Gly Trp Gly Leu Ala Met Leu Ser Val
65 70 75

<210> 457
<211> 101
<212> PRT
<213> Sus scrofa

<400> 457
Gly Ala Met Val Trp Thr Leu Asp Leu Asp Asp Val Arg Gly Thr Phe
1 5 10 15

Cys Gly Thr Gly Pro Phe Pro Leu Val Tyr Met Leu Asn Asp Leu Leu
20 25 30

Leu Lys Ala Glu Val Ser Ser Thr Leu Ser Pro Gly Phe Gly Leu Ser
35 40 45

Thr Thr Val Asn Ser Ser Arg Thr Cys Pro Glu Ser Leu Ala Val Thr
50 55 60

Lys Asp Leu Thr Thr Asp Leu Gly Ile Leu Pro Leu Gly Gly Glu Ala
65 70 75 80

Val Ala Thr Glu Thr His Gly Arg Ser Asp Asn Met Thr Val Thr Pro
85 90 95

Gly Gly Gly Leu Val
100

<210> 458
<211> 176
<212> PRT
<213> Sus scrofa

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<400> 458

Met Leu Ser Ala Leu Gly Gly Leu Gln Arg Cys Phe Trp Ala Ile Leu
1 5 10 15

Leu Leu Ala Leu Thr Val Ser Leu Leu Ala Gly Phe Leu His Lys Asp
20 25 30

Val Arg Leu Leu Met Pro Leu Leu Lys Gly Gln Ala Glu Gly Pro Pro
35 40 45

Ile Thr Asn Val Met Phe Leu Lys Thr His Lys Thr Ala Ser Ser Thr
50 55 60

Val Leu Asn Ile Leu Phe Arg Phe Ala Glu Thr His Asn Leu Ser Val
65 70 75 80

Ala Leu Pro Ala Gly Gln Arg Val His Leu Gly Tyr Pro Trp Leu Phe
85 90 95

Leu Ala Arg Tyr Val Glu Gly Val Glu Glu Gly Gly Pro Glu Gln Arg
100 105 110

Phe Asn Ile Met Cys Asn His Leu Arg Phe Asn Leu Pro Glu Val Arg
115 120 125

Lys Val Met Pro Asn Asp Thr Phe Tyr Phe Ser Ile Leu Arg Asn Pro
130 135 140

Val Phe Gln Leu Glu Ser Ser Phe Ile Tyr Tyr Lys Gly Tyr Val Pro
145 150 155 160

Ala Phe Arg Asp Val Val Ser Leu Glu Ala Phe Leu Ala Ser Pro Gly
165 170 175

<210> 459

<211> 101

<212> PRT

<213> Sus scrofa

<400> 459

Asp Leu Phe Thr Thr Leu Val Asp Leu Lys Trp Arg Phe Asn Leu Leu
1 5 10 15

Val Phe Thr Met Val Tyr Thr Val Thr Trp Leu Phe Phe Gly Phe Ile
20 25 30

Trp Trp Leu Ile Ala Tyr Ile Arg Gly Asp Leu Asp His Val Gly Asp
35 40 45

Gln Glu Trp Ile Pro Cys Val Glu Asn Leu Ser Gly Phe Val Ser Ala
50 55 60

Phe Leu Phe Ser Ile Glu Thr Glu Thr Thr Ile Gly Tyr Gly Phe Arg
65 70 75 80

Val Ile Thr Glu Lys Cys Pro Glu Gly Ile Val Leu Leu Leu Val Gln
85 90 95

Ala Ile Leu Gly Ser
100

<210> 460
<211> 226
<212> PRT
<213> Sus scrofa

<400> 460
Met Tyr Val Gly Glu Val Ser Pro Thr Ala Leu Arg Gly Ala Leu Gly
1 5 10 15

Thr Leu His Gln Leu Gly Ile Val Val Gly Ile Leu Ile Ala Gln Val
20 25 30

Phe Gly Leu Asp Ser Ile Met Gly Asn Glu Glu Leu Trp Pro Leu Leu
35 40 45

Leu Ser Val Ile Phe Ile Pro Ala Leu Leu Gln Cys Val Leu Leu Pro
50 55 60

Phe Cys Pro Glu Ser Pro Arg Phe Leu Leu Ile Asn Arg Asn Glu Glu
65 70 75 80

Asn Arg Ala Lys Ser Val Leu Lys Lys Leu Arg Gly Thr Ala Asp Val
85 90 95

Thr Arg Asp Leu Gln Glu Met Lys Glu Glu Ser Arg Gln Met Met Arg
100 105 110

Glu Lys Lys Val Thr Ile Leu Glu Leu Phe Arg Ser Ala Ala Tyr Arg
115 120 125

Gln Pro Ile Leu Ile Ala Val Val Leu Gln Leu Ser Gln Gln Leu Ser
130 135 140

Gly Ile Asn Ala Val Phe Tyr Tyr Ser Thr Ser Ile Phe Glu Lys Ala
145 150 155 160

Gly Val Gln Gln Pro Val Tyr Ala Thr Ile Gly Ser Gly Ile Val Asn
165 170 175

Thr Ala Phe Thr Val Val Ser Leu Phe Val Val Glu Arg Ala Gly Arg
180 185 190

Arg Thr Leu His Leu Ile Gly Leu Ala Gly Met Ala Gly Cys Ala Val
195 200 205

Leu Met Thr Ile Ala Leu Ala Leu Leu Glu Gln Leu Pro Trp Met Ser
210 215 220

Tyr Leu
225

<210> 461
<211> 176
<212> PRT
<213> Sus scrofa

<400> 461
Pro Arg Ala Asp Ser Phe His Ile Phe Arg Asp Pro Leu Lys Gly Asp
1 5 10 15

Leu Pro Trp Pro Gly Leu Thr Phe Gly Leu Ser Ile Leu Ala Leu Trp
20 25 30

Tyr Trp Cys Thr Asp Gln Val Ile Val Gln Arg Cys Leu Ser Ala Lys
35 40 45

Asn Met Ser His Val Lys Ala Gly Cys Val Met Cys Gly Tyr Phe Lys
50 55 60

Leu Leu Pro Met Phe Val Ile Val Met Pro Gly Met Ile Ser Arg Val
65 70 75 80

Leu Tyr Thr Glu Lys Ile Ala Cys Thr Val Pro Ser Glu Cys Glu Lys
85 90 95

Tyr Cys Gly Thr Lys Val Gly Cys Ser Asn Ile Ala Tyr Pro Thr Leu
100 105 110

Val Val Glu Leu Met Pro Asn Gly Leu Arg Gly Leu Met Leu Ser Val
115 120 125

Ile Leu Ala Ser Leu Met Ser Ser Leu Thr Ser Ile Phe Asn Ser Ala
130 135 140

Thr Thr Leu Phe Thr Met Asp Val Tyr Ala Lys Ile Arg Lys Arg Ala
145 150 155 160

Ser Glu Lys Glu Leu Met Ile Ala Gly Arg Leu Phe Ile Leu Val Leu
165 170 175

<210> 462
<211> 126
<212> PRT
<213> Sus scrofa

<400> 462
Met Gln Leu Glu Leu Ser Thr Cys Val Phe Leu Cys Leu Leu Pro Leu
1 5 10 15

Gly Phe Ser Ala Ile Arg Arg Tyr Tyr Leu Gly Ala Val Glu Leu Ser
20 25 30

Trp Asp Tyr Arg Gln Ser Glu Leu Leu Arg Glu Leu His Val Asp Thr
35 40 45

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Arg Phe Pro Ala Thr Ala Pro Gly Ala Leu Pro Leu Gly Pro Ser Val
50 55 60

Leu Tyr Lys Lys Thr Val Phe Val Glu Phe Thr Asp Gln Leu Phe Ser
65 70 75 80

Val Ala Arg Pro Arg Pro Pro Trp Met Gly Leu Leu Gly Pro Thr Ile
85 90 95

Gln Ala Glu Val Tyr Asp Thr Val Val Val Thr Leu Lys Asn Met Ala
100 105 110

Ser His Pro Val Ser Leu His Ala Val Gly Val Ser Phe Trp
115 120 125

<210> 463
<211> 126
<212> PRT
<213> Sus scrofa

<400> 463
Gly Arg Met Ala Gly Pro Pro Ala Arg Thr Leu Thr Pro Pro Pro Cys
1 5 10 15

Glu Gly Pro Ile Glu Ile Lys Asp Thr Phe Lys Tyr Ile Asn Thr Val
20 25 30

Val Ser Cys Leu Val Phe Val Leu Gly Ile Ile Gly Asn Ser Thr Leu
35 40 45

Leu Arg Ile Ile Tyr Lys Asn Lys Cys Met Arg Asn Gly Pro Asn Ile
50 55 60

Leu Ile Ala Ser Leu Ala Leu Gly Asp Leu Leu His Ile Ile Ile Asp
65 70 75 80

Ile Pro Ile Asn Val Tyr Lys Leu Leu Ala Glu Asp Trp Pro Phe Gly
85 90 95

Val Glu Met Cys Lys Leu Val Pro Phe Ile Gln Lys Ala Ser Val Gly
100 105 110

Ile Thr Val Leu Ser Leu Cys Ala Leu Ser Ile Asp Arg Tyr
115 120 125

<210> 464
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 464
Gln Leu Ser Asn His Ser Arg Asp Phe Met Gly Tyr Leu Ser Ser Val
1 5 10 15

Arg Leu Asn His Ser Met Val Arg Ser Gln Met Leu Glu Asn Ser Phe
20 25 30

Leu Ile Asn Asn Pro Ile Lys Lys Phe Glu Thr Leu Val Pro Ile Ile
35 40 45

Pro Leu Ile Gly Ser Leu Ala Lys Ala His Phe Cys Thr Val Leu Gly
50 55 60

His Pro Ile Ser Lys Pro Val Trp Ser Asp Leu Ser
65 70 75

<210> 465
<211> 76
<212> PRT
<213> Sus scrofa

<400> 465
Val Pro Ala Thr Leu Pro Gln Leu Thr Pro Thr Leu Val Ser Leu Leu
1 5 10 15

Glu Val Ile Glu Pro Glu Val Leu Tyr Ala Gly Tyr Asp Ser Ser Ile
20 25 30

Pro Asp Ser Thr Trp Arg Ile Met Thr Ala Leu Asn Met Leu Gly Gly
35 40 45

Arg Gln Val Ile Ala Ala Val Lys Trp Ala Lys Ala Ile Pro Gly Phe
50 55 60

Arg Asn Leu His Leu Asp Asp Gln Met Thr Leu Leu
65 70 75

<210> 466
<211> 126
<212> PRT
<213> Sus scrofa

<400> 466
Met Trp Ala Pro Glu Arg Ser Ala Glu Glu Gln Gly Asn Leu Thr Arg
1 5 10 15

Ser Leu Gly Ser Ser Glu Asp Cys Gly Ser Val Ser Val Val Phe Pro
20 25 30

Met Thr Met Leu Ile Thr Gly Phe Val Gly Asn Ala Leu Ala Met Leu
35 40 45

Leu Val Ser Gln Ser Tyr Arg Arg Arg Glu Ser Lys Arg Lys Lys Ser
50 55 60

Phe Leu Leu Cys Ile Gly Trp Leu Ala Leu Thr Asp Met Val Gly Gln
65 70 75 80

Leu Leu Thr Ser Pro Val Val Ile Val Leu Tyr Leu Ser His Gln Arg
85 90 95

Trp Glu Gln Leu Asp Pro Ser Gly Arg Leu Cys Thr Phe Phe Gly Leu
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Thr Met Thr Ala Phe Gly Leu Ser Ser Leu Phe Ile Ala Ser
 115 120 125

<210> 467
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 467
 Leu Gly Leu Gly Arg Ile Gly Arg Glu Val Ala Thr Arg Met Gln Ser
 1 5 10 15

Phe Gly Met Lys Thr Ile Gly Tyr Asp Pro Ile Ile Ala Pro Glu Val
 20 25 30

Ser Ala Ser Phe Gly Val Gln Gln Leu Pro Leu Glu Glu Ile Trp Pro
 35 40 45

Leu Cys Asp Phe Ile Thr Val His Thr Pro Leu Leu Pro Ser Thr Thr
 50 55 60

Gly Leu Leu Asn Asp Ser Thr Phe Ala Leu Cys Lys
 65 70 75

<210> 468
 <211> 101
 <212> PRT
 <213> Solanum tuberosum

<400> 468
 Leu Ile Pro Ile Arg Asn Ser Leu Gly Pro Leu Gly Thr Cys Leu Pro
 1 5 10 15

Ile Glu Asn Phe Tyr Ser Ser Tyr His Leu Ile Thr His Asn Gln Ile
 20 25 30

Leu Val Thr Lys Tyr Leu Gln Leu Asp Asn Leu Lys Gln Thr Phe Gln
 35 40 45

Val Ile Lys Leu Lys Tyr Tyr Leu Met Asp Glu Asn Gly Lys Ile Phe
 50 55 60

Asn Pro Asp Pro Cys Arg Asn Ile Ile Leu Asn Pro Val Asn Leu Asn
 65 70 75 80

Trp Ser Phe Leu His His Asn Tyr Cys Ala Glu Thr Ser Lys Ile Ile
 85 90 95

Ser Leu Gly Gln Phe
 100

<210> 469
 <211> 251
 <212> PRT
 <213> Sus scrofa

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<400> 469

His Tyr Tyr Val Phe Phe Glu Glu Gln Glu Asp Glu Ile Ile Gly Phe
1 5 10 15

Gly Gln Glu Leu Lys Asn Pro Gln Glu Glu Thr Leu Gln Ala Phe Asp
20 25 30

Ser His Tyr Asp Tyr Thr Val Cys Gly Gly Ser Glu Asp Met Val Cys
35 40 45

Thr Pro Lys Ser Asp Glu Phe Asn Pro Cys Glu Asp Ile Met Gly Tyr
50 55 60

Arg Phe Leu Arg Ile Val Val Trp Phe Val Ser Leu Leu Ala Leu Leu
65 70 75 80

Gly Asn Val Phe Val Leu Val Ile Leu Leu Thr Ser His Tyr Lys Leu
85 90 95

Thr Val Pro Arg Phe Leu Met Cys Asn Leu Ala Phe Ala Asp Phe Cys
100 105 110

Met Gly Met Tyr Leu Leu Leu Ile Ala Ser Val Asp Leu Tyr Thr Gln
115 120 125

Ser Glu Tyr Tyr Asn His Ala Ile Asp Trp Gln Thr Gly Pro Gly Cys
130 135 140

Asn Thr Ala Gly Phe Phe Thr Val Phe Ala Ser Glu Leu Ser Val Tyr
145 150 155 160

Thr Leu Thr Val Ile Thr Leu Glu Arg Trp Tyr Ala Ile Thr Phe Ala
165 170 175

Met Arg Leu Asp Arg Lys Ile Arg Leu Arg His Ala Tyr Ala Ile Met
180 185 190

Ala Gly Gly Trp Val Cys Cys Phe Leu Leu Ala Leu Leu Pro Leu Val
195 200 205

Gly Ile Ser Ser Tyr Ala Lys Val Ser Ile Cys Leu Pro Met Asp Thr
210 215 220

Glu Thr Pro Leu Ala Leu Ala Tyr Ile Ile Leu Val Leu Leu Leu Asn
225 230 235 240

Ile Val Ala Phe Thr Ile Val Cys Ser Cys Tyr
245 250

<210> 470

<211> 176

<212> PRT

<213> Sus scrofa

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<400> 470

Asn Thr Leu Cys Leu Pro Phe Thr Leu Thr Tyr Thr Leu Met Gly Glu
1 5 10 15

Trp Lys Met Gly Pro Val Leu Cys His Leu Val Pro Tyr Ala Gln Gly
20 25 30

Leu Ala Val Gln Val Ser Thr Ile Thr Leu Thr Val Ile Ala Leu Asp
35 40 45

Arg His Arg Cys Ile Val Tyr His Leu Glu Ser Lys Ile Ser Lys Arg
50 55 60

Ile Ser Phe Leu Ile Ile Gly Leu Ala Trp Gly Ile Ser Ala Leu Leu
65 70 75 80

Ala Ser Pro Leu Ala Ile Phe Arg Glu Tyr Ser Leu Ile Glu Ile Ile
85 90 95

Pro Asp Phe Glu Ile Val Ala Cys Thr Glu Lys Trp Pro Gly Glu Glu
100 105 110

Lys Ser Ile Tyr Gly Thr Val Tyr Ser Leu Ser Ser Leu Leu Ile Leu
115 120 125

Tyr Val Leu Pro Leu Gly Ile Ile Ser Phe Ser Tyr Ala Arg Ile Trp
130 135 140

Ser Lys Leu Lys Asn His Val Ser Pro Gly Gly Val Asn Asp His Tyr
145 150 155 160

His Gln Arg Arg Gln Lys Thr Thr Lys Met Leu Val Cys Val Val Val
165 170 175

<210> 471

<211> 101

<212> PRT

<213> Sus scrofa

<400> 471

Phe Asn Ile Leu Thr Ser Asn Arg Lys Thr Leu Thr Pro Glu Lys Gly
1 5 10 15

Gln Ser Gln Gly Leu Ile Trp Asp Phe Gly Tyr Leu Thr Leu Met Glu
20 25 30

Gln Arg Ser Gly Gly Ala Gly Lys Gly Asn Asn Lys Gly Pro Leu Gly
35 40 45

Val Thr Glu Glu Leu His Ile Ile Ser Phe Thr Val Lys Tyr Thr Tyr
50 55 60

Gln Gly Leu Lys Gln Glu Leu Thr Thr Asp Thr Leu Pro Val Val Ile
65 70 75 80

Ile Ser Asn Met Asn Gln Leu Ser Ile Ala Trp Ala Ser Ile Leu Trp
 85 90 95

Phe Asn Leu Leu Ser
 100

<210> 472
 <211> 76
 <212> PRT
 <213> Capra hircus

<400> 472
 His Glu Thr Gly Ser Asn Asn Pro Thr Gly Ile Pro Ser Asp Thr Asp
 1 5 10 15

Lys Ile Pro Phe His Pro Tyr Tyr Thr Ile Lys Asp Ile Leu Gly Ala
 20 25 30

Met Leu Leu Ile Leu Val Leu Met Leu Leu Val Leu Phe Thr Pro Asp
 35 40 45

Leu Leu Gly Asp Pro Asp Asn Tyr Thr Pro Ala Asn Pro Leu Asn Thr
 50 55 60

Pro Pro His Ile Lys Pro Glu Trp Tyr Phe Leu Phe
 65 70 75

<210> 473
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 473
 Ser Pro Leu Pro Pro Leu Phe Leu Pro Thr Asp Pro Pro Met Val Trp
 1 5 10 15

Leu Leu Ala Lys Cys Trp Val Arg Ser Ser Asp Phe Gln Leu His Glu
 20 25 30

Leu His Ser His Leu Leu Arg Gly His Leu Met Ala Glu Val Ile Ala
 35 40 45

Val Ala Thr Met Arg Cys Leu Pro Ser Ile His Pro Ile Phe Lys Leu
 50 55 60

Leu Ile Pro His Phe Arg Tyr Thr Met Glu Ile Asn
 65 70 75

<210> 474
 <211> 201
 <212> PRT
 <213> Sus scrofa

<400> 474
 Met Trp Asn Ala Thr Pro Ser Glu Glu Pro Gly Pro Asn Leu Thr Leu
 1 5 10 15

Pro Asp Leu Gly Trp Asp Ala Pro Pro Glu Asn Asp Ser Leu Val Glu
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25

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Glu Leu Leu Pro Leu Phe Pro Thr Pro Leu Leu Ala Gly Val Thr Ala
 35 40 45

Thr Cys Val Ala Leu Phe Val Val Gly Ile Ala Gly Asn Leu Leu Thr
 50 55 60

Met Leu Val Val Ser Arg Phe Arg Glu Met Arg Thr Thr Thr Asn Leu
 65 70 75 80

Tyr Leu Ser Ser Met Ala Phe Ser Asp Leu Leu Ile Phe Leu Cys Met
 85 90 95

Pro Leu Asp Leu Phe Arg Leu Trp Gln Tyr Arg Pro Trp Asn Leu Gly
 100 105 110

Asn Leu Leu Cys Lys Leu Phe Gln Phe Val Ser Glu Ser Cys Thr Tyr
 115 120 125

Ala Thr Val Leu Thr Ile Thr Ala Leu Ser Val Glu Arg Tyr Phe Ala
 130 135 140

Ile Cys Phe Pro Leu Arg Ala Lys Val Val Val Thr Lys Gly Arg Val
 145 150 155 160

Lys Leu Val Ile Leu Val Ile Trp Ala Val Ala Phe Cys Ser Ala Gly
 165 170 175

Pro Ile Phe Val Leu Val Gly Val Glu His Asp Asn Gly Thr Asp Pro
 180 185 190

Arg Asp Thr Asn Glu Cys Arg Ala Thr
 195 200

<210> 475
 <211> 201
 <212> PRT
 <213> Sus scrofa

<400> 475
 Asp Ser Glu Glu Asp His Glu Glu Asp Pro Asp Arg Tyr Val Cys Ser
 1 5 10 15

Gly Val Pro Gly Arg Pro Pro Gly Leu Glu Glu Glu Leu Thr Leu Lys
 20 25 30

Tyr Gly Ala Lys His Val Ile Met Leu Phe Val Pro Val Thr Leu Cys
 35 40 45

Met Ile Val Val Val Ala Thr Ile Lys Ser Val Arg Phe Tyr Thr Glu
 50 55 60

Lys Asn Gly Gln Leu Ile Tyr Thr Pro Phe Thr Glu Asp Thr Pro Ser
 65 70 75 80

Val Gly Gln Arg Leu Leu Asn Ser Val Leu Asn Thr Leu Ile Met Ile
85 90 95

Ser Val Ile Val Val Met Thr Ile Phe Leu Val Val Leu Tyr Lys Tyr
100 105 110

Arg Cys Tyr Lys Phe Ile His Gly Trp Leu Ile Thr Ser Ser Leu Met
115 120 125

Leu Leu Phe Leu Phe Thr Tyr Ile Tyr Leu Gly Glu Val Leu Lys Thr
130 135 140

Tyr Asn Val Ala Met Asp Tyr Pro Thr Leu Phe Leu Thr Val Trp Asn
145 150 155 160

Phe Gly Ala Val Gly Met Val Cys Ile His Trp Lys Gly Pro Leu Val
165 170 175

Leu Gln Gln Ala Tyr Leu Ile Met Ile Ser Ala Leu Met Ala Leu Val
180 185 190

Phe Ile Lys Tyr Leu Pro Glu Trp Ser
195 200

<210> 476
<211> 151
<212> PRT
<213> Sus scrofa

<400> 476
Asn Glu Glu Asp Leu Arg Glu Cys Phe Phe Asp Asp Val Glu Ser Ile
1 5 10 15

Pro Thr Val Thr Thr Trp Asn Thr Tyr Leu Arg Tyr Val Thr Val His
20 25 30

Lys Ser Leu Ile Phe Val Leu Ile Trp Cys Leu Val Val Phe Leu Ala
35 40 45

Glu Val Ala Ala Cys Leu Val Val Leu Cys Leu Leu Lys Lys Thr Ser
50 55 60

Pro Gln Asp Lys Gly Asn Ser Thr Lys Gly Ala Asn Asn Ser Tyr Ala
65 70 75 80

Val Ile Ile Thr Ser Thr Ser Ala Tyr Tyr Val Phe Tyr Ile Tyr Val
85 90 95

Gly Val Ala Asp Gly Leu Leu Ala Leu Gly Leu Phe Arg Gly Leu Pro
100 105 110

Leu Val His Thr Leu Ile Thr Val Ser Lys Ile Leu His Arg Lys Met
115 120 125

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Leu His Ser Val Leu Gln Ala Pro Met Ser Thr Leu Asn Thr Leu Lys
130 135 140

Ala Gly Gly Ile Leu Asn Arg
145 150

<210> 477
<211> 126
<212> PRT
<213> Sus scrofa

<400> 477
Leu Asn Gly Thr Ser Ala Leu Pro His Ser Ala Ala Asn Asp Pro Val
1 5 10 15

Phe Val Val Leu His Ser Phe Thr Asp Ala Ile Phe Asp Glu Trp Met
20 25 30

Lys Arg Phe Ser Pro Pro Val Asp Ala Trp Pro Gln Glu Leu Ala Pro
35 40 45

Ile Gly His Asn Arg Met Tyr Asn Met Val Pro Phe Phe Pro Pro Val
50 55 60

Thr Asn Glu Glu Leu Phe Leu Thr Ala Asp Gln Leu Gly Tyr Ser Tyr
65 70 75 80

Ala Ile Asp Leu Pro Val Ser Val Glu Gly Thr Pro Asp Trp Thr Thr
85 90 95

Thr Leu Ser Val Val Met Gly Met Leu Val Val Leu Val Gly Leu Ser
100 105 110

Ala Leu Leu Leu Phe Leu Gln Tyr Arg Arg Leu Arg Lys Gly
115 120 125

<210> 478
<211> 226
<212> PRT
<213> Sus scrofa

<400> 478
Phe Lys Glu Glu Ile Gly Ile Ala Glu Leu Ile Pro Leu Val Thr Thr
1 5 10 15

Tyr Ile Ile Leu Phe Ala Tyr Ile Tyr Phe Ser Thr Arg Lys Ile Asp
20 25 30

Met Val Lys Ser Lys Trp Gly Leu Ala Leu Ala Ala Val Val Thr Val
35 40 45

Leu Ser Ser Leu Leu Met Ser Val Gly Leu Cys Thr Leu Phe Gly Leu
50 55 60

Thr Pro Thr Leu Asn Gly Gly Glu Ile Phe Pro Tyr Leu Val Val Val
65 70 75 80

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Ile Gly Leu Glu Asn Val Leu Val Leu Thr Lys Ser Val Val Ser Thr
85 90 95

Pro Val Asp Leu Glu Val Lys Leu Arg Ile Ala Gln Gly Leu Ser Ser
100 105 110

Glu Ser Trp Ser Ile Met Lys Asn Met Ala Thr Glu Leu Gly Ile Ile
115 120 125

Leu Ile Gly Tyr Phe Thr Leu Val Pro Ala Ile Gln Glu Phe Cys Leu
130 135 140

Phe Ala Val Val Gly Leu Val Ser Asp Phe Phe Leu Gln Met Pro Phe
145 150 155 160

Phe Thr Thr Val Leu Ser Ile Asp Ile Arg Arg Met Glu Leu Ala Asp
165 170 175

Leu Asn Lys Arg Leu Pro Pro Glu Ala Cys Leu Pro Pro Ala Lys Pro
180 185 190

Val Gly Arg Ser Ala Arg Phe Glu Arg Gln Leu Ala Val Arg Pro Ala
195 200 205

Thr Pro His Thr Ile Thr Leu Gln Pro Ser Ser Phe Arg Asn Leu Arg
210 215 220

Leu Pro
225

<210> 479
<211> 76
<212> PRT
<213> Sus scrofa

<400> 479
Trp Trp Leu Phe Ser Phe Tyr Phe Cys Leu Pro Leu Ala Ile Thr Ala
1 5 10 15

Phe Phe Tyr Thr Leu Met Thr Cys Glu Met Leu Arg Lys Lys Ser Gly
20 25 30

Met Gln Ile Ala Leu Asn Asp His Leu Lys Gln Arg Arg Glu Val Ala
35 40 45

Lys Thr Val Phe Cys Leu Val Leu Val Phe Ala Leu Cys Trp Leu Pro
50 55 60

Leu His Leu Ser Arg Ile Leu Lys Leu Thr Leu Tyr
65 70 75

<210> 480
<211> 151
<212> PRT

<213> Solanum tuberosum

<400> 480

Gln Lys Asp Thr Tyr Leu Asn Tyr Ser Gln Ala Leu Ser Tyr Thr Ser
1 5 10 15

Gln Ala Leu Ser Gln Asn Leu Gln Gly Leu Arg Lys Arg Ser Pro Ile
20 25 30

Arg Arg Met Ser Thr Lys Leu Val Tyr Ser Leu Gln Glu Asn Trp Lys
35 40 45

Arg Ile Trp Val Leu Val Leu Trp Ile Leu Ile Met Ile Gly Leu Phe
50 55 60

Leu Trp Lys Phe Tyr Leu Tyr Lys Gln Lys Ser Ala Phe Gln Val Met
65 70 75 80

Gly Tyr Cys Leu Leu Thr Ala Lys Gly Ala Ala Glu Thr Leu Lys Phe
85 90 95

Asn Met Ala Leu Ile Leu Leu Pro Val Cys Arg Asn Thr Ile Thr Phe
100 105 110

Leu Arg Ser Thr Lys Leu Ser Cys Phe Val Pro Phe Asp Asp Asn Ile
115 120 125

Asn Phe His Lys Thr Val Ala Ala Ala Ile Val Thr Gly Ile Ile Leu
130 135 140

His Ala Gly Asn His Leu Val
145 150

<210> 481

<211> 126

<212> PRT

<213> Solanum tuberosum

<400> 481

Met Ile Ile Asp Thr Thr Glu Ile Glu Thr Ile Asn Ser Phe Ser Lys
1 5 10 15

Leu Glu Ser Leu Lys Glu Val Tyr Gly Ile Ile Trp Met Leu Val Pro
20 25 30

Ile Val Thr Leu Val Leu Gly Ile Thr Ile Gly Val Leu Val Ile Val
35 40 45

Trp Leu Glu Arg Glu Ile Ser Ala Gly Ile Gln Gln Arg Ile Gly Pro
50 55 60

Glu Tyr Ala Gly Pro Leu Gly Ile Leu Gln Ala Leu Ala Asp Gly Thr
65 70 75 80

Lys Leu Leu Leu Lys Glu Asn Leu Ile Pro Ser Thr Gly Asp Thr Arg
85 90 95

Leu Phe Ser Ile Gly Pro Ser Ile Ala Val Ile Ser Ile Phe Leu Ser
100 105 110

Tyr Ser Val Ile Pro Phe Gly Asp His Leu Val Leu Ala Asp
115 120 125

<210> 482
<211> 101
<212> PRT
<213> Sus scrofa

<400> 482
Leu Ile Leu Ala Phe Ile Ser Leu Asp Arg Tyr Leu Ala Ile Val His
1 5 10 15

Ala Thr Asn Ser Gln Arg Pro Arg Lys Leu Leu Ala Glu Lys Val Val
20 25 30

Tyr Val Gly Val Trp Ile Pro Ala Leu Leu Leu Thr Ile Pro Asp Phe
35 40 45

Ile Phe Ala Asn Val Arg Glu Gly Asp Gly Arg Tyr Ile Cys Asp Arg
50 55 60

Phe Tyr Pro Asn Asp Leu Trp Leu Val Val Phe Gln Phe Gln His Ile
65 70 75 80

Met Val Gly Leu Ile Leu Pro Gly Ile Val Ile Leu Ser Cys Tyr Cys
85 90 95

Ile Ile Ile Ser Lys
100

<210> 483
<211> 76
<212> PRT
<213> Sus scrofa

<400> 483
Leu Ile Leu Tyr Val Leu Pro Leu Gly Ile Ile Ser Phe Ser Tyr Ala
1 5 10 15

Arg Ile Trp Ser Lys Leu Lys Asn His Val Ser Pro Gly Gly Val Asn
20 25 30

Asp His Tyr His Gln Arg Arg Gln Lys Thr Thr Lys Met Leu Val Cys
35 40 45

Val Val Val Val Phe Ala Val Ser Trp Leu Pro Leu His Ala Phe Gln
50 55 60

Leu Ala Val Asp Ile Asp Ser Gln Val Leu Asp Leu
65 70 75

<210> 484

<211> 151

<212> PRT

<213> Sus scrofa

<400> 484

Ala Leu Val Tyr Leu Pro Gly Val Ile Ala Ala Ile Val Gln Leu His
 1 5 10 15

Asn Gly Thr Lys Tyr Lys Lys Phe Pro His Trp Leu Asp Arg Trp Met
 20 25 30

Val Thr Arg Lys Gln Phe Gly Leu Leu Ser Phe Phe Phe Ala Val Leu
 35 40 45

His Ala Val Tyr Ser Leu Ser Tyr Pro Met Arg Arg Ser Tyr Arg Tyr
 50 55 60

Lys Leu Leu Asn Trp Ala Tyr Gln Gln Val Gln Gln Asn Lys Glu Asp
 65 70 75 80

Ala Trp Ile Glu His Asp Val Trp Arg Met Glu Ile Tyr Val Ser Leu
 85 90 95

Gly Ile Val Thr Leu Ala Ile Leu Ala Leu Leu Ala Val Thr Ser Ile
 100 105 110

Pro Ser Val Ser Asp Ser Leu Thr Trp Arg Glu Phe His Tyr Ile Gln
 115 120 125

Ser Thr Leu Gly Ile Val Ser Leu Leu Leu Gly Thr Ile His Ala Leu
 130 135 140

Ile Phe Ala Trp Asn Lys Trp
 145 150

<210> 485

<211> 101

<212> PRT

<213> Sus scrofa

<400> 485

Thr Thr Ala Leu Leu Phe Thr Pro Val Thr Ile Arg Leu Cys Glu Val
 1 5 10 15

Leu Asn Leu Asp Pro Arg Gln Val Leu Ile Ala Glu Val Ile Phe Thr
 20 25 30

Asn Ile Gly Gly Ala Ala Thr Ala Ile Gly Asp Pro Pro Asn Val Ile
 35 40 45

Ile Val Ser Asn Gln Glu Leu Arg Lys Met Gly Leu Asp Phe Ala Gly
 50 55 60

Phe Thr Ala His Met Phe Ala Gly Ile Cys Phe Val Leu Leu Phe Ser
 65 70 75 80

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Phe Pro Leu Leu Arg Leu Leu Tyr Trp Asn Arg Lys Leu Tyr Asn Lys
85 90 95

Glu Pro Ser Glu Ile
100

<210> 486
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 486
Arg Gly Gly Leu Asp Pro Val Thr Gly Gly Leu Trp Leu Thr Asp Ile
1 5 10 15

Ala His His His Leu Ala Ile Ala Ile Leu Phe Leu Ile Ala Gly His
20 25 30

Met Tyr Arg Thr Asn Trp Gly Ile Gly His Gly Leu Lys Asp Ile Leu
35 40 45

Glu Ala His Lys Gly Pro Phe Thr Gly Gln Gly His Lys Gly Leu Tyr
50 55 60

Glu Ile Leu Thr Thr Ser Trp His Ala Gln Leu Ser
65 70 75

<210> 487
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 487
Leu Gly Phe Ser Ser Ser Glu Met His Glu Leu Leu Met Arg Leu Tyr
1 5 10 15

Val Thr Ile His Ser Asp His Glu Gly Gly Asn Val Ser Ala His Thr
20 25 30

Gly His Leu Val Ala Ser Ala Leu Ser Asp Pro Tyr Leu Ser Phe Ala
35 40 45

Ala Ala Leu Asn Gly Leu Ala Gly Pro Leu His Gly Leu Ala Asn Gln
50 55 60

Glu Val Leu Leu Trp Ile Lys Ser Val Val Glu Glu
65 70 75

<210> 488
<211> 101
<212> PRT
<213> Sus scrofa

<400> 488
Ala Ala Val Val Leu Leu Leu Ser Ala Leu Val Leu Arg Ala Pro Pro
1 5 10 15

Ser Val Gly Tyr Leu Asp Arg Leu Pro Arg Ser Phe His Leu Thr Gln
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25

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Glu Ser Ala Lys Ile Val Gly Ser Pro Asn Phe Pro Val Lys Val Tyr
 35 40 45

Val Met Leu His Gln Lys Ser Pro His Val Leu Cys Val Thr Gln Arg
 50 55 60

Leu Arg Asn Phe Glu Leu Val Asp Pro Ser Phe Gln Trp His Gly Pro
 65 70 75 80

Lys Gly Lys Ile Val Ser Glu Asn Ser Thr Ala Gln Val Thr Ser Thr
 85 90 95

Gly Ser Leu Val Phe
 100

<210> 489

<211> 76

<212> PRT

<213> Capra hircus

<400> 489

Met Trp Val Leu Leu Gly Val Phe Leu Leu Thr Leu Ala Tyr Leu Phe
 1 5 10 15

Trp Pro Lys Thr Lys His Ser Ala Ala Lys Tyr Pro Arg Ser Leu Pro
 20 25 30

Ser Leu Pro Leu Val Gly Ser Leu Leu Phe Leu Pro Arg Arg Gly Gln
 35 40 45

Gln His Glu Asn Phe Phe Lys Leu Gln Glu Lys Tyr Gly Pro Ile Tyr
 50 55 60

Ser Phe Arg Leu Gly Ser Lys Thr Thr Val Met Ile
 65 70 75

<210> 490

<211> 226

<212> PRT

<213> Sus scrofa

<400> 490

Ser Lys Gln Cys Glu Ser Thr Ala Arg Arg Pro Asn Asn Glu Thr Leu
 1 5 10 15

Tyr Ser Ala Ile Phe Ala Glu Ser Glu Leu Ser Asp Trp Asp Tyr Asp
 20 25 30

Tyr Gly Phe Cys Ser Pro Lys Thr Leu Gln Cys Ala Pro Glu Pro Asp
 35 40 45

Ala Phe Asn Pro Cys Glu Asp Ile Met Gly Tyr Asp Phe Leu Arg Val
 50 55 60

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Leu Ile Trp Leu Ile Asn Ile Leu Ala Ile Met Gly Asn Val Thr Val
65 70 75 80

Leu Phe Val Leu Leu Thr Ser His Tyr Lys Leu Thr Val Pro Arg Phe
85 90 95

Leu Met Cys Asn Leu Ser Phe Ala Asp Phe Cys Met Gly Leu Tyr Leu
100 105 110

Leu Leu Ile Ala Ser Val Asp Ala Gln Thr Lys Gly Gln Tyr Tyr Asn
115 120 125

His Ala Ile Asp Trp Gln Thr Gly Asn Gly Cys Ser Val Ala Gly Phe
130 135 140

Phe Thr Val Phe Ala Ser Glu Leu Ser Val Tyr Thr Leu Thr Val Ile
145 150 155 160

Thr Leu Glu Arg Trp His Thr Ile Thr Tyr Ala Ile Gln Leu Asp Gln
165 170 175

Lys Leu Arg Leu Arg His Ala Ile Pro Ile Met Leu Gly Gly Trp Leu
180 185 190

Phe Ser Thr Leu Ile Ala Met Leu Pro Leu Val Gly Val Ser Ser Tyr
195 200 205

Met Lys Val Ser Ile Cys Leu Pro Met Asp Val Glu Thr Thr Leu Ser
210 215 220

Gln Val
225

<210> 491
<211> 276
<212> PRT
<213> Sus scrofa

<400> 491
Leu Arg Tyr Leu Ser Leu Ala His Asn Asp Ile His Ser Arg Val Ser
1 5 10 15

Gln Gln Leu Cys Ser Ala Ser Leu Cys Ala Leu Asp Phe Ser Gly Asn
20 25 30

Asp Leu Ser Arg Met Trp Ala Glu Gly Asp Leu Tyr Leu Arg Phe Phe
35 40 45

Gln Gly Leu Arg Ser Leu Val Trp Leu Asp Leu Ser Gln Asn His Leu
50 55 60

His Thr Leu Leu Pro Arg Ala Leu Asp Asn Leu Pro Lys Ser Leu Lys
65 70 75 80

His Leu His Leu Arg Asp Asn Asn Leu Ala Phe Phe Asn Trp Ser Ser
Page 294

Leu Thr Leu Leu Pro Lys Leu Glu Thr Leu Asp Leu Ala Gly Asn Gln
100 105 110

Leu Lys Ala Leu Ser Asn Gly Ser Leu Pro Ser Gly Thr Gln Leu Arg
115 120 125

Arg Leu Asp Leu Ser Gly Asn Ser Ile Gly Phe Val Asn Pro Gly Phe
130 135 140

Phe Ala Leu Ala Lys Gln Leu Glu Glu Leu Asn Leu Ser Ala Asn Ala
145 150 155 160

Leu Lys Thr Val Glu Pro Ser Trp Phe Gly Ser Met Val Gly Asn Leu
165 170 175

Lys Val Leu Asp Val Ser Ala Asn Pro Leu His Cys Ala Cys Gly Ala
180 185 190

Thr Phe Val Gly Phe Leu Leu Glu Val Gln Ala Ala Val Pro Gly Leu
195 200 205

Pro Ser Arg Val Lys Cys Gly Ser Pro Gly Gln Leu Gln Gly His Ser
210 215 220

Ile Phe Ala Gln Asp Leu Arg Leu Cys Leu Asp Glu Thr Leu Ser Trp
225 230 235 240

Asn Cys Phe Gly Ile Ser Leu Leu Ala Met Ala Leu Gly Leu Val Val
245 250 255

Pro Met Leu His His Leu Cys Gly Trp Asp Leu Trp Tyr Cys Phe His
260 265 270

Leu Cys Leu Ala
275

<210> 492
<211> 126
<212> PRT
<213> Sus scrofa

<400> 492
Met Asn Tyr Thr Glu Ser Ser Pro Leu Ala Glu Ser Thr Ala Ile Gly
1 5 10 15

Phe Thr Pro Glu Leu Gly Ser Ile Thr Pro Val Pro Ser Asn Glu Thr
20 25 30

Thr Cys Glu Asn Trp Arg Glu Ile His His Leu Val Phe His Val Ala
35 40 45

Asn Val Phe Phe Ala Ile Gly Leu Val Leu Pro Thr Thr Leu His Leu
50 55 60

His Met Ile Leu Leu Arg Gly Met Leu Thr Ile Gly Cys Thr Leu Tyr
65 70 75 80

Ile Val Trp Ala Thr Leu Tyr Arg Cys Ala Leu Asp Ile Met Ile Trp
85 90 95

Asn Ser Val Phe Leu Gly Ile Asn Val Leu His Leu Ser Tyr Leu Leu
100 105 110

Tyr Lys Lys Arg Pro Val Lys Ile Glu Lys Glu Leu Lys Gly
115 120 125

<210> 493

<211> 126

<212> PRT

<213> Solanum tuberosum

<400> 493

Ala Tyr Ala Ser Arg Thr Leu Leu Phe Leu Gln Asp Asn Gly Ser Leu
1 5 10 15

Lys Pro Leu Ala Ile Glu Leu Ser Phe Pro His Pro Asp Gly Asp Gln
20 25 30

Phe Gly Val Thr Ser Lys Val Tyr Thr Pro Ser Asp Gln Gly Val Glu
35 40 45

Ser Ser Ile Trp Gln Leu Ala Lys Ala Tyr Val Ala Val Asn Asp Val
50 55 60

Gly Val His Gln Leu Ile Ser His Trp Leu Asn Thr His Ala Val Ile
65 70 75 80

Glu Pro Phe Val Ile Ala Thr Asn Arg Gln Leu Ser Val Leu His Pro
85 90 95

Ile His Lys Leu Leu Tyr Pro His Phe Arg Asp Thr Met Asn Ile Asn
100 105 110

Ala Ser Ala Arg Gln Leu Leu Val Asn Ala Gly Gly Val Leu
115 120 125

<210> 494

<211> 251

<212> PRT

<213> Sus scrofa

<400> 494

Ile Ser Phe Met Ala Glu Arg Ser Ile Glu Asp Glu Leu Asn Arg Glu
1 5 10 15

Ser Asn Ser Asp Leu Phe Thr Ile Leu Ile Ser Tyr Ala Ile Met Phe
20 25 30

Leu Tyr Ile Ser Ile Ala Leu Gly His Ile Lys Ser Cys Ser Arg Leu
Page 296

35

40

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Leu Val Asp Ser Lys Ile Ser Leu Gly Ile Ala Gly Ile Leu Ile Val
50 55 60

Leu Ser Ser Val Ala Cys Ser Leu Gly Ile Phe Ser Tyr Ile Gly Val
65 70 75 80

Pro Leu Thr Leu Ile Val Ile Glu Val Ile Pro Phe Leu Val Leu Ala
85 90 95

Val Gly Val Asp Asn Ile Phe Ile Leu Val Gln Thr Tyr Gln Arg Asp
100 105 110

Glu Arg Leu Gln Gly Glu Thr Leu Asp Gln Gln Leu Gly Arg Val Leu
115 120 125

Gly Glu Val Ala Pro Ser Met Phe Leu Ser Ser Phe Ser Glu Thr Val
130 135 140

Ala Phe Phe Leu Gly Gly Leu Ser Val Val Pro Ala Val His Thr Phe
145 150 155 160

Ser Leu Phe Ala Gly Met Ala Val Leu Ile Asp Phe Leu Leu Gln Ile
165 170 175

Thr Cys Phe Val Ser Leu Leu Gly Leu Asp Ile Lys Arg Gln Glu Lys
180 185 190

Asn Arg Leu Asp Val Val Cys Cys Val Gln Gly Ala Glu Asp Gly Ala
195 200 205

Gly Val Gln Ala Ser Glu Ser Cys Leu Phe Arg Phe Phe Lys Asn Ser
210 215 220

Tyr Ala Pro Leu Leu Leu Lys Asp Trp Met Arg Pro Ile Val Ile Ala
225 230 235 240

Val Phe Val Gly Val Leu Ser Phe Ser Ile Ala
245 250

<210> 495

<211> 101

<212> PRT

<213> Solanum tuberosum

<400> 495

Met Gly Val Thr Lys Lys Pro Asp Leu Asn Asp Pro Val Leu Arg Ala
1 5 10 15

Lys Leu Ala Lys Gly Met Gly His Asn Tyr Tyr Gly Glu Pro Ala Trp
20 25 30

Pro Asn Asp Leu Leu Tyr Ile Phe Pro Val Val Ile Leu Gly Thr Ile
35 40 45

Ala Cys Asn Val Gly Leu Ala Val Leu Glu Pro Ser Met Ile Gly Glu
50 55 60

Pro Pro Asp Pro Phe Ala Thr Pro Leu Glu Ile Leu Pro Glu Trp Tyr
65 70 75 80

Phe Phe Pro Val Phe Gln Ile Leu Arg Thr Val Pro Asn Lys Leu Leu
85 90 95

Gly Val Leu Leu Met
100

<210> 496
<211> 251
<212> PRT
<213> Sus scrofa

<400> 496
Asn Glu Glu Asp Leu Arg Glu Cys Phe Phe Asp Asp Val Glu Ser Ile
1 5 10 15

Pro Thr Val Thr Thr Trp Asn Thr Tyr Leu Arg Tyr Val Thr Val His
20 25 30

Lys Ser Leu Ile Phe Val Leu Ile Trp Cys Leu Val Val Phe Leu Ala
35 40 45

Glu Val Ala Ala Cys Leu Val Val Leu Cys Leu Leu Lys Lys Thr Ser
50 55 60

Pro Gln Asp Lys Gly Asn Ser Thr Lys Gly Ala Asn Asn Ser Tyr Ala
65 70 75 80

Val Ile Ile Thr Ser Thr Ser Ala Tyr Tyr Val Phe Tyr Ile Tyr Val
85 90 95

Gly Val Ala Asp Gly Leu Leu Ala Leu Gly Leu Phe Arg Gly Leu Pro
100 105 110

Leu Val His Thr Leu Ile Thr Val Ser Lys Ile Leu His Arg Lys Met
115 120 125

Leu His Ser Val Leu Gln Ala Pro Met Ser Thr Leu Asn Thr Leu Lys
130 135 140

Ala Gly Gly Ile Leu Asn Arg Phe Ser Lys Asp Ile Ala Val Leu Asp
145 150 155 160

Asp Leu Leu Pro Leu Thr Ile Phe Asp Phe Ile Gln Leu Leu Leu Ile
165 170 175

Val Ile Gly Ala Val Ala Val Val Ser Val Leu Lys Pro Tyr Ile Phe
180 185 190

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Leu Ala Thr Val Pro Val Ile Val Ala Phe Ile Leu Leu Arg Ala Tyr
195 200 205

Phe Leu His Thr Ser Gln Gln Leu Lys Gln Leu Glu Ser Glu Gly Arg
210 215 220

Ser Pro Ile Phe Thr His Leu Ile Thr Ser Leu Lys Gly Leu Trp Thr
225 230 235 240

Leu Arg Ala Phe Gly Arg Gln Pro Tyr Phe Glu
245 250

<210> 497

<211> 76

<212> PRT

<213> Sus scrofa

<400> 497

Tyr Arg Ala Gln Val Phe Ala Ser Ile Phe Leu Leu Leu Leu Ser Pro
1 5 10 15

Ala Gly Val Gly Ala Arg Ala Lys Asn Asp Phe Asn Leu Val His Pro
20 25 30

Leu Val Thr Met Glu Gln Leu Leu Trp Val Ser Gly Lys Gln Ile Gly
35 40 45

Ser Val Asp Thr Phe Arg Ile Pro Leu Ile Thr Thr Thr Pro Arg Gly
50 55 60

Thr Leu Leu Ala Phe Ala Glu Ala Arg Lys Met Ser
65 70 75

<210> 498

<211> 151

<212> PRT

<213> Sus scrofa

<400> 498

Gly Gly Gly Gly His Ala Asp Cys Glu Glu Leu Gln Arg Thr Gly Arg
1 5 10 15

Phe Cys Gly Gly Leu Ile Lys Asp Ile Lys Arg Lys Ala Pro Phe Phe
20 25 30

Ala Ser Asp Phe Tyr Asp Ala Leu Asn Ile Gln Ala Leu Ser Ala Ile
35 40 45

Leu Phe Ile Tyr Leu Ala Thr Val Thr Asn Ala Ile Thr Phe Gly Gly
50 55 60

Leu Leu Gly Asp Ala Thr Asp Asn Met Gln Gly Val Leu Glu Ser Phe
65 70 75 80

Leu Gly Thr Ala Val Ser Gly Ala Val Phe Cys Leu Phe Ala Gly Gln
85 90 95

Pro Leu Thr Ile Leu Ser Ser Thr Gly Pro Val Leu Val Phe Glu Arg
100 105 110

Leu Leu Phe Asn Phe Ser Lys Asp His Asn Phe Asp Tyr Leu Glu Phe
115 120 125

Arg Leu Trp Ile Gly Leu Trp Ser Ala Phe Leu Cys Leu Ile Leu Val
130 135 140

Ala Thr Asp Ala Ser Phe Leu
145 150

<210> 499

<211> 76

<212> PRT

<213> Capra hircus

<400> 499

Val Leu Phe Ile Tyr Gly Val Ser Asp Leu Pro Ser Asp His Gln Met
1 5 10 15

Met Leu Thr Val Arg Val His Thr Trp Ser Ser Leu Glu Leu Val Cys
20 25 30

Ser Glu Leu Thr Asn Pro Phe Val Met Lys Ala Gly Glu Ser Val Val
35 40 45

Leu Tyr Ser Lys Pro Val Pro Glu Leu Leu Lys Gly Cys Pro Gly Cys
50 55 60

Thr Arg Gln Ser Cys Val Val Ser Phe Tyr Leu Ser
65 70 75

<210> 500

<211> 251

<212> PRT

<213> Solanum tuberosum

<400> 500

Gln Lys Asp Thr Tyr Leu Asn Tyr Ser Gln Ala Leu Ser Tyr Thr Ser
1 5 10 15

Gln Ala Leu Ser Gln Asn Leu Gln Gly Leu Arg Lys Arg Ser Pro Ile
20 25 30

Arg Arg Met Ser Thr Lys Leu Val Tyr Ser Leu Gln Glu Asn Trp Lys
35 40 45

Arg Ile Trp Val Leu Val Leu Trp Ile Leu Ile Met Ile Gly Leu Phe
50 55 60

Leu Trp Lys Phe Tyr Leu Tyr Lys Gln Lys Ser Ala Phe Gln Val Met
65 70 75 80

Gly Tyr Cys Leu Leu Thr Ala Lys Gly Ala Ala Glu Thr Leu Lys Phe
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Asn Met Ala Leu Ile Leu Leu Pro Val Cys Arg Asn Thr Ile Thr Phe
100 105 110

Leu Arg Ser Thr Lys Leu Ser Cys Phe Val Pro Phe Asp Asp Asn Ile
115 120 125

Asn Phe His Lys Thr Val Ala Ala Ala Ile Val Thr Gly Ile Ile Leu
130 135 140

His Ala Gly Asn His Leu Val Cys Asp Phe Pro Lys Leu Ile His Ala
145 150 155 160

Asn Asn Thr Asn Tyr Gln Lys Tyr Leu Val Asn Asp Phe Gly Pro Ser
165 170 175

Gln Pro Gln Tyr Ile Asp Leu Val Lys Gly Val Glu Gly Val Thr Gly
180 185 190

Ile Ile Met Val Ile Leu Met Ala Ile Ala Phe Thr Leu Ala Thr Arg
195 200 205

Trp Phe Arg Arg Ser Leu Ile Lys Phe Pro Lys Pro Phe Asp Arg Leu
210 215 220

Thr Gly Phe Asn Ala Phe Trp Tyr Ser His His Leu Leu Ile Ile Val
225 230 235 240

Tyr Ile Val Leu Ile Ile His Gly Thr Phe Leu
245 250

<210> 501

<211> 76

<212> PRT

<213> Sus scrofa

<400> 501

Asn Leu Gln Lys Glu Ile Ser Leu Ala Lys Ala Arg His Gly Ile Ala
1 5 10 15

Asp Leu Phe Arg Thr Pro Val Leu Arg Arg Val Thr Leu Cys Leu Ser
20 25 30

Leu Ala Trp Phe Ala Thr Gly Phe Ala Tyr Tyr Ser Leu Ala Met Gly
35 40 45

Val Glu Glu Phe Gly Val Asn Leu Tyr Val Leu Gln Leu Ile Phe Gly
50 55 60

Gly Val Asp Val Pro Ala Lys Phe Ile Thr Met Leu
65 70 75

<210> 502

<211> 101

<212> PRT

<213> Sus scrofa

<400> 502

Met Ala Thr Met Val Ala Gln Lys Leu Ser His Leu Leu Pro Ser Leu
1 5 10 15

Arg Gln Val His Pro Glu Pro Gln Pro Ser Val His Pro Glu Pro Val
20 25 30

Phe Thr Val Asp Arg Ala Glu Val Pro Pro Leu Phe Trp Lys Pro Tyr
35 40 45

Ile Tyr Val Gly Tyr Arg Pro Leu His Gln Thr Trp Arg Phe Tyr Phe
50 55 60

Arg Thr Leu Phe Gln Gln His Asn Glu Ala Val Asn Val Trp Thr His
65 70 75 80

Leu Leu Ala Ala Leu Val Leu Leu Leu Arg Leu Ala Ile Phe Val Gly
85 90 95

Thr Val Asp Phe Trp
100

<210> 503

<211> 76

<212> PRT

<213> Sus scrofa

<400> 503

Met Leu Leu Thr Leu Tyr Ala Cys Leu Leu Trp Leu Ser Thr Ser Gly
1 5 10 15

Leu Trp Thr Ser Gln Ala Lys Asp Pro Asp Ser Asp Leu Ser Thr Arg
20 25 30

Ser Arg His Arg Asn Leu Ala Pro Asn Asn Val Asp Phe Ala Phe Ala
35 40 45

Leu Tyr Lys His Leu Val Ala Ser Ala Pro Gly Lys Asp Val Phe Leu
50 55 60

Ser Pro Val Ser Ile Ser Thr Ala Leu Ala Met Leu
65 70 75

<210> 504

<211> 101

<212> PRT

<213> Malus domestica

<400> 504

Leu Asp Gly Leu Tyr Glu Gln Ile Asn Ile Thr Arg Asp Thr Thr Asp
1 5 10 15

Tyr Leu Trp Tyr Met Thr Asp Ile Thr Ile Gly Ser Asp Glu Ala Phe
20 25 30

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Leu Lys Asn Gly Lys Ser Pro Leu Leu Thr Ile Phe Ser Ala Gly His
35 40 45

Ala Leu Asn Val Phe Ile Asn Gly Gln Leu Ser Gly Thr Val Tyr Gly
50 55 60

Ser Leu Glu Asn Pro Lys Leu Ser Phe Ser Gln Asn Val Asn Leu Arg
65 70 75 80

Ser Gly Ile Asn Lys Leu Ala Leu Leu Ser Ile Ser Val Gly Leu Pro
85 90 95

Asn Val Gly Thr His
100

<210> 505

<211> 151

<212> PRT

<213> Capra hircus

<400> 505

Ile Val His Ala Thr Gln Phe Tyr Arg Arg Gly Pro Pro Ala Arg Val
1 5 10 15

Ala Leu Thr Cys Val Ala Val Trp Gly Leu Cys Leu Leu Phe Ala Leu
20 25 30

Pro Asp Phe Ile Phe Leu Ser Ser His His Asp Asn Arg Leu Asn Ala
35 40 45

Thr His Cys Gln Tyr Asn Phe Pro Gln Glu Gly Arg Thr Ala Leu Arg
50 55 60

Val Leu Gln Leu Val Ala Gly Phe Leu Leu Pro Leu Leu Val Met Ala
65 70 75 80

Tyr Cys Tyr Ala Arg Ile Leu Thr Val Leu Leu Val Ser Arg Gly Gln
85 90 95

Arg Arg Leu Arg Ala Met Arg Leu Val Val Val Val Val Val Ala Phe
100 105 110

Ala Leu Cys Trp Thr Pro Tyr His Leu Val Val Leu Val Asp Thr Leu
115 120 125

Met Asp Leu Gly Ala Leu Ala Arg Asn Cys Gly Arg Glu Ser Arg Val
130 135 140

Asp Val Ala Lys Ser Val Thr
145 150

<210> 506

<211> 251

<212> PRT

<213> Sus scrofa

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<400> 506

Leu Ala Val Ser Ser Gly Ser Ala Ser Thr Glu Lys Gly Glu Leu Leu
1 5 10 15

Asp Ser Ala His Ile Arg Cys His Leu Ser Lys Leu Arg Cys Cys Val
20 25 30

Gln Trp Leu Lys Val Ser Gly Leu Phe Val Phe Val Val Leu Cys Ser
35 40 45

Ile Leu Phe Ser Leu Tyr Pro Asp Gln Gly Lys Phe Trp Gln Leu Leu
50 55 60

Ala Val Ser Pro Leu Glu Ser Tyr Ser Val Asn Leu Ser Ser His Ala
65 70 75 80

Asp Ser Met Leu Leu Gln Val Asp Leu Ala Gly Ala Leu Val Ala Ser
85 90 95

Gly Pro Ser His Leu Gly Lys Glu Glu His Val Ala Val Glu Val Thr
100 105 110

Gln Ala Asn Ala Pro Gly Ser Arg Arg Arg Arg Pro Gln Gln Val Thr
115 120 125

His Asn Trp Thr Ile Phe Leu Asn Pro Ser Gly Gly Glu His Thr Val
130 135 140

Met Ser Arg Thr Phe Glu Val Leu Ser Arg Glu Pro Val Ser Ile Asn
145 150 155 160

Ile Arg Ala Ser Leu Gln Gln Thr Gln Ile Val Pro Leu Leu Met Ala
165 170 175

His Gln Tyr Leu Arg Ala Ser Ile Glu Ala Gln Val Thr Ile Ala Ala
180 185 190

Val Ile Leu Ala Gly Val Tyr Val Leu Ile Ile Phe Glu Ile Val His
195 200 205

Arg Thr Leu Ala Ala Met Leu Gly Ser Leu Ala Ala Leu Ala Ala Leu
210 215 220

Ala Val Ile Gly Asp Arg Pro Thr Leu Thr Gln Val Val Glu Trp Ile
225 230 235 240

Asp Phe Glu Thr Leu Ala Leu Leu Phe Gly Met
245 250

<210> 507

<211> 151

<212> PRT

<213> Sus scrofa

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<400> 507

Met Leu Ser Arg Leu Phe Arg Met His Gly Leu Phe Val Ala Ser His
1 5 10 15

Pro Trp Glu Val Ile Val Gly Thr Val Thr Leu Thr Ile Cys Met Met
20 25 30

Ser Met Asn Met Phe Thr Gly Asn Asp Lys Ile Cys Gly Trp Asn Tyr
35 40 45

Glu Cys Pro Lys Phe Glu Glu Asp Val Leu Ser Ser Asp Ile Ile Ile
50 55 60

Leu Thr Ile Thr Arg Cys Ile Ala Ile Leu Tyr Ile Tyr Phe Gln Phe
65 70 75 80

Gln Asn Leu Arg Gln Leu Gly Ser Lys Tyr Ile Leu Gly Ile Ala Gly
85 90 95

Leu Phe Thr Ile Phe Ser Ser Phe Val Phe Ser Thr Val Val Ile His
100 105 110

Phe Leu Asp Lys Glu Leu Thr Gly Leu Asn Glu Ala Leu Pro Phe Phe
115 120 125

Leu Leu Leu Ile Asp Leu Ser Arg Ala Ser Ala Leu Ala Lys Phe Ala
130 135 140

Leu Ser Ser Asn Ser Gln Asp
145 150

<210> 508

<211> 126

<212> PRT

<213> Sus scrofa

<400> 508

Thr Leu Met Asp His Trp Val Phe Gly Glu Val Met Cys Lys Leu Asn
1 5 10 15

Pro Phe Val Gln Cys Val Ser Ile Thr Val Ser Ile Phe Ser Leu Val
20 25 30

Leu Ile Ala Val Glu Arg His Gln Leu Ile Ile Asn Pro Arg Gly Trp
35 40 45

Arg Pro Ser Asn Arg His Ala Tyr Val Gly Ile Ala Val Ile Trp Val
50 55 60

Leu Ala Val Ala Ser Ser Leu Pro Phe Leu Ile Tyr Gln Val Leu Thr
65 70 75 80

Asp Glu Pro Phe Gln Asn Val Thr Leu Asp Ala Phe Lys Asp Lys Tyr
85 90 95

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Val Cys Phe Asp Lys Phe Leu Ser Asp Ser His Arg Leu Ser Tyr Thr
100 105 110

Thr Leu Leu Leu Val Leu Gln Tyr Phe Gly Pro Leu Cys Phe
115 120 125

<210> 509
<211> 176
<212> PRT
<213> Sus scrofa

<400> 509
Phe Val Gly Leu Gly Tyr Arg Lys Thr Val Ala Ile Leu Tyr Gln Thr
1 5 10 15

Ala Phe Ser Val Gly Leu Val Leu Leu Ser Gly Leu Ala Tyr Ala Val
20 25 30

Pro His Trp Arg Ser Leu Gln Leu Ala Val Ser Leu Pro Ile Phe Leu
35 40 45

Leu Leu Leu Cys Tyr Trp Phe Val Pro Glu Ser Pro Arg Trp Leu Leu
50 55 60

Ser Gln Lys Arg Asn Thr Gln Ala Ile Lys Ile Met Asp Arg Ile Ala
65 70 75 80

Gln Lys Asn Gly Lys Leu Pro Pro Ala Asp Leu Lys Met Leu Ser Leu
85 90 95

Glu Glu Glu Val Val Thr Glu Arg Leu Ser Pro Ser Phe Leu Asp Leu
100 105 110

Phe Arg Thr Gln Asn Leu Arg Lys Tyr Thr Phe Ile Leu Met Tyr Leu
115 120 125

Trp Phe Thr Ser Ser Val Leu Tyr Gln Gly Leu Ile Met His Val Gly
130 135 140

Ala Thr Gly Gly Ser Leu Tyr Leu Asp Phe Leu Tyr Ser Ala Leu Val
145 150 155 160

Glu Phe Pro Ala Ala Phe Val Ile Leu Leu Ile Ile Asp Arg Phe Gly
165 170 175

<210> 510
<211> 201
<212> PRT
<213> Sus scrofa

<400> 510
Leu Leu Cys Gln Arg Leu Ala Ala Arg Leu Gly Val Val Thr Gly Lys
1 5 10 15

Asp Leu Gly Glu Ile Cys His Leu Tyr Tyr Pro Lys Val Pro Arg Thr
20 25 30

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Leu Leu Trp Leu Asn Met Glu Leu Ala Ile Val Gly Ser Asp Met Gln
35 40 45

Glu Val Ile Gly Thr Ala Ile Ala Phe Asn Leu Leu Ser Ala Gly Arg
50 55 60

Ile Pro Leu Trp Gly Gly Val Leu Ile Thr Val Val Asp Thr Phe Phe
65 70 75 80

Phe Leu Tyr Leu Asn Asn Tyr Gly Leu Arg Lys Leu Glu Ala Phe Phe
85 90 95

Ala Phe Leu Ile Ala Ile Met Ala Phe Thr Phe Gly Tyr Glu Tyr Val
100 105 110

Val Ala Arg Pro Ala Gln Gly Ala Leu Leu Arg Gly Leu Phe Leu Pro
115 120 125

Ser Cys Ser Gly Cys Gly Gln Pro Glu Leu Leu Gln Ala Val Gly Ile
130 135 140

Val Gly Ala Ile Ile Met Pro His Asn Ile Tyr Leu His Ser Ala Leu
145 150 155 160

Val Lys Ser Arg Glu Val Asp Arg Thr Arg Arg Glu Asp Ile Arg Glu
165 170 175

Ala Asn Met Tyr Phe Leu Ile Glu Ser Thr Ile Ala Leu Phe Val Ser
180 185 190

Phe Phe Ile Asn Leu Phe Val Met Ala
195 200

<210> 511
<211> 126
<212> PRT
<213> Sus scrofa

<400> 511
Met Leu Leu Trp Ser Gly Ile Cys Gly Leu Ser Pro Pro Arg Ile Phe
1 5 10 15

Pro Ser Leu Leu Val Val Val Ala Leu Val Gly Leu Leu Pro Val Leu
20 25 30

Arg Ser His Gly Leu Gln Pro Ser Pro Thr Ala Ser Thr Ile Arg Gly
35 40 45

Ser Glu Pro Pro Arg Glu Arg Ser Ile Gly Asp Val Thr Thr Ala Pro
50 55 60

Pro Glu Leu Ala Pro Glu Ser Arg Pro Val Asn His Ser Val Thr Glu
65 70 75 80

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His Gly Met Lys Ala Arg Lys Ala Phe Pro Val Leu Gly Ile Asp Tyr
85 90 95

Thr His Val Arg Thr Pro Phe Glu Ile Ser Leu Trp Ile Leu Leu Ala
100 105 110

Cys Leu Met Lys Ile Gly Phe His Val Ile Pro Thr Ile Ser
115 120 125

<210> 512
<211> 226
<212> PRT
<213> Sus scrofa

<400> 512
Pro Ile Glu Ser Cys Gln Asn Phe Tyr Lys Asp Phe Thr Leu Gln Ile
1 5 10 15

Asp Met Ala Phe Asn Val Phe Phe Leu Leu Tyr Phe Gly Leu Arg Phe
20 25 30

Ile Ala Ala Asn Asp Lys Leu Trp Phe Trp Leu Glu Val Asn Ser Val
35 40 45

Val Asp Phe Phe Thr Val Pro Pro Val Phe Val Ser Val Tyr Leu Asn
50 55 60

Arg Ser Trp Leu Gly Leu Arg Phe Leu Arg Ala Leu Arg Leu Ile Gln
65 70 75 80

Phe Ser Glu Ile Leu Gln Phe Leu Asn Ile Leu Lys Thr Ser Asn Ser
85 90 95

Ile Lys Leu Val Asn Leu Leu Ser Ile Phe Ile Ser Thr Trp Leu Thr
100 105 110

Ala Ala Gly Phe Ile His Leu Val Glu Asn Ser Gly Asp Pro Trp Glu
115 120 125

Asn Phe Gln Asn Asn Gln Ala Leu Thr Tyr Trp Glu Cys Val Tyr Leu
130 135 140

Leu Met Val Thr Met Ser Thr Val Gly Tyr Gly Asp Val Tyr Ala Lys
145 150 155 160

Thr Thr Leu Gly Arg Leu Phe Met Val Phe Phe Ile Leu Gly Gly Leu
165 170 175

Ala Met Phe Ala Ser Tyr Val Pro Glu Ile Ile Glu Leu Ile Gly Asn
180 185 190

Arg Lys Lys Tyr Gly Gly Ser Tyr Ser Ala Val Ser Gly Arg Lys His
195 200 205

Ile Val Val Cys Gly His Ile Thr Leu Glu Ser Val Ser Asn Phe Leu
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 210 215 220
 Lys Asp
 225
 <210> 513
 <211> 176
 <212> PRT
 <213> Sus scrofa
 <400> 513
 Met Glu His Leu Glu Arg Cys Ala Trp Val Leu Arg Gly Thr Leu Val
 1 5 10 15
 Arg Ala Ala Val Arg Arg Tyr Leu Pro Trp Ala Leu Ala Ala Ser Met
 20 25 30
 Leu Ala Gly Ser Leu Leu Lys Glu Leu Ser Pro Leu Pro Glu Ser Tyr
 35 40 45
 Leu Ser Asn Lys Arg Asn Val Leu Asn Val Tyr Phe Val Lys Val Ala
 50 55 60
 Trp Ala Trp Thr Phe Cys Leu Leu Leu Pro Phe Ile Ala Leu Thr Asn
 65 70 75 80
 Tyr His Leu Thr Gly Lys Ala Gly Leu Val Leu Arg Arg Leu Ser Thr
 85 90 95
 Leu Leu Val Gly Thr Ala Ile Trp Tyr Val Cys Thr Ala Ile Phe Ser
 100 105 110
 Asn Val Glu His Tyr Thr Gly Ser Cys Tyr Gln Ser Pro Ala Leu Glu
 115 120 125
 Gly Val Arg Asn Glu Pro Leu Ser Lys Gln Gln Cys His Gly Gln Gly
 130 135 140
 Gly Phe Trp His Gly Phe Asp Ile Ser Gly His Ser Phe Leu Leu Thr
 145 150 155 160
 Phe Cys Ala Leu Met Ile Val Glu Glu Met Ala Val Leu His Glu Val
 165 170 175
 <210> 514
 <211> 151
 <212> PRT
 <213> Sus scrofa
 <400> 514
 Val Gly Leu Val Ala Val Phe Asp Tyr His Arg Lys Lys Gly Ile Ala
 1 5 10 15
 Asp Leu Tyr Ser Leu His Ser Trp Cys Gly Ile Leu Val Phe Val Leu
 20 25 30

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Phe Leu Ala Gln Trp Leu Val Gly Leu Gly Phe Phe Leu Phe Pro Gly
35 40 45

Ala Ser Phe Ser Leu Arg Ser Arg Tyr Arg Pro Gln His Val Phe Phe
50 55 60

Gly Ala Ala Ile Phe Leu Leu Ser Val Gly Thr Ala Leu Leu Gly Leu
65 70 75 80

Lys Glu Ala Leu Leu Phe Gln Leu Gly Thr Lys Tyr Ser Ala Phe Glu
85 90 95

Ser Glu Gly Val Leu Ala Asn Val Leu Gly Leu Leu Leu Val Ala Phe
100 105 110

Gly Ala Val Val Leu Tyr Ile Leu Thr Arg Ala Asp Trp Lys Arg Pro
115 120 125

Leu Gln Ala Glu Glu Gln Ala Leu Ser Met Asp Phe Lys Thr Leu Thr
130 135 140

Glu Gly Asp Ser Pro Ser Ser
145 150

<210> 515

<211> 76

<212> PRT

<213> Capsicum annuum

<400> 515

Leu Arg Val Gly Val Ile His Gly Leu Ala Arg Met Ala Ala Ile Met
1 5 10 15

Ala Ser Ala Tyr Lys Ala Tyr Leu Gly Val Gly Leu Gly Pro Leu Ser
20 25 30

Phe Ile Thr Lys Phe Arg Ile Pro His Pro Gly Arg Val Gly Gly Arg
35 40 45

Phe Phe Ile Asp Leu Gly Met Pro Leu Met Leu Ser Trp Val Leu Gly
50 55 60

Gly Asn Gly Glu Lys Leu Glu Gly Arg Ile Gln His
65 70 75

<210> 516

<211> 101

<212> PRT

<213> Sus scrofa

<400> 516

Ile Gln Phe Val Asp Met Val Lys Gly Arg Ser Leu Ala Gly Val Val
1 5 10 15

Asn Ala Gln Ala Leu Thr Ser Ala Phe Ser Pro His Thr Lys Pro Trp
20 25 30

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Ile Gly Leu Ala Glu Ala Leu Gly Ala Leu Met Gln Ala Trp Ala Gly
35 40 45

Ser Pro Lys Gly Thr Ile Gln Val Val Thr Gln Gly Thr Ser Leu Lys
50 55 60

Asn Ser Gly Thr Cys Leu Ser Pro Ala Val Ile Val Gly Leu Leu Lys
65 70 75 80

Glu Ala Ser His Arg Ala Asp Val Asn Leu Val Asn Ala Lys Leu Leu
85 90 95

Glu Lys Glu Ala Gly
100

<210> 517

<211> 276

<212> PRT

<213> Sus scrofa

<400> 517

Asp Ala Ala Val Asp Phe His Arg Leu Ile Ala Ser Thr Ala Ile Ile
1 5 10 15

Leu Thr Val Leu His Ser Ala Gly His Val Val Asn Val Tyr Leu Phe
20 25 30

Ser Ile Ser Pro Leu Ser Val Leu Ser Cys Leu Phe Pro Gly Leu Phe
35 40 45

His Asp Asn Gly Ser Glu Phe Pro Gln Lys Tyr Tyr Trp Trp Phe Phe
50 55 60

Gln Thr Val Pro Gly Leu Thr Gly Val Met Leu Leu Leu Ile Leu Ala
65 70 75 80

Ile Met Tyr Val Phe Ala Ser His His Phe Arg Arg Cys Ser Phe Arg
85 90 95

Gly Phe Trp Leu Thr His His Leu Tyr Ile Leu Leu Tyr Met Leu Leu
100 105 110

Ile Ile His Gly Ser Phe Ala Leu Ile Gln Leu Pro Arg Phe His Ile
115 120 125

Phe Phe Leu Val Pro Ala Leu Ile Tyr Val Gly Asp Lys Leu Val Ser
130 135 140

Leu Ser Arg Lys Lys Val Glu Ile Ser Val Val Lys Ala Glu Leu Leu
145 150 155 160

Pro Ser Gly Val Thr His Leu Gln Phe Gln Arg Pro Gln Gly Phe Glu
165 170 175

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Tyr Lys Ser Gly Gln Trp Val Arg Ile Ala Cys Leu Ala Leu Gly Thr
180 185 190

Thr Glu Tyr His Pro Phe Thr Leu Thr Ser Ala Pro His Glu Asp Thr
195 200 205

Leu Ser Leu His Ile Arg Ala Ala Gly Pro Trp Thr Thr Arg Leu Arg
210 215 220

Glu Ile Tyr Ser Pro Pro Thr Asp Asp Asn Cys Ala Lys Tyr Pro Lys
225 230 235 240

Leu Tyr Leu Asp Gly Pro Phe Gly Glu Gly His Gln Glu Trp His Lys
245 250 255

Phe Glu Val Ser Val Leu Val Gly Gly Gly Ile Gly Val Thr Pro Phe
260 265 270

Ala Ser Ile Leu
275

<210> 518
<211> 276
<212> PRT
<213> Sus scrofa

<400> 518
Asp Phe Phe Phe Val Tyr Ala Asp Tyr His Thr His Phe Leu Tyr Cys
1 5 10 15

Val Arg Ala Pro Ala Ser Leu Asn Asp Ala Ser Leu Leu His Asp Pro
20 25 30

Cys Leu Gly Thr Phe Gly Gly Pro Val Phe Pro Trp Leu Val Leu Gly
35 40 45

Gly Tyr Asp Asp Gln Asn Tyr Asn Asn Ala Thr Ala Leu Val Ile Thr
50 55 60

Phe Pro Val Asn Asn Tyr Tyr Asn Asp Thr Glu Lys Leu Gln Arg Ala
65 70 75 80

Gln Ala Trp Glu Ser Glu Phe Ile Asn Phe Val Lys Asn Tyr Lys Asn
85 90 95

Pro Asn Leu Thr Ile Ser Phe Met Ala Glu Arg Ser Ile Glu Asp Glu
100 105 110

Leu Asn Arg Glu Ser Asn Ser Asp Leu Phe Thr Ile Leu Ile Ser Tyr
115 120 125

Ala Ile Met Phe Leu Tyr Ile Ser Ile Ala Leu Gly His Ile Lys Ser
130 135 140

Cys Ser Arg Leu Leu Val Asp Ser Lys Ile Ser Leu Gly Ile Ala Gly

145 150 155 160
 Ile Leu Ile Val Leu Ser Ser Val Ala Cys Ser Leu Gly Ile Phe Ser
 165 170 175
 Tyr Ile Gly Val Pro Leu Thr Leu Ile Val Ile Glu Val Ile Pro Phe
 180 185 190
 Leu Val Leu Ala Val Gly Val Asp Asn Ile Phe Ile Leu Val Gln Thr
 195 200 205
 Tyr Gln Arg Asp Glu Arg Leu Gln Gly Glu Thr Leu Asp Gln Gln Leu
 210 215 220
 Gly Arg Val Leu Gly Glu Val Ala Pro Ser Met Phe Leu Ser Ser Phe
 225 230 235 240
 Ser Glu Thr Val Ala Phe Phe Leu Gly Gly Leu Ser Val Val Pro Ala
 245 250 255
 Val His Thr Phe Ser Leu Phe Ala Gly Met Ala Val Leu Ile Asp Phe
 260 265 270
 Leu Leu Gln Ile
 275
 <210> 519
 <211> 276
 <212> PRT
 <213> Sus scrofa
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 Lys Gly Glu Ala Pro Ala Lys Ser Ser Thr His Arg His Asp Glu Glu
 1 5 10 15
 Leu Gly Met Ala Ser Ala Glu Thr Leu Thr Val Phe Leu Lys Leu Leu
 20 25 30
 Ala Ala Gly Phe Tyr Gly Val Ser Ser Phe Leu Ile Val Val Val Asn
 35 40 45
 Lys Ser Val Leu Thr Asn Tyr Arg Phe Pro Ser Ser Leu Cys Val Gly
 50 55 60
 Leu Gly Gln Met Val Ala Thr Val Ala Val Leu Trp Val Gly Lys Ala
 65 70 75 80
 Leu Arg Val Val Lys Phe Pro Asp Phe Asp Arg Asn Val Pro Arg Lys
 85 90 95
 Thr Phe Pro Leu Pro Leu Leu Tyr Phe Gly Asn Gln Ile Thr Gly Leu
 100 105 110
 Phe Ser Thr Lys Lys Leu Asn Leu Pro Met Phe Thr Val Leu Arg Arg
 115 120 125

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Phe Ser Ile Leu Phe Thr Met Phe Ala Glu Gly Val Leu Leu Lys Lys
 130 135 140
 Thr Phe Ser Trp Gly Ile Lys Met Thr Val Phe Ala Met Ile Ile Gly
 145 150 155 160
 Ala Phe Val Ala Ala Ser Ser Asp Leu Ala Phe Asp Leu Glu Gly Tyr
 165 170 175
 Val Phe Ile Leu Ile Asn Asp Val Leu Thr Ala Ala Asn Gly Ala Tyr
 180 185 190
 Val Lys Gln Lys Leu Asp Ser Lys Glu Leu Gly Lys Tyr Gly Leu Leu
 195 200 205
 Tyr Tyr Asn Ala Leu Phe Met Ile Leu Pro Thr Leu Ala Ile Ala Tyr
 210 215 220
 Ile Thr Gly Asp Ala Gln Lys Ala Met Asp Phe Glu Gly Trp Ala Asp
 225 230 235 240
 Thr Leu Phe Leu Leu Gln Phe Thr Leu Ser Cys Val Met Gly Phe Ile
 245 250 255
 Leu Met Tyr Ala Thr Val Leu Cys Thr Gln Tyr Asn Ser Ala Leu Thr
 260 265 270
 Thr Thr Ile Val
 275
 <210> 520
 <211> 176
 <212> PRT
 <213> Sus scrofa
 <400> 520
 Met His Met Phe Arg Asp Pro Ala Thr Gly Asp Leu Pro Trp Thr Gly
 1 5 10 15
 Met Thr Phe Gly Leu Thr Ile Met Ala Thr Trp Tyr Trp Cys Thr Asp
 20 25 30
 Gln Val Ile Val Gln Arg Ser Leu Ser Ala Arg Asp Leu Asn His Ala
 35 40 45
 Lys Gly Gly Ser Ile Leu Ala Ser Tyr Leu Lys Met Leu Pro Met Gly
 50 55 60
 Leu Met Val Met Pro Gly Met Ile Ser Arg Val Leu Phe Pro Asp Asp
 65 70 75 80
 Val Gly Cys Val Val Pro Ser Glu Cys Leu Arg Ala Cys Gly Ala Glu
 85 90 95

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Ile Gly Cys Ser Asn Ile Ala Tyr Pro Lys Leu Val Met Glu Leu Met
100 105 110

Pro Thr Gly Leu Arg Gly Leu Met Val Ala Val Met Met Ala Ala Leu
115 120 125

Met Ser Ser Leu Thr Ser Ile Phe Asn Ser Ser Ser Thr Leu Phe Thr
130 135 140

Met Asp Val Trp Arg Arg Leu Arg Pro Arg Ala Gly Glu Arg Glu Leu
145 150 155 160

Leu Leu Val Gly Arg Leu Val Ile Val Val Leu Ile Gly Val Ser Val
165 170 175

<210> 521
<211> 151
<212> PRT
<213> Sus scrofa

<400> 521
Met Asp Arg Gly Val Leu Pro Gln Ala Ile Ala Leu Leu Leu Ala Val
1 5 10 15

Cys Ser Phe Gly Pro Thr Ala Gly Leu Ala Glu Gly Val Gln Cys Asp
20 25 30

Leu Gln Pro Val Asp Pro Lys Val Thr Tyr Thr Thr Ser Gln Val Ser
35 40 45

Glu Gly Cys Val Ala His Val Pro Asn Ala Thr Val Gly Val His Ile
50 55 60

Leu Phe Leu Glu Phe Ser Lys Glu Val Ser Thr Leu Glu Leu Thr Val
65 70 75 80

Gln Met Thr Asn Pro Asn Gly Ala Arg Pro Gln Glu Val Leu Leu Ile
85 90 95

Leu Ser Val Asn Lys Asn Ile His Leu Thr Leu Gln Val Pro Glu Ile
100 105 110

Pro Leu His Leu Ala Tyr Asp Ser Lys Leu Val Phe Leu Gln Glu Ala
115 120 125

Pro Lys Ala Val Ile Thr Glu Leu Pro Pro Ser Thr Thr Lys Asn Gln
130 135 140

Leu Phe Leu Trp Ala Asn Thr
145 150

<210> 522
<211> 76
<212> PRT
<213> Sus scrofa

<400> 522

Lys Ser Ser Val Gly Thr Ser Leu Leu Leu Asn Leu Ala Gln Ile Leu
1 5 10 15

Ser Asp Met Val Ile Lys Gly Gln Phe Lys Pro Ser Arg Ser Ile Val
20 25 30

Phe Ala Ser Trp Ser Ala Gly Asp Phe Gly Ala Ile Gly Ala Thr Glu
35 40 45

Trp Leu Glu Gly Tyr Leu Ser Ser Leu His Leu Lys Ala Phe Thr Tyr
50 55 60

Ile Asn Leu Asp Lys Ala Val Leu Gly Thr Ser Asn
65 70 75

<210> 523

<211> 76

<212> PRT

<213> Sus scrofa

<400> 523

Ala Val Phe Arg Pro Glu Val Pro Leu Arg Arg Gly Leu Pro Leu Leu
1 5 10 15

Leu Phe Arg Ala Gln Pro Ser Asn Pro Thr Met Leu Pro Thr Met Ile
20 25 30

Gly Leu Leu Ala Glu Ala Arg Val Gln Leu Leu Ser Tyr Gln Thr Ser
35 40 45

Val Val Ser Asp Gly Glu Thr Trp His Val Met Ala Ile Ser Ser Leu
50 55 60

Leu Pro Ser Leu Glu Pro Trp Lys Gln His Val Thr
65 70 75

<210> 524

<211> 176

<212> PRT

<213> Solanum tuberosum

<400> 524

Met Ile Trp His Val Gln Asn Glu Asn Phe Ile Leu Asp Ser Thr Arg
1 5 10 15

Ile Phe Met Lys Ala Phe His Leu Leu Leu Phe Asp Gly Ser Leu Ile
20 25 30

Phe Pro Glu Cys Ile Leu Ile Phe Gly Leu Ile Leu Leu Met Ile
35 40 45

Asp Ser Thr Ser Asp Gln Lys Asp Ile Pro Trp Leu Tyr Phe Ile Ser
50 55 60

Ser Thr Ser Leu Val Leu Ser Ile Thr Ala Leu Leu Phe Arg Trp Arg
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65				70				75				80			
Glu	Glu	Pro	Met	Ile 85	Ser	Phe	Ser	Gly	Asn 90	Phe	Gln	Thr	Asn	Asn 95	Phe
Asn	Glu	Ile	Phe 100	Gln	Phe	Leu	Ile	Leu 105	Leu	Cys	Ser	Thr	Leu 110	Cys	Ile
Pro	Leu	Ser 115	Val	Glu	Tyr	Ile	Glu 120	Cys	Thr	Glu	Met	Ala 125	Ile	Thr	Glu
Phe	Leu 130	Leu	Phe	Val	Leu	Thr 135	Ala	Thr	Leu	Gly	Gly 140	Met	Phe	Leu	Cys
Gly 145	Ala	Asn	Asp	Leu	Ile 150	Thr	Ile	Phe	Val	Ala 155	Pro	Glu	Cys	Phe	Ser 160
Leu	Cys	Ser	Tyr	Leu 165	Leu	Ser	Gly	Tyr	Thr 170	Lys	Lys	Asp	Val	Arg 175	Ser
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<211> 176															
<212> PRT															
<213> Solanum tuberosum															
<400> 525															
Met 1	Ile	Trp	His	Val 5	Gln	Asn	Glu	Asn	Phe 10	Ile	Leu	Asp	Ser	Thr 15	Arg
Ile	Phe	Met	Lys 20	Ala	Phe	His	Leu	Leu 25	Leu	Phe	Asp	Gly	Ser 30	Leu	Ile
Phe	Pro	Glu 35	Cys	Ile	Leu	Ile	Phe 40	Gly	Leu	Ile	Leu	Leu 45	Leu	Met	Ile
Asp	Ser 50	Thr	Ser	Asp	Gln	Lys 55	Asp	Ile	Pro	Trp	Leu 60	Tyr	Phe	Ile	Ser
Ser 65	Thr	Ser	Leu	Val	Leu 70	Ser	Ile	Thr	Ala	Leu 75	Leu	Phe	Arg	Trp	Arg 80
Glu	Glu	Pro	Met	Ile 85	Ser	Phe	Ser	Gly	Asn 90	Phe	Gln	Thr	Asn	Asn 95	Phe
Asn	Glu	Ile	Phe 100	Gln	Phe	Leu	Ile	Leu 105	Leu	Cys	Ser	Thr	Leu 110	Cys	Ile
Pro	Leu	Ser 115	Val	Glu	Tyr	Ile	Glu 120	Cys	Thr	Glu	Met	Ala 125	Ile	Thr	Glu
Phe	Leu 130	Leu	Phe	Val	Leu	Thr 135	Ala	Thr	Leu	Gly	Gly 140	Met	Phe	Leu	Cys
Gly 145	Ala	Asn	Asp	Leu	Ile 150	Thr	Ile	Phe	Val	Ala 155	Pro	Glu	Cys	Phe	Ser 160

Leu Cys Ser Tyr Leu Leu Ser Gly Tyr Thr Lys Lys Asp Val Arg Ser
165 170 175

<210> 526
<211> 226
<212> PRT
<213> Sus scrofa

<400> 526
Leu Gly Lys Glu Glu His Val Ala Val Glu Val Thr Gln Ala Asn Ala
1 5 10 15

Pro Gly Ser Arg Arg Arg Arg Pro Gln Gln Val Thr His Asn Trp Thr
20 25 30

Ile Phe Leu Asn Pro Ser Gly Gly Glu His Thr Val Met Ser Arg Thr
35 40 45

Phe Glu Val Leu Ser Arg Glu Pro Val Ser Ile Asn Ile Arg Ala Ser
50 55 60

Leu Gln Gln Thr Gln Ile Val Pro Leu Leu Met Ala His Gln Tyr Leu
65 70 75 80

Arg Ala Ser Ile Glu Ala Gln Val Thr Ile Ala Ala Val Ile Leu Ala
85 90 95

Gly Val Tyr Val Leu Ile Ile Phe Glu Ile Val His Arg Thr Leu Ala
100 105 110

Ala Met Leu Gly Ser Leu Ala Ala Leu Ala Ala Leu Ala Val Ile Gly
115 120 125

Asp Arg Pro Thr Leu Thr Gln Val Val Glu Trp Ile Asp Phe Glu Thr
130 135 140

Leu Ala Leu Leu Phe Gly Met Met Ile Leu Val Ala Ile Phe Ser Glu
145 150 155 160

Thr Gly Phe Phe Asp Tyr Cys Ala Val Lys Ala Tyr Gln Leu Ser Arg
165 170 175

Gly Arg Val Trp Ala Met Ile Ile Met Leu Cys Leu Ile Ala Ala Val
180 185 190

Leu Ser Ala Phe Leu Asp Asn Val Thr Thr Ala Leu Leu Phe Thr Pro
195 200 205

Val Thr Ile Arg Leu Cys Glu Val Leu Asn Leu Asp Pro Arg Gln Val
210 215 220

Leu Ile
225

<210> 527
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 527
 Leu Leu Arg Ala Val Ser Tyr His Leu Val Gln Lys Pro Phe Thr Leu
 1 5 10 15
 Thr Lys Ser Ile Leu Leu Asp Leu Ala Tyr Ala Tyr Gly Lys Leu Gly
 20 25 30
 Phe His Gln Thr Gln Val Phe Gln Arg Leu Ala Ala Asp Leu Leu Pro
 35 40 45
 His Thr Pro Ser Leu Thr Ser Ser Glu Val Ala Arg Cys Thr Lys Ser
 50 55 60
 Phe Ala Phe Leu Lys Trp Leu Ser Leu Pro Leu Phe Glu Ala Phe Ala
 65 70 75 80
 Gln His Val Leu Asp Arg Ala Gln Ser Ile Ala Leu Pro His Leu Cys
 85 90 95
 Asn Met Leu Leu Ala
 100

<210> 528
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 <212> PRT
 <213> Sus scrofa

<400> 528
 Thr His His Leu Tyr Ile Leu Leu Tyr Met Leu Leu Ile Ile His Gly
 1 5 10 15
 Ser Phe Ala Leu Ile Gln Leu Pro Arg Phe His Ile Phe Phe Leu Val
 20 25 30
 Pro Ala Leu Ile Tyr Val Gly Asp Lys Leu Val Ser Leu Ser Arg Lys
 35 40 45
 Lys Val Glu Ile Ser Val Val Lys Ala Glu Leu Leu Pro Ser Gly Val
 50 55 60
 Thr His Leu Gln Phe Gln Arg Pro Gln Gly Phe Glu Tyr Lys Ser Gly
 65 70 75 80
 Gln Trp Val Arg Ile Ala Cys Leu Ala Leu Gly Thr Thr Glu Tyr His
 85 90 95
 Pro Phe Thr Leu Thr
 100

<210> 529
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<212> PRT

<213> Sus scrofa

<400> 529

Val Tyr Asp Thr Pro Gly Ser Ser Ile Val Thr Glu Phe Asn Leu Val
 1 5 10 15

Cys Glu Ala Ala Trp Lys Val Asp Leu Phe Gln Ser Cys Val Asn Val
 20 25 30

Gly Phe Phe Val Gly Ser Met Gly Ile Gly Tyr Ile Ala Asp Arg Leu
 35 40 45

Val Gly Ser Ser Ala Ser Trp Pro Pro Pro His Gln Cys Arg Leu Gly
 50 55 60

Arg Pro Asp Ala Val Ala Pro Asp Tyr Val Ser Leu Leu Val Phe Arg
 65 70 75 80

Leu Leu Gln Gly Leu Val Ser Lys Gly Ser Trp Met Ala Gly Tyr Thr
 85 90 95

Leu Ile Thr Glu Phe Val Gly Leu Gly Tyr Arg Lys Thr Val Ala Ile
 100 105 110

Leu Tyr Gln Thr Ala Phe Ser Val Gly Leu Val Leu Leu Ser Gly Leu
 115 120 125

Ala Tyr Ala Val Pro His Trp Arg Ser Leu Gln Leu Ala Val Ser Leu
 130 135 140

Pro Ile Phe Leu Leu Leu Leu Cys Tyr Trp Phe Val Pro Glu Ser Pro
 145 150 155 160

Arg Trp Leu Leu Ser Gln Lys Arg Asn Thr Gln Ala Ile Lys Ile Met
 165 170 175

Asp Arg Ile Ala Gln Lys Asn Gly Lys Leu Pro Pro Ala Asp Leu Lys
 180 185 190

Met Leu Ser Leu Glu Glu Glu Val Val Thr Glu Arg Leu Ser Pro Ser
 195 200 205

Phe Leu Asp Leu Phe Arg Thr Gln Asn Leu Arg Lys Tyr Thr Phe Ile
 210 215 220

Leu Met Tyr Leu Trp Phe Thr Ser Ser Val Leu Tyr Gln Gly Leu Ile
 225 230 235 240

Met His Val Gly Ala Thr Gly Gly Ser Leu Tyr
 245 250

<210> 530

<211> 126

<212> PRT

<213> Solanum tuberosum

<400> 530

Phe His Tyr His Lys Ala Ala Pro Lys Leu Ala Trp Phe Gln Asp Val
 1 5 10 15

Glu Ser Met Leu Asn His His Leu Ala Gly Leu Leu Gly Leu Gly Ser
 20 25 30

Leu Ser Trp Ala Gly His Gln Val His Val Ser Leu Pro Ile Asn Gln
 35 40 45

Phe Leu Asn Ala Gly Val Asp Pro Lys Glu Ile Pro Leu Pro His Glu
 50 55 60

Phe Ile Leu Asn Arg Asp Leu Leu Ala Gln Leu Tyr Pro Ser Phe Ala
 65 70 75 80

Glu Gly Ala Thr Pro Phe Phe Thr Leu Asn Trp Ser Lys Tyr Ala Asp
 85 90 95

Phe Leu Thr Phe Arg Gly Gly Leu Asp Pro Val Thr Gly Gly Leu Trp
 100 105 110

Leu Thr Asp Ile Ala His His His Leu Ala Ile Ala Ile Leu
 115 120 125

<210> 531

<211> 251

<212> PRT

<213> Solanum tuberosum

<400> 531

Met Glu Gly Val Leu Gln Thr Arg Gly Leu Leu Ser Leu Pro Ser Lys
 1 5 10 15

Pro Lys Ile Lys Ala Phe Tyr Pro Leu Pro Gln Gly Gly Leu Arg Asn
 20 25 30

Arg Phe Asn Ser Leu Ser Ser Leu Lys Pro Asn Pro Leu Asn Gly Val
 35 40 45

Ser Leu Ser Ser Asn Gly Phe Gln Lys Val Gln Gly Phe Asp Thr Lys
 50 55 60

Pro Gln Leu Phe Gly Gln Lys Lys Arg Cys Phe Pro Ile Cys Lys Ala
 65 70 75 80

Glu Ala Ala Ala Ala Ala Gly Ala Ala Asp Gly Gln Pro Leu Phe Val
 85 90 95

Glu Lys Glu Gln Pro Lys Phe Met Gly Ile Glu Leu Val Thr Leu Lys
 100 105 110

Lys Ile Ile Pro Leu Gly Ala Met Phe Phe Cys Ile Leu Phe Asn Tyr
 115 120 125

Thr Ile Leu Arg Asp Thr Lys Asp Val Leu Val Val Thr Ala Lys Gly
130 135 140

Ser Ser Ala Glu Ile Ile Pro Phe Leu Lys Thr Trp Val Asn Leu Pro
145 150 155 160

Met Ala Ile Gly Phe Met Leu Leu Tyr Thr Lys Leu Ala Asn Val Leu
165 170 175

Ser Lys Glu Ala Leu Phe Tyr Thr Val Ile Leu Pro Phe Ile Ala Phe
180 185 190

Phe Gly Ala Phe Gly Phe Val Leu Tyr Pro Leu Ser Asn Tyr Phe His
195 200 205

Pro Thr Ala Phe Ala Asp Lys Leu Leu Asn Thr Leu Gly Pro Arg Phe
210 215 220

Leu Gly Pro Ile Ala Ile Leu Arg Ile Trp Ser Phe Cys Leu Phe Tyr
225 230 235 240

Val Met Ala Glu Leu Trp Gly Ser Val Val Val
245 250

<210> 532
<211> 251
<212> PRT
<213> Sus scrofa

<400> 532
Pro Asp Phe Asp Ala Ala Glu Lys Val Thr Lys Tyr Cys Gly Glu Asp
1 5 10 15

Gly Asp Trp Tyr Arg His Pro Glu Ser Asn Ile Ser Trp Ser Asn Tyr
20 25 30

Thr Met Cys Asn Ala Phe Thr Pro Asp Lys Leu Gln Asn Ala Tyr Ile
35 40 45

Leu Tyr Tyr Leu Ala Ile Val Gly His Ser Leu Ser Ile Leu Thr Leu
50 55 60

Leu Ile Ser Leu Gly Ile Phe Met Phe Leu Arg Tyr Phe Asn Leu Leu
65 70 75 80

Ala Pro Phe Asn Ala Leu Leu Tyr Pro Thr Arg Ser Ile Ser Cys Gln
85 90 95

Arg Val Thr Leu His Lys Asn Met Phe Leu Thr Tyr Val Leu Asn Ser
100 105 110

Ile Ile Ile Ile Val His Leu Val Val Ile Val Pro Asn Gly Glu Leu
115 120 125

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Val Lys Arg Asp Pro Pro Ile Cys Lys Val Leu His Phe Phe His Gln
130 135 140

Tyr Met Met Ser Cys Asn Tyr Phe Trp Met Leu Cys Glu Gly Val Tyr
145 150 155 160

Leu His Thr Leu Ile Val Val Ser Val Phe Ala Glu Gly Gln Arg Leu
165 170 175

Trp Trp Tyr His Val Leu Gly Trp Gly Phe Pro Leu Ile Pro Thr Thr
180 185 190

Ala His Ala Ile Thr Arg Ala Val Leu Phe Asn Asp Asn Cys Trp Leu
195 200 205

Ser Val Asp Thr Asn Leu Leu Tyr Ile Ile His Gly Pro Val Met Ala
210 215 220

Ala Leu Val Val Asn Phe Phe Phe Leu Leu Asn Ile Leu Arg Val Leu
225 230 235 240

Val Lys Lys Leu Lys Glu Ser Gln Glu Ala Glu
245 250

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<211> 126
<212> PRT
<213> Sus scrofa

<400> 533
Thr Phe Leu Gly Gly Phe Val Leu Leu Val Val Phe Leu Ala Thr Arg
1 5 10 15

Arg Val Ala Val Thr Ala Arg His Leu Ser Arg Leu Val Val Gly Ala
20 25 30

Ala Val Trp Arg Gly Ala Gly Arg Ala Phe Leu Leu Ile Glu Asp Leu
35 40 45

Thr Gly Ser Cys Phe Glu Pro Leu Pro Gln Gly Leu Leu Leu His Glu
50 55 60

Leu Pro Asp Arg Arg Ser Arg Leu Ala Ala Gly His Gln Trp Arg Gly
65 70 75 80

Tyr Thr Val Ser Ser His Thr Phe Leu Leu Thr Phe Cys Cys Leu Leu
85 90 95

Met Ala Glu Glu Ala Ala Val Phe Ala Lys Tyr Leu Ala His Gly Leu
100 105 110

Pro Ala Gly Ala Pro Leu Arg Leu Val Phe Leu Leu Asn Val
115 120 125

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 <213> Sus scrofa

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 Ala Phe Ile Leu Leu Arg Ala Tyr Phe Leu His Thr Ser Gln Gln Leu
 1 5 10 15
 Lys Gln Leu Glu Ser Glu Gly Arg Ser Pro Ile Phe Thr His Leu Ile
 20 25 30
 Thr Ser Leu Lys Gly Leu Trp Thr Leu Arg Ala Phe Gly Arg Gln Pro
 35 40 45
 Tyr Phe Glu Thr Leu Phe His Lys Ala Leu Asn Leu His Thr Ala Asn
 50 55 60
 Trp Phe Leu Tyr Leu Ser Thr Leu Arg Trp Phe Gln Met Arg Ile Glu
 65 70 75 80
 Met Ile Phe Val Ile Phe Phe Ile Ala Val Thr Phe Ile Ser Ile Leu
 85 90 95
 Thr Thr Gly Glu Gly
 100

<210> 535
 <211> 126
 <212> PRT
 <213> Sus scrofa

<400> 535
 Ala Thr Pro Arg Gly Gln Val Val Val Leu Ala Cys Pro Leu Ile Phe
 1 5 10 15
 Lys Leu Phe Ser Pro Thr Gln Gly Leu Asn Val Ser Arg Asn Cys Thr
 20 25 30
 Asp Glu Gly Trp Thr Pro Leu Glu Pro Gly Pro Tyr Pro Ile Ala Cys
 35 40 45
 Gly Met Asp Asp Lys Ala Ser Gly Leu Asp Glu Gln Gln Thr Val Phe
 50 55 60
 Tyr Asn Ser Val Lys Thr Gly Tyr Thr Ile Gly Tyr Ser Leu Ser Leu
 65 70 75 80
 Ala Ala Leu Leu Val Ala Thr Ala Ile Leu Ser Leu Phe Arg Lys Leu
 85 90 95
 His Cys Thr Arg Asn Tyr Ile His Met His Leu Phe Ile Ser Phe Ile
 100 105 110
 Leu Arg Ala Thr Ala Val Phe Ile Lys Asp Leu Ala Leu Phe
 115 120 125

<210> 536
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 536
 Lys Gly Glu Ala Pro Ala Lys Ser Ser Thr His Arg His Asp Glu Glu
 1 5 10 15
 Leu Gly Met Ala Ser Ala Glu Thr Leu Thr Val Phe Leu Lys Leu Leu
 20 25 30
 Ala Ala Gly Phe Tyr Gly Val Ser Ser Phe Leu Ile Val Val Val Asn
 35 40 45
 Lys Ser Val Leu Thr Asn Tyr Arg Phe Pro Ser Ser Leu Cys Val Gly
 50 55 60
 Leu Gly Gln Met Val Ala Thr Val Ala Val Leu Trp
 65 70 75

<210> 537
 <211> 126
 <212> PRT
 <213> Solanum tuberosum

<400> 537
 Glu Gln Asn Glu Asp Asn Val Leu Ala Arg Met Leu Asp His Lys Glu
 1 5 10 15
 Ala Ile Ile Ser His Leu Ser Trp Ala Ser Leu Phe Leu Gly Phe His
 20 25 30
 Thr Leu Gly Leu Tyr Val His Asn Asp Val Met Leu Ala Phe Gly Thr
 35 40 45
 Pro Glu Lys Gln Ile Leu Ile Glu Pro Ile Phe Ala Gln Trp Ile Gln
 50 55 60
 Ser Ala His Gly Lys Thr Ser Tyr Gly Phe Asp Val Leu Leu Ser Ser
 65 70 75 80
 Thr Thr Gly Pro Ala Phe Asn Ala Gly Arg Ser Ile Trp Leu Pro Gly
 85 90 95
 Trp Leu Asn Ala Val Asn Glu Asn Ser Asn Ser Leu Phe Leu Thr Ile
 100 105 110
 Gly Pro Gly Asp Phe Leu Val His His Ala Ile Ala Leu Gly
 115 120 125

<210> 538
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 <212> PRT
 <213> Sus scrofa

<400> 538

Val Met Thr Ile Phe Leu Val Val Leu Tyr Lys Tyr Arg Cys Tyr Lys
 1 5 10 15
 Phe Ile His Gly Trp Leu Ile Thr Ser Ser Leu Met Leu Leu Phe Leu
 20 25 30
 Phe Thr Tyr Ile Tyr Leu Gly Glu Val Leu Lys Thr Tyr Asn Val Ala
 35 40 45
 Met Asp Tyr Pro Thr Leu Phe Leu Thr Val Trp Asn Phe Gly Ala Val
 50 55 60
 Gly Met Val Cys Ile His Trp Lys Gly Pro Leu Val Leu Gln Gln Ala
 65 70 75 80
 Tyr Leu Ile Met Ile Ser Ala Leu Met Ala Leu Val Phe Ile Lys Tyr
 85 90 95
 Leu Pro Glu Trp Ser Ala Trp Val Ile Leu Gly Ala Ile Ser Val Tyr
 100 105 110
 Asp Leu Val Ala Val Leu Cys Pro Lys Gly Pro Leu Arg Met Leu Val
 115 120 125
 Glu Thr Ala Gln Glu Arg Asn Glu Pro Ile Phe Pro Ala Leu Ile Tyr
 130 135 140
 Ser Ser Ala Met Val Trp Thr Val Gly Met Ala Lys Leu Asp Pro Ser
 145 150 155 160
 Ser Gln Gly Ala Leu Gln Leu Pro Tyr Asp Pro Glu Met Glu Glu Asp
 165 170 175
 Ser Tyr Asp Ser Phe Gly Glu Pro Ser Tyr Pro Glu Val Phe Glu Pro
 180 185 190
 Pro Leu Pro Gly Tyr Pro Gly Glu Glu Leu Glu Glu Glu Glu Glu Arg
 195 200 205
 Gly Val Lys Leu Gly Leu Gly Asp Phe Ile Phe Tyr Ser Val Leu Val
 210 215 220
 Gly Lys Ala Ala Ala Thr Gly Ser Gly Asp Trp Asn Thr Thr Leu Ala
 225 230 235 240
 Cys Phe Val Ala Ile Leu Ile Gly Leu Cys Leu Thr Leu Leu Leu Leu
 245 250 255
 Ala Val Phe Lys Lys Ala Leu Pro Ala Leu Pro Ile Ser Ile Thr Phe
 260 265 270
 Gly Leu Ile Phe
 275

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<210> 539
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 539
 Leu Phe Asn Asp Asn Cys Trp Leu Ser Val Asp Thr Asn Leu Leu Tyr
 1 5 10 15
 Ile Ile His Gly Pro Val Met Ala Ala Leu Val Val Asn Phe Phe Phe
 20 25 30
 Leu Leu Asn Ile Leu Arg Val Leu Val Lys Lys Leu Lys Glu Ser Gln
 35 40 45
 Glu Ala Glu Ser His Met Tyr Leu Lys Ala Val Arg Ala Thr Leu Ile
 50 55 60
 Leu Val Pro Leu Leu Gly Val Gln Phe Val Val Leu
 65 70 75

<210> 540
 <211> 126
 <212> PRT
 <213> Sus scrofa

<400> 540
 Pro Ile Glu Ser Cys Gln Asn Phe Tyr Lys Asp Phe Thr Leu Gln Ile
 1 5 10 15
 Asp Met Ala Phe Asn Val Phe Phe Leu Leu Tyr Phe Gly Leu Arg Phe
 20 25 30
 Ile Ala Ala Asn Asp Lys Leu Trp Phe Trp Leu Glu Val Asn Ser Val
 35 40 45
 Val Asp Phe Phe Thr Val Pro Pro Val Phe Val Ser Val Tyr Leu Asn
 50 55 60
 Arg Ser Trp Leu Gly Leu Arg Phe Leu Arg Ala Leu Arg Leu Ile Gln
 65 70 75 80
 Phe Ser Glu Ile Leu Gln Phe Leu Asn Ile Leu Lys Thr Ser Asn Ser
 85 90 95
 Ile Lys Leu Val Asn Leu Leu Ser Ile Phe Ile Ser Thr Trp Leu Thr
 100 105 110
 Ala Ala Gly Phe Ile His Leu Val Glu Asn Ser Gly Asp Pro
 115 120 125

<210> 541
 <211> 76
 <212> PRT
 <213> Solanum tuberosum

<400> 541

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Gly Pro Cys Val Cys Leu Ala Lys Gly Ala Ala Glu Thr Ile Lys Leu
1 5 10 15

Asn Met Ala Ile Ile Leu Leu Pro Val Cys Arg Asn Thr Ile Thr Trp
20 25 30

Leu Arg Asn Lys Thr Arg Leu Gly Ser Ala Val Pro Phe Asp Asp Asn
35 40 45

Leu Asn Phe His Lys Val Ile Ala Val Ala Ile Ala Leu Gly Val Ala
50 55 60

Ile His Gly Leu Ala His Leu Thr Cys Asp Phe Pro
65 70 75

<210> 542
<211> 201
<212> PRT
<213> Salmo salar

<400> 542
Lys Cys Leu Phe Ala Phe Tyr Gly Gly Glu Thr Val Tyr His Lys Tyr
1 5 10 15

Leu Ile Gly Leu Gln Phe Tyr Asn Val Phe Leu Phe Phe Trp Cys Ala
20 25 30

Asn Phe Val Thr Ala Leu Gly Gln Met Thr Leu Ala Gly Ala Phe Ala
35 40 45

Ser Tyr Tyr Trp Ala Leu Val Lys Pro Asp Asp Met Pro Ala Phe Pro
50 55 60

Ile Phe Ser Ser Leu Gly Arg Ser Leu Arg Tyr His Thr Gly Ser Leu
65 70 75 80

Ala Phe Gly Ser Leu Ile Leu Ser Ile Ile Gln Ile Ile Arg Val Leu
85 90 95

Leu Glu Tyr Ile Asp His Lys Leu Gln Gly Thr Gln Asn Lys Cys Thr
100 105 110

Lys Phe Leu Leu Cys Cys Leu Lys Cys Cys Phe Trp Cys Leu Glu Lys
115 120 125

Phe Ile Lys Phe Ile Asn Arg Asn Ala Tyr Ile Met Val Ala Ile Tyr
130 135 140

Gly Lys Asn Phe Cys Thr Ser Ala Lys Asp Ala Phe Phe Leu Leu Met
145 150 155 160

Arg Asn Met Ile Arg Val Ala Val Leu Asp Lys Val Thr Asp Phe Leu
165 170 175

Leu Phe Leu Gly Lys Leu Leu Ile Val Gly Leu Val Gly Ile Phe Ala

180

185

190

Phe Phe Phe Phe Ser Gly Arg Val Lys
 195 200

<210> 543
 <211> 76
 <212> PRT
 <213> Thunnus albacares

<400> 543
 Met Phe Lys Leu Val Ala Gln Leu Tyr Lys Ile Val Pro Asn Val Leu
 1 5 10 15

Leu Glu Gln Gly Lys Ala Lys Asn Pro Trp Pro Asn Val Asp Ala His
 20 25 30

Ser Gly Val Leu Leu Gln Tyr Tyr Gly Met Thr Glu Met Asn Tyr Tyr
 35 40 45

Thr Val Leu Phe Gly Val Ser Arg Ala Leu Gly Val Leu Ala Gln Leu
 50 55 60

Val Trp Ser Arg Ala Leu Gly Phe Pro Leu Glu Arg
 65 70 75

<210> 544
 <211> 76
 <212> PRT
 <213> Meleagris gallopavo

<400> 544
 Phe Asn Lys Thr Asp Trp Ile Phe Gly Asp Val Met Cys Lys Leu Gln
 1 5 10 15

Arg Phe Ile Phe His Val Asn Leu Tyr Gly Ser Ile Leu Phe Leu Thr
 20 25 30

Cys Ile Ser Val His Arg Tyr Thr Gly Val Val His Pro Leu Lys Ser
 35 40 45

Leu Gly Arg Leu Lys Lys Lys Asn Ala Val Tyr Val Ser Ser Leu Val
 50 55 60

Trp Ala Leu Val Val Ala Val Ile Ala Pro Ile Leu
 65 70 75

<210> 545
 <211> 76
 <212> PRT
 <213> Solanum tuberosum

<400> 545
 Pro His Asn Asn Gln Gln Gln Glu Asp Asn Asn Thr Leu Leu Ile Asp
 1 5 10 15

Ala Ser Asp Ala Leu Pro Leu Pro Leu Tyr Leu Thr Asn Gly Leu Phe
 20 25 30

Phe Thr Met Phe Phe Ser Val Met Tyr Phe Leu Leu Ser Arg Trp Arg
35 40 45

Glu Lys Ile Arg Asn Ser Thr Pro Leu His Val Val Thr Leu Ser Glu
50 55 60

Leu Gly Ala Ile Val Ser Leu Ile Ala Ser Val Ile
65 70 75

<210> 546
<211> 126
<212> PRT
<213> Sus scrofa

<400> 546
Glu Gly Asp Pro Gly Glu Pro Leu Cys Lys Ile Leu Leu Val Leu Tyr
1 5 10 15

Ser Val Gly Leu Phe Ser Glu Ala Phe Phe Asn Val Leu Leu Thr Val
20 25 30

Gln Arg Tyr Gln Lys Phe Phe Gln Met Arg Gly Phe Phe Ser Ala Thr
35 40 45

Arg Met Val Ala Gly Ser Ile Phe Pro Ser Ala Leu Val Trp Val Ile
50 55 60

Ala Val Leu Val Met Leu Pro Glu Leu Ala Phe Tyr Lys Pro Gln Met
65 70 75 80

Glu Asn Gln Lys Tyr Lys Cys Phe Phe Gly Arg Pro Leu Phe Leu Pro
85 90 95

Ala Asp Glu Thr Phe Trp Lys His Phe Leu Thr Leu Lys Met Asn Ile
100 105 110

Leu Gly Phe Leu Leu Pro Leu Phe Val Phe Val Phe Cys Tyr
115 120 125

<210> 547
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 547
Met Ile Phe Ser Thr Leu Glu His Ile Leu Thr His Ile Ser Phe Ser
1 5 10 15

Ile Val Ser Ile Val Ile Thr Ile His Leu Ile Thr Phe Leu Val Asp
20 25 30

Glu Ile Val Lys Leu Tyr Asp Ser Ser Glu Lys Gly Ile Ile Val Thr
35 40 45

Phe Phe Cys Ile Thr Gly Leu Leu Val Thr Arg Trp Ile Ser Ser Gly
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<400> 550

Ile Tyr Thr Asp Ala Leu Gln Thr Leu Ile Met Leu Ile Gly Ala Leu
1 5 10 15

Thr Leu Met Gly Tyr Ser Phe Ala Ala Val Gly Gly Met Glu Gly Leu
20 25 30

Lys Glu Lys Tyr Phe Leu Ala Leu Ala Ser Asn Arg Ser Gly Asn Ser
35 40 45

Ser Cys Gly Leu Pro Arg Glu Asp Ala Phe His Ile Phe Arg Asp Pro
50 55 60

Leu Thr Ser Asp Leu Pro Trp Pro Gly Ile Leu Phe Gly Met Ser Ile
65 70 75 80

Pro Ser Leu Trp Tyr Trp Cys Thr Asp Gln Val Ile Val Gln Arg Thr
85 90 95

Leu Ala Ala Lys Asn Leu Ser His Ala Lys Gly Gly Ser Leu Met Ala
100 105 110

Ala Tyr Leu Lys Val Leu Pro Leu Phe Ile Met Val Phe Pro Gly Met
115 120 125

Val Ser Arg Val Leu Phe Pro Asp Gln Val Ala Cys Ala Asp Pro Glu
130 135 140

Ile Cys Gln Lys Val Cys Ser Asn Pro Ala Gly Cys Ser Asp Ile Ala
145 150 155 160

Tyr Pro Lys Leu Val Leu Glu Leu Leu Pro Met Gly Leu Arg Gly Leu
165 170 175

Met Met Ala Val Met Val Ala Ala Leu Met Ser Ser Leu Thr Ser Ile
180 185 190

Phe Asn Ser Ala Ser Thr Ile Phe Thr Met Asp Leu Trp Asn His Leu
195 200 205

Arg Pro Arg Ala Ser Glu Arg Glu Leu Met Ile Val Gly Arg Val Phe
210 215 220

Val Leu
225

<210> 551

<211> 76

<212> PRT

<213> Sus scrofa

<400> 551

Asn Tyr Ile His Met His Leu Phe Ile Ser Phe Ile Leu Arg Ala Thr
1 5 10 15

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Ala Val Phe Ile Lys Asp Leu Ala Leu Phe Asp Ser Glu Glu Ser Asp
20 25 30

His Cys Ser Lys Gly Ser Val Gly Cys Lys Ala Ala Val Val Leu Phe
35 40 45

Gln Tyr Cys Val Met Ala Asn Phe Phe Trp Leu Leu Val Glu Gly Leu
50 55 60

Tyr Leu His Thr Leu Leu Ala Val Ser Phe Phe Ser
65 70 75

<210> 552

<211> 76

<212> PRT

<213> Sus scrofa

<400> 552

Met Arg Leu Arg Trp Thr Gln Gly Gly Asn Met Trp Leu Gly Val Leu
1 5 10 15

Leu Thr Leu Gln Leu Cys Ser Ser Leu Glu Gly Gln Glu Asn Ser Phe
20 25 30

Thr Ile Asn Ser Ile His Met Glu Met Leu Pro Gly Gln Glu Val His
35 40 45

Asn Gly Glu Asn Leu Thr Leu Gln Cys Ile Val Asp Val Ser Thr Thr
50 55 60

Ser Ser Val Lys Pro Gln His Gln Val Leu Phe Tyr
65 70 75

<210> 553

<211> 176

<212> PRT

<213> Sus scrofa

<400> 553

Trp Met Leu Val Phe Arg Leu Ile Gln Gly Leu Val Ser Lys Ala Gly
1 5 10 15

Trp Met Ile Gly Tyr Ile Leu Ile Thr Glu Phe Val Gly Leu Ser Tyr
20 25 30

Arg Arg Thr Val Gly Ile Phe Tyr Gln Val Ala Phe Thr Phe Gly Leu
35 40 45

Leu Val Leu Ala Gly Val Ala Tyr Ala Leu Pro His Trp Arg Trp Leu
50 55 60

Gln Phe Thr Val Thr Leu Pro Asn Phe Cys Phe Leu Phe Tyr Tyr Trp
65 70 75 80

Cys Val Pro Glu Ser Pro Arg Trp Leu Ile Ser Gln Asn Lys Asn Ala
85 90 95

Lys Ala Met Ser Ile Ile Lys His Ile Ala Lys Lys Asn Gly Lys Ser
100 105 110

Leu Pro Ala Ser Leu Gln Ser Leu Arg Pro Asp Glu Glu Val Gly Glu
115 120 125

Lys Leu Lys Pro Ser Phe Leu Asp Leu Val Arg Thr Pro Gln Ile Arg
130 135 140

Lys His Thr Leu Ile Leu Met Tyr Asn Trp Phe Thr Ser Ala Val Leu
145 150 155 160

Tyr Gln Gly Leu Val Met His Met Gly Leu Ala Gly Ser Asn Leu Tyr
165 170 175

<210> 554
<211> 76
<212> PRT
<213> Sus scrofa

<400> 554
Phe Trp Lys His Phe Leu Thr Leu Lys Met Asn Ile Leu Gly Phe Leu
1 5 10 15

Leu Pro Leu Phe Val Phe Val Phe Cys Tyr Val Arg Met Arg Arg Thr
20 25 30

Leu Lys Phe Gly Glu Arg Gly Tyr Asp Leu Phe Lys Leu Val Phe Thr
35 40 45

Ile Met Val Val Phe Leu Leu Met Trp Gly Pro Tyr Asn Ile Ala Leu
50 55 60

Phe Leu Ser Ala Phe Asn Glu His Phe Ser Leu His
65 70 75

<210> 555
<211> 126
<212> PRT
<213> Sus scrofa

<400> 555
Leu Leu Gly Arg Ile Ile Ala Ser Tyr Asp Pro Asp Asn Lys Ala Glu
1 5 10 15

Arg Ser Ile Ala Ile Tyr Leu Gly Val Gly Leu Cys Leu Leu Phe Ile
20 25 30

Val Arg Thr Leu Leu Leu His Pro Ala Ile Phe Gly Pro His His Ile
35 40 45

Gly Met Gln Met Arg Ile Ala Met Phe Ser Leu Ile Tyr Lys Lys Thr
50 55 60

Leu Lys Leu Ser Ser Arg Val Leu Asp Lys Ile Ser Ile Gly Gln Leu
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65

70

75

80

Val Ser Leu Leu Ser Asn Asn Leu Asn Lys Phe Asp Glu Gly Leu Ala
85 90 95

Leu Ala His Phe Val Trp Ile Ala Pro Leu Gln Val Thr Leu Leu Met
100 105 110

Gly Leu Leu Trp Glu Leu Leu Gln Ala Ser Ala Phe Cys Gly
115 120 125

<210> 556

<211> 101

<212> PRT

<213> Sus scrofa

<400> 556

Pro Gln His Leu Val Lys Ala Gly Phe Met Thr Pro Ser Glu His Lys
1 5 10 15

His Leu Glu Lys Leu Ser Leu Pro His Asn Ser Phe Trp Met Pro Trp
20 25 30

Val Trp Phe Ala Asn Leu Ser Thr Lys Ala Trp Ile Gly Gly Arg Ile
35 40 45

Arg Asp Pro Val Leu Leu Gln Ser Leu Leu Asp Glu Met Asn Thr Leu
50 55 60

Arg Thr Gln Cys Gly His Leu Tyr Ala Tyr Asp Trp Ile Ser Val Pro
65 70 75 80

Leu Val Tyr Thr Gln Val Val Thr Val Ala Val Tyr Ser Phe Phe Leu
85 90 95

Ala Cys Leu Val Gly
100

<210> 557

<211> 101

<212> PRT

<213> Sus scrofa

<400> 557

Met Ala Arg Thr Val Cys Gly Cys Ser Trp Ala Leu Ile Phe Ile Ile
1 5 10 15

Met Ser Leu Leu Val Lys Ala Lys Ile Asp Val Cys Lys Arg Gly Asp
20 25 30

Val Thr Val Gln Pro Ser His Val Ile Ser Leu Gly Ser Ala Val Asn
35 40 45

Ile Ser Cys Ser Leu Lys Pro Arg Gln Gly Cys Leu Gln Val Ser Ser
50 55 60

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Leu Asn Lys Leu Ile Leu Tyr Arg Phe His Arg Arg Ile His Phe Gln
65 70 75 80

Arg Gly His Ser Leu Ser Ser Gln Val Thr Gly Leu Pro Leu Gly Thr
85 90 95

Thr Leu Phe Val Cys
100

<210> 558
<211> 201
<212> PRT
<213> Sus scrofa

<400> 558
Met Ala Asn Ser Ala Ser Pro Glu Gln Asn Gln Asn His Cys Ser Ala
1 5 10 15

Ile Asn Ser Ser Ile Leu Leu Thr Gln Gly Asn Leu Pro Thr Leu Thr
20 25 30

Leu Ser Gly Lys Ile Arg Val Thr Val Thr Phe Phe Leu Phe Leu Leu
35 40 45

Ser Thr Ala Phe Asn Ala Ser Phe Leu Leu Lys Leu Gln Lys Trp Thr
50 55 60

Gln Arg Lys Glu Lys Gly Lys Lys Leu Ser Arg Met Lys Val Leu Leu
65 70 75 80

Lys His Leu Thr Leu Ala Asn Leu Leu Glu Thr Leu Ile Val Met Pro
85 90 95

Leu Asp Gly Met Trp Asn Ile Thr Val Gln Trp Tyr Ala Gly Glu Phe
100 105 110

Leu Cys Lys Val Leu Ser Tyr Leu Lys Leu Phe Ser Met Tyr Ala Pro
115 120 125

Ala Phe Met Met Val Val Ile Ser Leu Asp Arg Ser Leu Ala Ile Thr
130 135 140

Arg Pro Leu Ala Val Lys Ser Asn Ser Arg Leu Gly Arg Phe Met Ile
145 150 155 160

Gly Leu Ala Trp Leu Leu Ser Ser Ile Phe Ala Gly Pro Gln Leu Tyr
165 170 175

Ile Phe Arg Met Ile His Leu Ala Asp Ser Ser Gly Gln Thr Glu Gly
180 185 190

Phe Ser Gln Cys Val Thr His Gly Ser
195 200

<210> 559

<211> 126

<212> PRT

<213> Meleagris gallopavo

<400> 559

Met Asp Pro Leu Asn Leu Ser Trp Tyr Asn Thr Gly Asp Arg Asn Trp
1 5 10 15

Ser Glu Pro Val Asn Glu Ser Ser Ala Asp Gln Lys Pro Gln Tyr Asn
20 25 30

Tyr Tyr Ala Val Leu Leu Thr Leu Leu Ile Phe Val Ile Val Phe Gly
35 40 45

Asn Val Leu Val Cys Met Ala Val Ser Arg Glu Lys Ala Leu Gln Thr
50 55 60

Thr Thr Asn Tyr Leu Ile Val Ser Leu Ala Val Ala Asp Leu Leu Val
65 70 75 80

Ala Thr Leu Val Met Pro Trp Val Val Tyr Leu Glu Val Val Gly Glu
85 90 95

Trp Arg Phe Ser Arg Ile His Cys Asp Ile Phe Val Thr Leu Asp Val
100 105 110

Met Met Cys Thr Ala Ser Ile Leu Asn Leu Cys Ala Ile Ser
115 120 125

<210> 560

<211> 101

<212> PRT

<213> Sus scrofa

<400> 560

Ala Leu Gly Arg Ser Phe Val His Gly Pro Glu Leu Asp Asn Gly Gln
1 5 10 15

Leu Arg Ile Gln Arg Thr Gly Ile Tyr Arg Leu His Ile Gln Val Thr
20 25 30

Leu Thr Asn Cys Ser Ser Ser Thr Trp Thr Val Met Pro Arg Gln Ala
35 40 45

Thr Leu Thr Leu Gly Ile Cys Ser Pro Thr Thr His Ser Ile Ser Leu
50 55 60

Leu Arg Leu Asn Phe His His Thr Cys Arg Val Ala Ser Gln Arg Leu
65 70 75 80

Thr Pro Leu Ala Lys Gly Asp Val Leu Cys Thr Asn Leu Thr Leu Pro
85 90 95

Leu Leu Pro Ser Arg
100

<210> 561
 <211> 251
 <212> PRT
 <213> Sus scrofa

<400> 561

Met Ala Phe Glu Glu Leu Leu Asp Lys Val Gly Gly Phe Gly Pro Phe
 1 5 10 15

Gln Leu Trp Asn Val Ala Leu Leu Ala Leu Pro Arg Val Leu Leu Pro
 20 25 30

Met His Phe Leu Leu Pro Ile Phe Leu Thr Ala Val Pro Ala His Arg
 35 40 45

Cys Ala Leu Pro Gly Ala Pro Ala Asn Phe Ser His Gln Asp Ala Trp
 50 55 60

Leu Glu Ala His Leu Pro Arg Glu Pro Asp Gly Arg Phe Ser Ser Cys
 65 70 75 80

Leu Arg Phe Thr His Ser Arg Ala Leu Pro Asn Thr Thr Leu Trp Gly
 85 90 95

Leu Gly Gln Ser Pro Gly Glu Gln Leu Glu Gly Glu Pro Ser Thr Val
 100 105 110

Pro Cys Pro Gln Gly Trp Glu Tyr Asp His Ser Glu Phe Ser Ser Thr
 115 120 125

Ile Ala Thr Glu Trp Asp Leu Val Cys Glu Gln Lys Gly Leu Asn Arg
 130 135 140

Ala Thr Ser Thr Phe Phe Phe Ala Gly Val Leu Val Gly Ala Val Ala
 145 150 155 160

Phe Gly Tyr Leu Ser Asp Arg Phe Gly Arg Arg Arg Leu Leu Leu Val
 165 170 175

Ala Tyr Val Ser Ala Leu Val Leu Gly Leu Val Ser Ala Ala Ser Val
 180 185 190

Ser Tyr Thr Met Phe Ala Ile Thr Arg Thr Leu Thr Gly Thr Ala Leu
 195 200 205

Ala Gly Phe Thr Ile Ile Val Met Pro Leu Glu Leu Glu Trp Leu Asp
 210 215 220

Val Gly His Arg Thr Val Ala Gly Val Leu Ser Ser Thr Phe Trp Thr
 225 230 235 240

Gly Gly Val Met Leu Leu Ala Leu Val Gly Tyr
 245 250

<210> 562

<211> 226

<212> PRT

<213> Sus scrofa

<400> 562

Met Glu Gly Val Leu Ala Ala Asn Trp Ser Ala Glu Ala Val Asn Ser
 1 5 10 15

Ser Ala Ala Pro Pro Glu Ala Glu Gly Asn Arg Thr Ala Gly Pro Pro
 20 25 30

Gln Arg Asn Glu Ala Leu Ala Arg Val Glu Val Ala Val Leu Cys Leu
 35 40 45

Ile Leu Phe Leu Ala Leu Ser Gly Asn Ala Cys Val Leu Leu Ala Leu
 50 55 60

Arg Thr Thr Arg His Lys His Ser Arg Leu Phe Phe Phe Met Lys His
 65 70 75 80

Leu Ser Ile Ala Asp Leu Val Val Ala Val Phe Gln Val Leu Pro Gln
 85 90 95

Leu Leu Trp Asp Ile Thr Phe Arg Phe Tyr Gly Pro Asp Leu Leu Cys
 100 105 110

Arg Leu Val Lys Tyr Leu Gln Val Val Gly Met Phe Ala Ser Thr Tyr
 115 120 125

Leu Leu Leu Leu Met Ser Leu Asp Arg Cys Leu Ala Ile Cys Gln Pro
 130 135 140

Leu Arg Ala Leu Arg Arg Pro Ala Asp Arg Leu Ala Val Leu Ala Thr
 145 150 155 160

Trp Leu Gly Cys Leu Val Ala Ser Ala Pro Gln Val His Ile Phe Ser
 165 170 175

Leu Arg Glu Val Ala Asp Gly Val Phe Asp Cys Trp Ala Val Phe Ile
 180 185 190

Gln Pro Trp Gly Pro Lys Ala Tyr Ile Thr Trp Ile Thr Leu Ala Val
 195 200 205

Tyr Ile Val Pro Val Ile Val Leu Ala Ala Cys Tyr Gly Leu Ile Ser
 210 215 220

Phe Lys
 225

<210> 563

<211> 201

<212> PRT

<213> Sus scrofa

<400> 563

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Met Glu Arg Gly Pro Val Val Gly Ala Gly Leu Gly Ala Arg Ala Arg
1 5 10 15

Ile Arg Thr Leu Leu Gly Cys Leu Val Lys Val Leu Leu Trp Val Ala
20 25 30

Ser Ala Leu Leu Tyr Phe Gly Ser Glu Gln Ala Ala Arg Leu Leu Gly
35 40 45

Ser Pro Cys Leu Arg Arg Leu Tyr His Ala Trp Leu Ala Ala Val Val
50 55 60

Ile Phe Gly Pro Leu Leu Gln Phe His Val Asn Pro Arg Thr Ile Phe
65 70 75 80

Ala Ser His Gly Asn Phe Phe Asn Ile Lys Phe Val Asn Ser Ala Trp
85 90 95

Gly Trp Thr Cys Thr Phe Leu Gly Gly Phe Val Leu Leu Val Val Phe
100 105 110

Leu Ala Thr Arg Arg Val Ala Val Thr Ala Arg His Leu Ser Arg Leu
115 120 125

Val Val Gly Ala Ala Val Trp Arg Gly Ala Gly Arg Ala Phe Leu Leu
130 135 140

Ile Glu Asp Leu Thr Gly Ser Cys Phe Glu Pro Leu Pro Gln Gly Leu
145 150 155 160

Leu Leu His Glu Leu Pro Asp Arg Arg Ser Arg Leu Ala Ala Gly His
165 170 175

Gln Trp Arg Gly Tyr Thr Val Ser Ser His Thr Phe Leu Leu Thr Phe
180 185 190

Cys Cys Leu Leu Met Ala Glu Glu Ala
195 200

<210> 564

<211> 276

<212> PRT

<213> Sus scrofa

<400> 564

Trp Met Leu Val Phe Arg Leu Ile Gln Gly Leu Val Ser Lys Ala Gly
1 5 10 15

Trp Met Ile Gly Tyr Ile Leu Ile Thr Glu Phe Val Gly Leu Ser Tyr
20 25 30

Arg Arg Thr Val Gly Ile Phe Tyr Gln Val Ala Phe Thr Phe Gly Leu
35 40 45

Leu Val Leu Ala Gly Val Ala Tyr Ala Leu Pro His Trp Arg Trp Leu
Page 340

50
 55
 60
 Gln Phe Thr Val Thr Leu Pro Asn Phe Cys Phe Leu Phe Tyr Tyr Trp
 65 70 75 80
 Cys Val Pro Glu Ser Pro Arg Trp Leu Ile Ser Gln Asn Lys Asn Ala
 85 90 95
 Lys Ala Met Ser Ile Ile Lys His Ile Ala Lys Lys Asn Gly Lys Ser
 100 105 110
 Leu Pro Ala Ser Leu Gln Ser Leu Arg Pro Asp Glu Glu Val Gly Glu
 115 120 125
 Lys Leu Lys Pro Ser Phe Leu Asp Leu Val Arg Thr Pro Gln Ile Arg
 130 135 140
 Lys His Thr Leu Ile Leu Met Tyr Asn Trp Phe Thr Ser Ala Val Leu
 145 150 155 160
 Tyr Gln Gly Leu Val Met His Met Gly Leu Ala Gly Ser Asn Leu Tyr
 165 170 175
 Leu Asp Phe Phe Tyr Ser Ala Leu Val Glu Phe Pro Ala Ala Leu Leu
 180 185 190
 Ile Leu Leu Thr Ile Asp Arg Leu Gly Arg Arg His Pro Trp Ala Ala
 195 200 205
 Ser Asn Val Val Ala Gly Ala Ala Cys Leu Ala Ser Val Phe Ile Pro
 210 215 220
 Glu Asp Pro His Trp Leu Arg Ile Thr Val Leu Cys Leu Gly Arg Met
 225 230 235 240
 Gly Ile Thr Met Ala Tyr Glu Met Val Cys Leu Val Asn Ala Glu Leu
 245 250 255
 Tyr Pro Thr Phe Ile Arg Asn Leu Gly Val Leu Val Cys Ser Ser Met
 260 265 270
 Cys Asp Ile Gly
 275

<210> 565

<211> 76

<212> PRT

<213> Solanum tuberosum

<400> 565

Leu Gly Thr Ala Asp Phe Leu Val His His Ile His Ala Phe Thr Ile
 1 5 10 15

His Val Thr Val Leu Ile Leu Leu Lys Gly Val Leu Phe Ala Arg Ser
 20 25 30

Ser Arg Leu Ile Pro Asp Lys Ala Asn Leu Gly Phe Arg Phe Pro Cys
35 40 45

Asp Gly Pro Gly Arg Gly Gly Thr Cys Gln Val Ser Ala Trp Asp His
50 55 60

Val Phe Leu Gly Leu Phe Trp Met Tyr Asn Ser Ile
65 70 75

<210> 566
<211> 76
<212> PRT
<213> Sus scrofa

<400> 566
Phe Gly Glu Val Leu Cys Arg Val Val Asn Thr Met Ile Tyr Met Asn
1 5 10 15

Leu Tyr Ser Ser Ile Cys Phe Leu Met Leu Val Ser Ile Asp Arg Tyr
20 25 30

Leu Ala Leu Val Lys Thr Met Ser Met Gly Arg Met Arg Gly Val Arg
35 40 45

Trp Ala Lys Leu Tyr Ser Leu Val Ile Trp Gly Cys Thr Leu Leu Leu
50 55 60

Ser Ser Pro Met Leu Ala Phe Arg Thr Met His Glu
65 70 75

<210> 567
<211> 176
<212> PRT
<213> Salmo salar

<400> 567
Met Arg Gln Leu Phe Lys Asp Tyr Glu Val Arg Gln Tyr Val Val Gln
1 5 10 15

Val Val Phe Ser Ile Thr Phe Ala Phe Ser Cys Thr Met Phe Glu Leu
20 25 30

Ile Ile Phe Glu Ile Leu Gly Ala Leu Glu Thr Ser Ser Arg Tyr Phe
35 40 45

His Trp Lys Phe Asn Leu Tyr Val Ile Leu Leu Val Leu Ile Phe Val
50 55 60

Val Pro Phe Tyr Ile Gly Tyr Phe Val Val Ser Asn Ile Arg Leu Leu
65 70 75 80

Gln Arg Gln Lys Leu Leu Phe Ala Cys Val Val Trp Phe Thr Phe Met
85 90 95

Tyr Phe Phe Trp Lys Leu Gly Asp Pro Phe Pro Ile Leu Ser Pro Lys
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100

105

110

His Gly Ile Leu Ser Ile Glu Gln Leu Ile Ser Arg Val Gly Val Ile
 115 120 125

Gly Val Thr Leu Met Ala Leu Leu Ser Gly Phe Gly Ala Val Asn Cys
 130 135 140

Pro Tyr Thr Tyr Met Ser Tyr Phe Leu Arg Asn Val Thr Glu Ser Asp
 145 150 155 160

Ile Leu Ala Leu Glu Arg Arg Leu Leu Gln Thr Met Asp Met Ile Val
 165 170 175

<210> 568
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 568
 Met Glu Pro Asn Asp Ser Trp Arg Val Asp Ser Glu Phe Arg Tyr Thr
 1 5 10 15

Leu Phe Pro Ile Phe Tyr Ser Ile Ile Phe Val Leu Gly Val Ile Ala
 20 25 30

Asn Ser Tyr Val Leu Trp Val Phe Ala Arg Val Tyr Pro Ser Lys Lys
 35 40 45

Leu Asn Glu Ile Lys Ile Phe Met Leu Asn Leu Thr Met Ala Asp Leu
 50 55 60

Leu Phe Leu Val Thr Leu Pro Leu Trp Ile Ile Tyr Tyr Tyr His Glu
 65 70 75 80

Gly Asn Trp Ile Leu Pro Lys Phe Leu Cys Asn Leu Ala Gly Cys Phe
 85 90 95

Phe Phe Ile Asn Thr
 100

<210> 569
 <211> 251
 <212> PRT
 <213> Sus scrofa

<400> 569
 Gly Leu Leu Ala Leu Gly Leu Phe Arg Gly Leu Pro Leu Val His Thr
 1 5 10 15

Leu Ile Thr Val Ser Lys Ile Leu His Arg Lys Met Leu His Ser Val
 20 25 30

Leu Gln Ala Pro Met Ser Thr Leu Asn Thr Leu Lys Ala Gly Gly Ile
 35 40 45

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Leu Asn Arg Phe Ser Lys Asp Ile Ala Val Leu Asp Asp Leu Leu Pro
50 55 60

Leu Thr Ile Phe Asp Phe Ile Gln Leu Leu Leu Ile Val Ile Gly Ala
65 70 75 80

Val Ala Val Val Ser Val Leu Lys Pro Tyr Ile Phe Leu Ala Thr Val
85 90 95

Pro Val Ile Val Ala Phe Ile Leu Leu Arg Ala Tyr Phe Leu His Thr
100 105 110

Ser Gln Gln Leu Lys Gln Leu Glu Ser Glu Gly Arg Ser Pro Ile Phe
115 120 125

Thr His Leu Ile Thr Ser Leu Lys Gly Leu Trp Thr Leu Arg Ala Phe
130 135 140

Gly Arg Gln Pro Tyr Phe Glu Thr Leu Phe His Lys Ala Leu Asn Leu
145 150 155 160

His Thr Ala Asn Trp Phe Leu Tyr Leu Ser Thr Leu Arg Trp Phe Gln
165 170 175

Met Arg Ile Glu Met Ile Phe Val Ile Phe Phe Ile Ala Val Thr Phe
180 185 190

Ile Ser Ile Leu Thr Thr Gly Glu Gly Glu Gly Thr Val Gly Ile Ile
195 200 205

Leu Thr Leu Ala Met Asn Ile Met Ser Thr Leu Gln Trp Ala Val Asn
210 215 220

Ser Ser Ile Asp Val Asp Ser Leu Met Arg Ser Val Ser Arg Val Phe
225 230 235 240

Lys Phe Ile Asp Met Pro Ala Glu Gly Asp Gln
245 250

<210> 570

<211> 76

<212> PRT

<213> Sus scrofa

<400> 570

Phe Trp Leu Leu Asn Val Leu Phe Pro Pro His Thr Thr Pro Lys Ala
1 5 10 15

Glu Leu Ser Asn His Thr Arg Pro Val Ile Leu Val Pro Gly Cys Leu
20 25 30

Gly Asn Pro Asp Val Val Asn Trp Met Cys Tyr Arg Phe Thr Ile Trp
35 40 45

Leu Asp Leu Asn Met Phe Leu Pro Leu Gly Val Asp Val Pro Gly Phe
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55

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Gly Lys Thr Tyr Ser Val Glu Tyr Leu Asp Asn Ser
65 70 75

<210> 571
<211> 201
<212> PRT
<213> Sus scrofa

<400> 571
Ile Phe Gly Tyr Leu Ala Asn Arg Leu Gly Arg Arg Lys Val Leu Ile
1 5 10 15

Leu Asn Tyr Leu Gln Thr Ala Val Ser Gly Thr Cys Ala Ala Phe Ala
20 25 30

Pro Asn Phe Pro Val Tyr Cys Ala Phe Arg Leu Leu Ser Gly Met Ser
35 40 45

Leu Ala Gly Ile Ser Leu Ser Cys Met Thr Leu Asn Val Glu Trp Met
50 55 60

Pro Ile His Thr Arg Ala Cys Val Gly Thr Leu Ile Gly Tyr Val Tyr
65 70 75 80

Ser Leu Gly Gln Phe Leu Leu Ala Gly Val Ala Tyr Ala Val Pro Arg
85 90 95

Trp Arg His Leu Gln Met Leu Val Ser Val Pro Phe Phe Ala Phe Phe
100 105 110

Ile Tyr Ser Trp Phe Phe Ile Glu Ser Ala Arg Trp Tyr Ser Ser Ser
115 120 125

Gly Arg Leu Asp Leu Thr Leu Lys Ala Leu Gln Arg Val Ala Trp Ile
130 135 140

Asn Gly Lys Arg Glu Glu Gly Ala Ser Leu Ser Met Glu Val Leu Arg
145 150 155 160

Ala Ser Leu Asn Lys Glu Leu Thr Met Asp Lys Gly Gln Ala Ser Ala
165 170 175

Met Glu Leu Leu Arg Cys Pro Val Leu Arg Arg Leu Phe Leu Cys Leu
180 185 190

Ser Leu Leu Trp Phe Ala Thr Ser Phe
195 200

<210> 572
<211> 276
<212> PRT
<213> Sus scrofa

<400> 572

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Leu Pro Cys Pro Ala Phe Phe Ser His Phe Ser Ser Glu Pro Gly Ala
 1 5 10 15
 Leu Lys Arg Asp Cys Thr Thr Thr Gly Trp Ser Glu Pro Phe Pro Pro
 20 25 30
 Tyr Pro Glu Ala Cys Pro Val Pro Leu Glu Leu Leu Thr Asp Glu Lys
 35 40 45
 Ser Tyr Phe Ser Thr Val Arg Ile Val Tyr Thr Thr Gly His Ser Val
 50 55 60
 Ser Ala Val Ala Leu Phe Val Ala Ile Ala Ile Leu Val Ala Leu Arg
 65 70 75 80
 Arg Leu His Cys Pro Arg Asn Tyr Ile His Ser Gln Leu Phe Ala Thr
 85 90 95
 Phe Ile Leu Lys Ala Gly Ala Val Phe Leu Lys Asp Ala Ala Leu Phe
 100 105 110
 His Ser Glu Asn Thr Asp His Cys Ser Phe Ser Thr Val Leu Cys Lys
 115 120 125
 Val Ser Val Ala Thr Ser His Phe Ala Thr Met Thr Asn Phe Ser Trp
 130 135 140
 Leu Leu Ala Glu Ala Val Tyr Leu Thr Cys Leu Leu Ala Ser Thr Ser
 145 150 155 160
 Pro Ser Thr Arg Arg Ala Phe Trp Trp Leu Val Leu Ala Gly Trp Gly
 165 170 175
 Leu Pro Leu Leu Phe Thr Gly Thr Trp Val Gly Cys Lys Leu Ala Phe
 180 185 190
 Glu Asp Val Ala Cys Trp Asp Leu Asp Asp Ser Ser Pro Tyr Trp Trp
 195 200 205
 Ile Ile Lys Gly Pro Ile Val Leu Ser Val Gly Val Asn Phe Gly Leu
 210 215 220
 Phe Leu Asn Ile Ile Arg Ile Leu Leu Arg Lys Leu Glu Pro Ala Gln
 225 230 235 240
 Gly Ser Leu His Thr Gln Pro Gln Tyr Trp Arg Leu Ser Lys Ser Thr
 245 250 255
 Leu Leu Leu Ile Pro Leu Phe Gly Ile His Tyr Val Ile Phe Asn Phe
 260 265 270
 Leu Pro Asp Ser
 275

<210> 573
 <211> 276
 <212> PRT
 <213> Sus scrofa

<400> 573

Leu Gly Thr Tyr Thr Ser Ser Met Ala Leu Lys Lys Phe Lys Thr Ser
 1 5 10 15

Arg Tyr Phe Pro Thr Thr Ala Arg Lys Leu Ile Ser Asp Phe Ala Ile
 20 25 30

Ile Leu Ser Ile Leu Ile Phe Cys Val Ile Asp Ala Leu Val Gly Val
 35 40 45

Asp Thr Pro Lys Leu Ile Val Pro Ser Glu Phe Lys Pro Thr Ser Pro
 50 55 60

Asn Arg Gly Trp Phe Val Pro Pro Phe Gly Gly Asn Pro Trp Trp Val
 65 70 75 80

Tyr Leu Ala Ala Ala Ile Pro Ala Leu Leu Val Thr Ile Leu Ile Phe
 85 90 95

Met Asp Gln Gln Ile Thr Ala Val Ile Val Asn Arg Lys Glu His Lys
 100 105 110

Leu Lys Lys Gly Ala Gly Tyr His Leu Asp Leu Phe Trp Val Ala Ile
 115 120 125

Leu Met Val Val Cys Ser Phe Met Ala Leu Pro Trp Tyr Val Ala Ala
 130 135 140

Thr Val Ile Ser Ile Ala His Ile Asp Ser Leu Lys Met Glu Thr Glu
 145 150 155 160

Thr Ser Ala Pro Gly Glu Gln Pro Lys Phe Leu Gly Val Arg Glu Gln
 165 170 175

Arg Val Thr Gly Thr Leu Val Phe Ile Leu Thr Gly Leu Ser Val Phe
 180 185 190

Met Ala Pro Ile Leu Lys Phe Ile Pro Met Pro Val Leu Tyr Gly Val
 195 200 205

Phe Leu Tyr Met Gly Val Ala Ser Leu Asn Gly Val Gln Phe Met Asp
 210 215 220

Arg Leu Lys Leu Leu Leu Met Pro Leu Lys His Gln Pro Asp Phe Ile
 225 230 235 240

Tyr Leu Arg His Val Pro Leu Arg Arg Val His Leu Phe Thr Phe Leu
 245 250 255

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Gln Val Leu Cys Leu Ala Leu Leu Trp Ile Leu Lys Ser Thr Val Ala
260 265 270

Ala Ile Ile Phe
275

<210> 574
<211> 126
<212> PRT
<213> Sus scrofa

<400> 574
Gly Arg Arg His Pro Trp Ala Ala Ser Asn Val Val Ala Gly Ala Ala
1 5 10 15

Cys Leu Ala Ser Val Phe Ile Pro Glu Asp Pro His Trp Leu Arg Ile
20 25 30

Thr Val Leu Cys Leu Gly Arg Met Gly Ile Thr Met Ala Tyr Glu Met
35 40 45

Val Cys Leu Val Asn Ala Glu Leu Tyr Pro Thr Phe Ile Arg Asn Leu
50 55 60

Gly Val Leu Val Cys Ser Ser Met Cys Asp Ile Gly Gly Ile Ile Thr
65 70 75 80

Pro Phe Leu Val Tyr Arg Leu Thr Asp Ile Trp His Glu Leu Pro Leu
85 90 95

Val Val Phe Ala Val Val Gly Leu Ile Ala Gly Gly Leu Val Leu Leu
100 105 110

Leu Pro Glu Thr Lys Gly Lys Thr Leu Pro Glu Thr Ile Glu
115 120 125

<210> 575
<211> 76
<212> PRT
<213> Sus scrofa

<400> 575
Leu Ile Ile Phe Glu Ile Val His Arg Thr Leu Ala Ala Met Leu Gly
1 5 10 15

Ser Leu Ala Ala Leu Ala Ala Leu Ala Val Ile Gly Asp Arg Pro Thr
20 25 30

Leu Thr Gln Val Val Glu Trp Ile Asp Phe Glu Thr Leu Ala Leu Leu
35 40 45

Phe Gly Met Met Ile Leu Val Ala Ile Phe Ser Glu Thr Gly Phe Phe
50 55 60

Asp Tyr Cys Ala Val Lys Ala Tyr Gln Leu Ser Arg
65 70 75

<210> 576
 <211> 126
 <212> PRT
 <213> Sus scrofa

<400> 576
 Met Gly Ser Glu Ile Pro Asp Tyr Tyr Asn Lys Thr Leu Ala Ser Glu
 1 5 10 15
 Asn Asn Thr Val Ala Thr Arg Asn Ser Gly Phe Pro Val Trp Glu Asp
 20 25 30
 Tyr Lys Gly Ser Val Asp Asp Leu Gln Tyr Phe Leu Ile Gly Leu Tyr
 35 40 45
 Thr Phe Val Ser Leu Leu Gly Phe Met Gly Asn Leu Leu Ile Leu Met
 50 55 60
 Ala Val Met Arg Lys Arg Asn Gln Lys Thr Thr Val Asn Phe Leu Ile
 65 70 75 80
 Gly Asn Leu Ala Phe Ser Asp Ile Leu Val Val Leu Phe Cys Ser Pro
 85 90 95
 Phe Thr Leu Thr Ser Val Leu Leu Asp Gln Trp Met Phe Gly Lys Val
 100 105 110
 Met Cys His Ile Met Pro Phe Leu Gln Cys Val Thr Val Leu
 115 120 125

<210> 577
 <211> 251
 <212> PRT
 <213> Sus scrofa

<400> 577
 Arg Ser Arg Arg His Gln Thr Val Gln Gln Phe Lys Arg Phe Val Glu
 1 5 10 15
 Asn Tyr Arg Arg His Ile Gly Cys Leu Ala Val Phe Tyr Thr Ile Ala
 20 25 30
 Gly Gly Leu Phe Leu Glu Arg Ala Tyr Tyr Tyr Ala Phe Ala Ala His
 35 40 45
 His Met Gly Ile Thr Asp Thr Thr Arg Val Gly Ile Ile Leu Ser Arg
 50 55 60
 Gly Thr Ala Ala Ser Ile Ser Phe Met Phe Ser Tyr Ile Leu Leu Thr
 65 70 75 80
 Met Cys Arg Asn Leu Ile Thr Phe Leu Arg Glu Thr Phe Leu Asn Arg
 85 90 95
 Tyr Val Pro Phe Asp Ala Ala Val Asp Phe His Arg Leu Ile Ala Ser
 100 105 110

Thr Ala Ile Ile Leu Thr Val Leu His Ser Ala Gly His Val Val Asn
115 120 125

Val Tyr Leu Phe Ser Ile Ser Pro Leu Ser Val Leu Ser Cys Leu Phe
130 135 140

Pro Gly Leu Phe His Asp Asn Gly Ser Glu Phe Pro Gln Lys Tyr Tyr
145 150 155 160

Trp Trp Phe Phe Gln Thr Val Pro Gly Leu Thr Gly Val Met Leu Leu
165 170 175

Leu Ile Leu Ala Ile Met Tyr Val Phe Ala Ser His His Phe Arg Arg
180 185 190

Cys Ser Phe Arg Gly Phe Trp Leu Thr His His Leu Tyr Ile Leu Leu
195 200 205

Tyr Met Leu Leu Ile Ile His Gly Ser Phe Ala Leu Ile Gln Leu Pro
210 215 220

Arg Phe His Ile Phe Phe Leu Val Pro Ala Leu Ile Tyr Val Gly Asp
225 230 235 240

Lys Leu Val Ser Leu Ser Arg Lys Lys Val Glu
245 250

<210> 578
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 578
Thr Leu Ala Ala Trp Pro Val Thr Arg Asp Ser Arg Leu Phe His Phe
1 5 10 15

Leu Met Leu Ala Met Tyr Ser Gly Gln Ile Gly Ser Phe Ser Ser Arg
20 25 30

Asp Leu Leu Leu Phe Phe Ile Met Trp Glu Leu Glu Leu Ile Pro Val
35 40 45

Tyr Leu Leu Leu Ala Met Trp Gly Gly Lys Lys Arg Leu Tyr Ser Ala
50 55 60

Thr Lys Phe Ile Leu Tyr Thr Ala Gly Gly Ser Val
65 70 75

<210> 579
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 579
Met Ile Trp His Val Gln Asn Glu Asn Phe Ile Leu Asp Ser Thr Arg

1 5 10 15
 Ile Phe Met Lys Ala Phe His Leu Leu Leu Phe Asp Gly Ser Leu Ile
 20 25 30
 Phe Pro Glu Cys Ile Leu Ile Phe Gly Leu Ile Leu Leu Leu Met Ile
 35 40 45
 Asp Ser Thr Ser Asp Gln Lys Asp Ile Pro Trp Leu Tyr Phe Ile Ser
 50 55 60
 Ser Thr Ser Leu Val Leu Ser Ile Thr Ala Leu Leu
 65 70 75

 <210> 580
 <211> 76
 <212> PRT
 <213> Solanum tuberosum

 <400> 580
 Met Ile Trp His Val Gln Asn Glu Asn Phe Ile Leu Asp Ser Thr Arg
 1 5 10 15
 Ile Phe Met Lys Ala Phe His Leu Leu Leu Phe Asp Gly Ser Leu Ile
 20 25 30
 Phe Pro Glu Cys Ile Leu Ile Phe Gly Leu Ile Leu Leu Leu Met Ile
 35 40 45
 Asp Ser Thr Ser Asp Gln Lys Asp Ile Pro Trp Leu Tyr Phe Ile Ser
 50 55 60
 Ser Thr Ser Leu Val Leu Ser Ile Thr Ala Leu Leu
 65 70 75

 <210> 581
 <211> 151
 <212> PRT
 <213> Sus scrofa

 <400> 581
 Pro Gly Glu Gln Leu Glu Gly Glu Pro Ser Thr Val Pro Cys Pro Gln
 1 5 10 15
 Gly Trp Glu Tyr Asp His Ser Glu Phe Ser Ser Thr Ile Ala Thr Glu
 20 25 30
 Trp Asp Leu Val Cys Glu Gln Lys Gly Leu Asn Arg Ala Thr Ser Thr
 35 40 45
 Phe Phe Phe Ala Gly Val Leu Val Gly Ala Val Ala Phe Gly Tyr Leu
 50 55 60
 Ser Asp Arg Phe Gly Arg Arg Arg Leu Leu Leu Val Ala Tyr Val Ser
 65 70 75 80

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Ala Leu Val Leu Gly Leu Val Ser Ala Ala Ser Val Ser Tyr Thr Met
85 90 95

Phe Ala Ile Thr Arg Thr Leu Thr Gly Thr Ala Leu Ala Gly Phe Thr
100 105 110

Ile Ile Val Met Pro Leu Glu Leu Glu Trp Leu Asp Val Gly His Arg
115 120 125

Thr Val Ala Gly Val Leu Ser Ser Thr Phe Trp Thr Gly Gly Val Met
130 135 140

Leu Leu Ala Leu Val Gly Tyr
145 150

<210> 582
<211> 101
<212> PRT
<213> Sus scrofa

<400> 582
Leu Ala Val Ser Ser Gly Ser Ala Ser Thr Glu Lys Gly Glu Leu Leu
1 5 10 15

Asp Ser Ala His Ile Arg Cys His Leu Ser Lys Leu Arg Cys Cys Val
20 25 30

Gln Trp Leu Lys Val Ser Gly Leu Phe Val Phe Val Val Leu Cys Ser
35 40 45

Ile Leu Phe Ser Leu Tyr Pro Asp Gln Gly Lys Phe Trp Gln Leu Leu
50 55 60

Ala Val Ser Pro Leu Glu Ser Tyr Ser Val Asn Leu Ser Ser His Ala
65 70 75 80

Asp Ser Met Leu Leu Gln Val Asp Leu Ala Gly Ala Leu Val Ala Ser
85 90 95

Gly Pro Ser His Leu
100

<210> 583
<211> 126
<212> PRT
<213> Sus scrofa

<400> 583
Arg Val Val Arg Arg Pro Ser Tyr Val Asp Leu Phe Arg Thr Pro Arg
1 5 10 15

Leu Arg His Ile Ser Leu Cys Cys Met Val Val Trp Phe Gly Val Asn
20 25 30

Phe Ser Tyr Tyr Gly Leu Ser Leu Asp Val Ser Gly Leu Gly Leu Asn
35 40 45

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Val Tyr Gln Thr Gln Leu Leu Phe Gly Ala Val Glu Leu Pro Ser Lys
50 55 60

Leu Leu Val Tyr Leu Ser Val Arg His Ala Gly Arg Arg Leu Thr Leu
65 70 75 80

Ala Gly Thr Leu Leu Gly Thr Ser Leu Ser Leu Gly Phe Arg Leu Leu
85 90 95

Val Ser Ser Glu Met Lys Ser Trp Ser Thr Ala Leu Ala Val Leu Gly
100 105 110

Lys Gly Phe Ser Glu Ala Ala Phe Thr Thr Ala Tyr Leu Phe
115 120 125

<210> 584
<211> 126
<212> PRT
<213> Sus scrofa

<400> 584
Met Ala Ala Leu Leu Leu Arg His Val Gly Arg His Cys Leu Arg Ala
1 5 10 15

His Leu Ser Pro Gln Leu Cys Ile Arg Asn Ala Val Pro Leu Gly Thr
20 25 30

Thr Ala Lys Glu Glu Met Glu Arg Phe Trp Asn Lys Asn Leu Gly Ser
35 40 45

Asn Arg Pro Leu Ser Pro His Ile Thr Ile Tyr Arg Trp Ser Leu Pro
50 55 60

Met Ala Met Ser Ile Cys His Arg Gly Thr Gly Ile Ala Leu Ser Ala
65 70 75 80

Gly Val Ser Leu Phe Gly Leu Ser Ala Leu Leu Leu Pro Gly Asn Phe
85 90 95

Glu Ser His Leu Glu Leu Val Lys Ser Leu Cys Leu Gly Pro Thr Leu
100 105 110

Ile Tyr Thr Ala Lys Phe Gly Ile Val Phe Pro Leu Met Tyr
115 120 125

<210> 585
<211> 151
<212> PRT
<213> Sus scrofa

<400> 585
Ala Gly Ala Val Phe Leu Lys Asp Ala Ala Leu Phe His Ser Glu Asn
1 5 10 15

Thr Asp His Cys Ser Phe Ser Thr Val Leu Cys Lys Val Ser Val Ala
20 25 30

Thr Ser His Phe Ala Thr Met Thr Asn Phe Ser Trp Leu Leu Ala Glu
35 40 45

Ala Val Tyr Leu Thr Cys Leu Leu Ala Ser Thr Ser Pro Ser Thr Arg
50 55 60

Arg Ala Phe Trp Trp Leu Val Leu Ala Gly Trp Gly Leu Pro Leu Leu
65 70 75 80

Phe Thr Gly Thr Trp Val Gly Cys Lys Leu Ala Phe Glu Asp Val Ala
85 90 95

Cys Trp Asp Leu Asp Asp Ser Ser Pro Tyr Trp Trp Ile Ile Lys Gly
100 105 110

Pro Ile Val Leu Ser Val Gly Val Asn Phe Gly Leu Phe Leu Asn Ile
115 120 125

Ile Arg Ile Leu Leu Arg Lys Leu Glu Pro Ala Gln Gly Ser Leu His
130 135 140

Thr Gln Pro Gln Tyr Trp Arg
145 150

<210> 586
<211> 101
<212> PRT
<213> Sus scrofa

<400> 586
Phe Leu Asp Leu Gln Leu Asn Ala Thr Glu Gly Asn Val Ser Gly Pro
1 5 10 15

Ser Val Gly Asn Thr Ser Ser Pro Cys Glu Asp Met Gly Ile Glu Val
20 25 30

Glu Val Phe Leu Thr Leu Gly Leu Ile Ser Leu Leu Glu Asn Ile Leu
35 40 45

Val Ile Gly Ala Ile Ala Arg Asn Lys Asn Leu His Val Pro Met Tyr
50 55 60

Phe Phe Val Cys Ser Leu Ala Val Ala Asp Met Leu Val Ser Leu Ser
65 70 75 80

Asn Ser Trp Glu Thr Ile Thr Ile Tyr Leu Ile Ala Asn Lys His Leu
85 90 95

Val Leu Ser Asp Thr
100

<210> 587
<211> 126
<212> PRT

<213> Sus scrofa

<400> 587

Pro Asp Phe Asp Ala Ala Glu Lys Val Thr Lys Tyr Cys Gly Glu Asp
 1 5 10 15

Gly Asp Trp Tyr Arg His Pro Glu Ser Asn Ile Ser Trp Ser Asn Tyr
 20 25 30

Thr Met Cys Asn Ala Phe Thr Pro Asp Lys Leu Gln Asn Ala Tyr Ile
 35 40 45

Leu Tyr Tyr Leu Ala Ile Val Gly His Ser Leu Ser Ile Leu Thr Leu
 50 55 60

Leu Ile Ser Leu Gly Ile Phe Met Phe Leu Arg Tyr Phe Asn Leu Leu
 65 70 75 80

Ala Pro Phe Asn Ala Leu Leu Tyr Pro Thr Arg Ser Ile Ser Cys Gln
 85 90 95

Arg Val Thr Leu His Lys Asn Met Phe Leu Thr Tyr Val Leu Asn Ser
 100 105 110

Ile Ile Ile Ile Val His Leu Val Val Ile Val Pro Asn Gly
 115 120 125

<210> 588

<211> 101

<212> PRT

<213> Salmo salar

<400> 588

Arg Ala Pro Phe Asp Leu Thr Glu Gly Glu Ser Glu Leu Val Ser Gly
 1 5 10 15

Phe Asn Val Glu Tyr Ala Gly Gly Pro Phe Ala Leu Phe Phe Leu Ala
 20 25 30

Glu Tyr Ala Asn Ile Leu Leu Met Asn Thr Leu Ser Ala Ile Leu Phe
 35 40 45

Leu Gly Ala Ser His Ile Pro Ala Phe Pro Glu Leu Thr Ala Val Asn
 50 55 60

Leu Met Thr Lys Ala Ala Leu Leu Ser Val Val Phe Leu Trp Val Arg
 65 70 75 80

Ala Ser Tyr Pro Arg Phe Arg Tyr Asp Gln Leu Met His Leu Val Trp
 85 90 95

Lys Ser Phe Leu Pro
 100

<210> 589

<211> 126

<212> PRT

<213> Sus scrofa

<400> 589

Asn Leu Ser His Ala Lys Gly Gly Ser Leu Met Ala Ala Tyr Leu Lys
 1 5 10 15

Val Leu Pro Leu Phe Ile Met Val Phe Pro Gly Met Val Ser Arg Val
 20 25 30

Leu Phe Pro Asp Gln Val Ala Cys Ala Asp Pro Glu Ile Cys Gln Lys
 35 40 45

Val Cys Ser Asn Pro Ala Gly Cys Ser Asp Ile Ala Tyr Pro Lys Leu
 50 55 60

Val Leu Glu Leu Leu Pro Met Gly Leu Arg Gly Leu Met Met Ala Val
 65 70 75 80

Met Val Ala Ala Leu Met Ser Ser Leu Thr Ser Ile Phe Asn Ser Ala
 85 90 95

Ser Thr Ile Phe Thr Met Asp Leu Trp Asn His Leu Arg Pro Arg Ala
 100 105 110

Ser Glu Arg Glu Leu Met Ile Val Gly Arg Val Phe Val Leu
 115 120 125

<210> 590

<211> 76

<212> PRT

<213> Sus scrofa

<400> 590

Leu Leu Cys Gln Arg Leu Ala Ala Arg Leu Gly Val Val Thr Gly Lys
 1 5 10 15

Asp Leu Gly Glu Ile Cys His Leu Tyr Tyr Pro Lys Val Pro Arg Thr
 20 25 30

Leu Leu Trp Leu Asn Met Glu Leu Ala Ile Val Gly Ser Asp Met Gln
 35 40 45

Glu Val Ile Gly Thr Ala Ile Ala Phe Asn Leu Leu Ser Ala Gly Arg
 50 55 60

Ile Pro Leu Trp Gly Gly Val Leu Ile Thr Val Val
 65 70 75

<210> 591

<211> 76

<212> PRT

<213> Sus scrofa

<400> 591

Met Trp Val Leu Leu Val Phe Phe Leu Leu Thr Leu Thr Tyr Leu Phe
 1 5 10 15

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Trp Pro Lys Thr Lys Gly Ser Gly Ala Lys Tyr Pro Arg Ser Leu Pro
20 25 30

Val Leu Pro Val Val Gly Ser Leu Pro Phe Leu Pro Arg Arg Gly His
35 40 45

Gln His Met Asn Phe Phe Lys Leu Gln Asp Lys Tyr Gly Pro Ile Phe
50 55 60

Ser Phe Arg Leu Gly Ser Lys Thr Thr Val Val Ile
65 70 75

<210> 592
<211> 151
<212> PRT
<213> Sus scrofa

<400> 592
Met Leu Thr Pro Phe Gly Ala Leu Ala Ala Gly Phe Leu Ala Gly Thr
1 5 10 15

Val Ser Thr Leu Gly Phe Lys Phe Phe Thr Pro Ile Leu Glu Ser Lys
20 25 30

Phe Lys Ile Gln Asp Thr Cys Gly Val His Asn Leu His Gly Met Pro
35 40 45

Gly Val Leu Gly Ala Leu Leu Gly Val Leu Val Ala Gly Leu Ala Thr
50 55 60

His Asp Ser Tyr Gly Glu Gly Leu Glu Ser Val Phe Pro Leu Ile Ala
65 70 75 80

Glu Gly Gln Arg Ser Ser Thr Ser Gln Ala Leu His Gln Leu Phe Gly
85 90 95

Leu Phe Val Thr Leu Ile Phe Ala Ser Val Gly Gly Gly Leu Gly Gly
100 105 110

Leu Leu Leu Arg Leu Pro Phe Leu Asp Ser Pro Pro Asp Ser Gln Cys
115 120 125

Tyr Glu Asp Gln Ile Tyr Trp Glu Val Pro Glu Glu His Ala Asp Leu
130 135 140

Ala Gln Gly Ser Leu Arg Pro
145 150

<210> 593
<211> 151
<212> PRT
<213> Sus scrofa

<400> 593
His Lys Asn Met Phe Leu Thr Tyr Val Leu Asn Ser Ile Ile Ile Ile
1 5 10 15

Val His Leu Val Val Ile Val Pro Asn Gly Glu Leu Val Lys Arg Asp
20 25 30

Pro Pro Ile Cys Lys Val Leu His Phe Phe His Gln Tyr Met Met Ser
35 40 45

Cys Asn Tyr Phe Trp Met Leu Cys Glu Gly Val Tyr Leu His Thr Leu
50 55 60

Ile Val Val Ser Val Phe Ala Glu Gly Gln Arg Leu Trp Trp Tyr His
65 70 75 80

Val Leu Gly Trp Gly Phe Pro Leu Ile Pro Thr Thr Ala His Ala Ile
85 90 95

Thr Arg Ala Val Leu Phe Asn Asp Asn Cys Trp Leu Ser Val Asp Thr
100 105 110

Asn Leu Leu Tyr Ile Ile His Gly Pro Val Met Ala Ala Leu Val Val
115 120 125

Asn Phe Phe Phe Leu Leu Asn Ile Leu Arg Val Leu Val Lys Lys Leu
130 135 140

Lys Glu Ser Gln Glu Ala Glu
145 150

<210> 594
<211> 76
<212> PRT
<213> Sus scrofa

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Any amino acid

<400> 594
Met Lys Leu Gly Ser Ala Ile Pro Trp Ala Leu Leu Leu Ser Thr Xaa
1 5 10 15

Thr Leu Val Ser Thr Ala Gln Asn Lys Gly Ser Asp Asp Cys Gly Gly
20 25 30

Phe Leu Lys Asn Tyr Ser Gly Trp Ile Ser Tyr Tyr Lys Ala Leu Thr
35 40 45

Thr Asn Cys Val Trp Thr Ile Glu Met Lys Pro Gly His Lys Ile Ile
50 55 60

Leu Gln Ile Leu Pro Leu Asn Leu Trp Thr Ile Glu
65 70 75

<210> 595

<211> 226

<212> PRT

<213> Sus scrofa

<400> 595

Met Asn Ser Thr Leu Ser Ser Gln Val Glu Asn His Ser Ile Tyr Tyr
 1 5 10 15

Asn Phe Ser Glu Lys Asn Ser Gln Phe Leu Ala Phe Glu Asn Asp Asp
 20 25 30

Cys His Leu Pro Leu Ala Met Ile Phe Thr Leu Ala Leu Ala Tyr Gly
 35 40 45

Ala Val Ile Ile Leu Gly Val Ser Gly Asn Leu Ala Leu Ile Ile Ile
 50 55 60

Ile Leu Lys Gln Lys Glu Met Arg Asn Val Thr Asn Ile Leu Ile Val
 65 70 75 80

Asn Leu Ser Phe Ser Asp Leu Leu Val Ala Ile Met Cys Leu Pro Phe
 85 90 95

Thr Phe Val Tyr Thr Leu Met Asp His Trp Val Phe Gly Glu Val Met
 100 105 110

Cys Lys Leu Asn Pro Phe Val Gln Cys Val Ser Ile Thr Val Ser Ile
 115 120 125

Phe Ser Leu Val Leu Ile Ala Val Glu Arg His Gln Leu Ile Ile Asn
 130 135 140

Pro Arg Gly Trp Arg Pro Ser Asn Arg His Ala Tyr Val Gly Ile Ala
 145 150 155 160

Val Ile Trp Val Leu Ala Val Ala Ser Ser Leu Pro Phe Leu Ile Tyr
 165 170 175

Gln Val Leu Thr Asp Glu Pro Phe Gln Asn Val Thr Leu Asp Ala Phe
 180 185 190

Lys Asp Lys Tyr Val Cys Phe Asp Lys Phe Leu Ser Asp Ser His Arg
 195 200 205

Leu Ser Tyr Thr Thr Leu Leu Leu Val Leu Gln Tyr Phe Gly Pro Leu
 210 215 220

Cys Phe
 225

<210> 596

<211> 151

<212> PRT

<213> Sus scrofa

<400> 596

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Gly Leu Leu Ala Leu Gly Leu Phe Arg Gly Leu Pro Leu Val His Thr
1 5 10 15

Leu Ile Thr Val Ser Lys Ile Leu His Arg Lys Met Leu His Ser Val
20 25 30

Leu Gln Ala Pro Met Ser Thr Leu Asn Thr Leu Lys Ala Gly Gly Ile
35 40 45

Leu Asn Arg Phe Ser Lys Asp Ile Ala Val Leu Asp Asp Leu Leu Pro
50 55 60

Leu Thr Ile Phe Asp Phe Ile Gln Leu Leu Leu Ile Val Ile Gly Ala
65 70 75 80

Val Ala Val Val Ser Val Leu Lys Pro Tyr Ile Phe Leu Ala Thr Val
85 90 95

Pro Val Ile Val Ala Phe Ile Leu Leu Arg Ala Tyr Phe Leu His Thr
100 105 110

Ser Gln Gln Leu Lys Gln Leu Glu Ser Glu Gly Arg Ser Pro Ile Phe
115 120 125

Thr His Leu Ile Thr Ser Leu Lys Gly Leu Trp Thr Leu Arg Ala Phe
130 135 140

Gly Arg Gln Pro Tyr Phe Glu
145 150

<210> 597
<211> 76
<212> PRT
<213> Sus scrofa

<400> 597
Arg Thr Ser Ala Gln Gly Ile Leu Gln Gly Leu His Leu Gly Leu Gly
1 5 10 15

Arg Gly Cys Gly Ala Met Ile Gly Gly Val Leu Val Asn Tyr Phe Gly
20 25 30

Ala Ala Ala Thr Phe Arg Gly Ile Gly Met Ala Cys Leu Val Ile Leu
35 40 45

Leu Leu Phe Ala Leu Ile Gln Trp Leu Ala Val Pro Asp Glu Glu Glu
50 55 60

Asp Lys Thr Met Leu Ala Glu Arg Ile Pro Val Pro
65 70 75

<210> 598
<211> 226
<212> PRT
<213> Sus scrofa

<220>

<221> MOD_RES

<222> (105)..(105)

<223> Any amino acid

<400> 598

Met Glu Arg Lys Leu Met Ser Leu Leu Pro Ser Ile Ser Leu Ser Glu
 1 5 10 15

Met Glu Pro Asn Ser Thr Leu Gly Asn His Asn Ser Asn Arg Ser Cys
 20 25 30

Thr Thr Glu Asn Phe Lys Arg Glu Phe Tyr Pro Ile Val Tyr Leu Val
 35 40 45

Ile Phe Ile Trp Gly Ala Leu Gly Asn Gly Phe Ser Ile Tyr Val Phe
 50 55 60

Leu Lys Pro Tyr Lys Lys Ser Thr Ser Val Asn Val Phe Met Leu Asn
 65 70 75 80

Leu Ala Ile Ser Asp Leu Leu Phe Thr Ile Thr Leu Pro Phe Arg Val
 85 90 95

Asp Tyr Tyr Leu Arg Gly Ser Asn Xaa Ile Phe Gly Asp Thr Pro Cys
 100 105 110

Arg Ile Met Ser Tyr Ser Met Tyr Val Asn Met Tyr Ser Ser Ile Tyr
 115 120 125

Phe Leu Thr Val Leu Ser Val Val Arg Phe Leu Ala Thr Val His Pro
 130 135 140

Phe Arg Leu Leu His Thr Thr Ser Ile Lys Asn Ala Trp Ile Leu Cys
 145 150 155 160

Gly Val Ile Trp Ile Phe Ile Met Ala Ser Ser Thr Val Leu Leu Lys
 165 170 175

Asn Gly Ser Glu Gln Lys Asp Asn Val Thr Leu Cys Leu Glu Leu Asn
 180 185 190

Ser Asn Lys Val Thr Lys Leu Lys Thr Met Asn Tyr Val Ala Leu Val
 195 200 205

Val Gly Phe Val Leu Pro Phe Gly Thr Leu Ser Ile Cys Tyr Leu Leu
 210 215 220

Ile Ile
 225

<210> 599

<211> 176

<212> PRT

<213> Solanum tuberosum

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<400> 599

Pro Gly Gly Glu Val Ile Asp Thr Phe Pro Tyr Phe Val Ser Gly Val
1 5 10 15

Leu His Leu Ile Ser Ser Ala Val Leu Gly Phe Gly Gly Ile Tyr His
20 25 30

Ala Leu Leu Gly Pro Glu Thr Leu Glu Glu Ser Phe Pro Phe Phe Gly
35 40 45

Tyr Val Trp Lys Asp Arg Asn Lys Met Thr Thr Ile Leu Gly Ile His
50 55 60

Leu Ile Leu Leu Gly Ile Gly Ala Phe Leu Leu Val Phe Lys Ala Leu
65 70 75 80

Tyr Phe Gly Gly Val Tyr Asp Thr Trp Ala Pro Gly Gly Gly Asp Val
85 90 95

Arg Lys Ile Thr Asn Leu Thr Leu Ser Pro Ser Ile Ile Phe Gly Tyr
100 105 110

Leu Leu Lys Ser Pro Phe Gly Gly Glu Gly Trp Ile Val Ser Val Asp
115 120 125

Asp Leu Glu Asp Ile Ile Gly Gly His Val Trp Leu Gly Ser Ile Cys
130 135 140

Ile Leu Gly Gly Ile Trp His Ile Leu Thr Lys Pro Phe Ala Trp Ala
145 150 155 160

Arg Arg Ala Leu Val Trp Ser Gly Glu Ala Tyr Leu Ser Tyr Ser Leu
165 170 175

<210> 600

<211> 276

<212> PRT

<213> Sus scrofa

<400> 600

Met Trp Pro Leu Val Val Val Val Leu Leu Gly Ser Ala Tyr Cys Gly
1 5 10 15

Ser Ala Gln Leu Ile Phe Asn Ile Thr Lys Ser Val Glu Phe Thr Val
20 25 30

Cys Asn Thr Thr Val Thr Ile Pro Cys Phe Val Asn Asn Met Glu Ala
35 40 45

Lys Asn Ile Ser Glu Leu Tyr Val Lys Trp Lys Phe Lys Gly Lys Asp
50 55 60

Ile Phe Ile Phe Asp Gly Ala Gln His Ile Ser Lys Pro Ser Glu Ala
65 70 75 80

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Phe Pro Ser Ser Lys Ile Ser Pro Ser Glu Leu Leu His Gly Ile Ala
85 90 95

Ser Leu Lys Met Asp Lys Arg Asp Ala Val Ile Gly Asn Tyr Thr Cys
100 105 110

Glu Val Thr Glu Leu Ser Arg Glu Gly Glu Thr Ile Ile Glu Leu Lys
115 120 125

Arg Arg Phe Val Ser Trp Phe Ser Pro Asn Glu Asn Ile Leu Ile Val
130 135 140

Ile Phe Pro Ile Leu Ala Ile Leu Leu Phe Trp Gly Gln Phe Gly Ile
145 150 155 160

Leu Thr Leu Lys Tyr Lys Ser Ser Tyr Thr Lys Glu Lys Thr Ile Phe
165 170 175

Leu Leu Val Ala Gly Leu Met Leu Thr Ile Ile Val Ile Val Gly Ala
180 185 190

Ile Leu Phe Ile Pro Gly Glu Tyr Ser Thr Lys Asn Ala Cys Gly Leu
195 200 205

Gly Leu Ile Val Ile Pro Thr Ala Ile Leu Ile Leu Leu Gln Tyr Cys
210 215 220

Val Phe Met Met Ala Leu Gly Met Ser Ser Phe Thr Ile Ala Ile Leu
225 230 235 240

Ile Leu Gln Val Leu Gly His Val Leu Ser Val Val Gly Leu Ser Leu
245 250 255

Cys Val Ser Glu Cys Thr Pro Val His Gly Pro Leu Leu Ile Ser Gly
260 265 270

Leu Gly Ile Ile
275

<210> 601
<211> 201
<212> PRT
<213> Sus scrofa

<400> 601
Glu Phe Tyr Asn Gln Thr Trp Leu His Arg Tyr Gly Glu Ser Ile Ser
1 5 10 15

Pro Ala Thr Leu Thr Thr Leu Trp Ser Leu Ser Val Ala Ile Phe Ser
20 25 30

Val Gly Gly Met Ile Gly Ser Phe Ser Val Gly Leu Phe Val Asn Arg
35 40 45

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Phe Gly Arg Arg Asn Ser Met Leu Met Met Asn Leu Leu Ala Phe Ile
50 55 60

Ser Ala Val Leu Met Gly Phe Ser Lys Leu Gly Lys Ser Phe Glu Met
65 70 75 80

Leu Ile Leu Gly Arg Phe Ile Ile Gly Val Tyr Cys Gly Leu Thr Thr
85 90 95

Gly Phe Val Pro Met Tyr Val Gly Glu Val Ser Pro Thr Ala Leu Arg
100 105 110

Gly Ala Leu Gly Thr Leu His Gln Leu Gly Ile Val Val Gly Ile Leu
115 120 125

Ile Ala Gln Val Phe Gly Leu Asp Ser Ile Met Gly Asn Glu Glu Leu
130 135 140

Trp Pro Leu Leu Leu Ser Val Ile Phe Ile Pro Ala Leu Leu Gln Cys
145 150 155 160

Val Leu Leu Pro Phe Cys Pro Glu Ser Pro Arg Phe Leu Leu Ile Asn
165 170 175

Arg Asn Glu Glu Asn Arg Ala Lys Ser Val Leu Lys Lys Leu Arg Gly
180 185 190

Thr Ala Asp Val Thr Arg Asp Leu Gln
195 200

<210> 602
<211> 176
<212> PRT
<213> Sus scrofa

<400> 602
Phe Gly Glu Val Leu Cys Arg Val Val Asn Thr Met Ile Tyr Met Asn
1 5 10 15

Leu Tyr Ser Ser Ile Cys Phe Leu Met Leu Val Ser Ile Asp Arg Tyr
20 25 30

Leu Ala Leu Val Lys Thr Met Ser Met Gly Arg Met Arg Gly Val Arg
35 40 45

Trp Ala Lys Leu Tyr Ser Leu Val Ile Trp Gly Cys Thr Leu Leu Leu
50 55 60

Ser Ser Pro Met Leu Ala Phe Arg Thr Met His Glu Tyr Ala Ala Glu
65 70 75 80

Gly His Asn Val Thr Ala Cys Ile Ile Lys Tyr Pro Ser Arg Ser Trp
85 90 95

Met Val Phe Thr Asn Ile Leu Leu Asn Ser Val Gly Phe Leu Leu Pro

100

105

110

Leu Ser Ile Ile Thr Tyr Cys Thr Val Gln Ile Leu Gln Val Leu Arg
 115 120 125

Asn Asn Glu Met Gln Lys Phe Lys Glu Ile Gln Thr Glu Arg Lys Ala
 130 135 140

Thr Val Leu Val Leu Ala Val Leu Leu Leu Phe Val Val Cys Trp Leu
 145 150 155 160

Pro Phe Gln Ile Ser Thr Phe Leu Asp Thr Leu Leu Arg Leu Gly Val
 165 170 175

<210> 603

<211> 126

<212> PRT

<213> Malus domestica

<400> 603

Met Leu Ala Cys Asn Cys Ile Glu Pro Gln Trp Pro Ala Asp Glu Leu
 1 5 10 15

Leu Met Lys Tyr Gln Tyr Ile Ser Asp Phe Phe Ile Ala Leu Ala Tyr
 20 25 30

Phe Ser Ile Pro Leu Glu Leu Ile Tyr Phe Val Lys Lys Ser Ala Val
 35 40 45

Phe Pro Tyr Arg Trp Val Leu Val Gln Phe Gly Ala Phe Ile Val Leu
 50 55 60

Cys Gly Ala Thr His Leu Ile Asn Leu Trp Thr Phe Ser Ile His Ser
 65 70 75 80

Arg Thr Val Ala Met Val Met Thr Thr Ala Lys Val Leu Thr Ala Val
 85 90 95

Val Ser Cys Ala Thr Ala Leu Met Leu Val His Ile Ile Pro Asp Leu
 100 105 110

Leu Ser Val Lys Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala
 115 120 125

<210> 604

<211> 101

<212> PRT

<213> Sus scrofa

<400> 604

Asn Ile Leu Leu Asn Ser Val Gly Phe Leu Leu Pro Leu Ser Ile Ile
 1 5 10 15

Thr Tyr Cys Thr Val Gln Ile Leu Gln Val Leu Arg Asn Asn Glu Met
 20 25 30

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Gln Lys Phe Lys Glu Ile Gln Thr Glu Arg Lys Ala Thr Val Leu Val
35 40 45

Leu Ala Val Leu Leu Leu Phe Val Val Cys Trp Leu Pro Phe Gln Ile
50 55 60

Ser Thr Phe Leu Asp Thr Leu Leu Arg Leu Gly Val Leu Ser Gly Cys
65 70 75 80

Trp Asp Glu His Ala Val Asp Val Ile Thr Gln Ile Ser Ser Tyr Val
85 90 95

Ala Tyr Ser Asn Ser
100

<210> 605
<211> 76
<212> PRT
<213> Sus scrofa

<400> 605
Thr Ala Val Gly Pro Lys His Thr Ala Ser Ser Glu Leu Thr Thr Ala
1 5 10 15

Glu Ser Val Thr Met Ser Gln His Ala Leu Gly Asp Val Ala Gly Arg
20 25 30

Gly Val Thr Glu Lys Pro Gln Ser Val Gly Ala Leu Tyr Ile Val Leu
35 40 45

Pro Ile Ala Leu Leu Ile Leu Leu Phe Phe Gly Thr Phe Leu Leu Trp
50 55 60

Lys Asn Trp Arg Leu Lys Ser Ile Asn Ser Ile Asn
65 70 75

<210> 606
<211> 101
<212> PRT
<213> Meleagris gallopavo

<400> 606
Leu Ser Leu Ile Ala Leu Thr Ala Ala Met Ile Ile Leu Cys Leu Phe
1 5 10 15

Arg Lys Leu His Cys Thr Arg Asn Tyr Ile His Met His Leu Phe Met
20 25 30

Ser Phe Ile Met Arg Ala Ile Ala Val Phe Ile Lys Asp Val Thr Leu
35 40 45

Phe Glu Ser Gly Glu Pro Glu His Cys Phe Val Ser Ser Val Gly Cys
50 55 60

Lys Ala Met Met Val Phe Phe Gln Tyr Cys Val Met Ala Asn Phe Phe
65 70 75 80

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Trp Leu Leu Val Glu Gly Leu Tyr Leu His Thr Leu Leu Val Ile Ser
85 90 95

Phe Phe Ser Glu Arg
100

<210> 607
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 607
Met Asn Tyr Phe Pro Trp Leu Thr Ile Ile Val Val Phe Pro Ile Phe
1 5 10 15

Ala Gly Ser Leu Ile Phe Phe Leu Pro His Lys Gly Asn Arg Val Ile
20 25 30

Arg Trp Tyr Thr Ile Cys Ile Cys Ile Leu Glu Leu Leu Leu Thr Thr
35 40 45

Tyr Ala Phe Cys Tyr His Phe Gln Ser Asp Asp Pro Leu Ile Gln Leu
50 55 60

Val Glu Asp Tyr Lys Trp Ile Asp Phe Phe Asp Phe His Trp Arg Leu
65 70 75 80

Gly Ile Asp Gly Leu Ser Ile Gly Pro Ile Leu Leu Thr Gly Phe Ile
85 90 95

Thr Thr Leu Ala Thr
100

<210> 608
<211> 151
<212> PRT
<213> Sus scrofa

<400> 608
Tyr Phe Phe Val Leu Asp Ser Thr Asn Ile Glu Leu Ser Lys Thr Gly
1 5 10 15

Ala Gly Asn Leu Thr Arg Cys Phe Glu His Tyr Glu Lys Gly Ser Met
20 25 30

Pro Val Leu Ile Ile His Ile Phe Leu Val Phe Ser Phe Phe Leu Val
35 40 45

Phe Leu Val Ile Leu Phe Cys Asn Leu Val Ile Ile Arg Thr Leu Leu
50 55 60

Thr Gln Ser Val Gln Met Gln Arg Asn Ala Glu Val Lys Arg Arg Ala
65 70 75 80

Leu Trp Met Val Cys Thr Val Leu Ala Val Phe Ile Ile Cys Phe Val
85 90 95

Pro His His Ile Val Gln Leu Pro Trp Thr Leu Ala Glu Leu Gly Phe
 100 105 110

Gln Ser Gly Asn Phe His Gln Ala Ile Asn Asp Ala His Gln Ile Thr
 115 120 125

Leu Cys Leu Leu Ser Thr Asn Cys Val Leu Asp Pro Ile Ile Tyr Cys
 130 135 140

Phe Leu Thr Lys Lys Phe Arg
 145 150

<210> 609
 <211> 176
 <212> PRT
 <213> Sus scrofa

<400> 609
 Val Ser Pro Leu Ser Leu Leu Ala Cys Val Phe Pro Ser Val Phe Val
 1 5 10 15

Asn Asp Gly Ser Lys Leu Pro Gln Lys Phe Tyr Trp Trp Phe Phe Gln
 20 25 30

Thr Ile Pro Gly Met Thr Gly Val Leu Leu Leu Val Val Leu Ala Ile
 35 40 45

Met Tyr Val Phe Ala Ser Pro Tyr Phe Arg Arg Arg Ser Phe Arg Gly
 50 55 60

Phe Trp Leu Thr His His Phe Tyr Ile Leu Leu Tyr Val Leu Leu Ile
 65 70 75 80

Ile His Gly Ser Phe Ala Leu Ile Gln Leu Pro Arg Phe His Ile Phe
 85 90 95

Phe Leu Val Pro Ala Leu Ile Tyr Val Gly Asp Lys Leu Val Ser Leu
 100 105 110

Ser Arg Lys Lys Val Glu Ile Ser Val Val Lys Ala Glu Leu Leu Pro
 115 120 125

Ser Gly Val Thr His Leu Gln Phe Gln Arg Pro Gln Gly Phe Glu Tyr
 130 135 140

Lys Ser Gly Gln Trp Val Arg Ile Ala Cys Leu Gly Leu Gly Thr Asn
 145 150 155 160

Glu Tyr His Pro Phe Thr Leu Thr Ser Ala Pro His Glu Asp Thr Leu
 165 170 175

<210> 610
 <211> 76
 <212> PRT

<213> Sus scrofa

<400> 610

Asp Thr Phe Asn Pro Cys Glu Asp Ile Met Gly His Asp Ile Leu Arg
 1 5 10 15

Val Leu Ile Trp Phe Ile Ser Ile Leu Ala Ile Thr Gly Asn Ile Ile
 20 25 30

Val Leu Val Ile Leu Ile Thr Ser Gln Tyr Lys Leu Thr Val Pro Arg
 35 40 45

Phe Leu Met Cys Asn Leu Ala Phe Ala Asp Leu Cys Ile Gly Ile Tyr
 50 55 60

Leu Leu Leu Ile Ala Ser Val Asp Ile His Thr Lys
 65 70 75

<210> 611

<211> 126

<212> PRT

<213> Solanum tuberosum

<400> 611

Ser Gln Pro Gln Tyr Ile Asp Leu Val Lys Gly Val Glu Gly Val Thr
 1 5 10 15

Gly Ile Ile Met Val Ile Leu Met Ala Ile Ala Phe Thr Leu Ala Thr
 20 25 30

Arg Trp Phe Arg Arg Ser Leu Ile Lys Phe Pro Lys Pro Phe Asp Arg
 35 40 45

Leu Thr Gly Phe Asn Ala Phe Trp Tyr Ser His His Leu Leu Ile Ile
 50 55 60

Val Tyr Ile Val Leu Ile Ile His Gly Thr Phe Leu Tyr Leu Val His
 65 70 75 80

Asn Trp Tyr Ser Lys Thr Thr Trp Met Tyr Leu Ala Val Pro Val Leu
 85 90 95

Leu Tyr Ala Gly Glu Arg Thr Leu Arg Phe Phe Arg Ser Gly Leu Tyr
 100 105 110

Thr Val Arg Leu Leu Lys Val Ala Ile Tyr Pro Gly Asn Val
 115 120 125

<210> 612

<211> 126

<212> PRT

<213> Sus scrofa

<400> 612

Ile Tyr Thr Asp Ala Leu Gln Thr Leu Ile Met Leu Ile Gly Ala Leu
 1 5 10 15

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Thr Leu Met Gly Tyr Ser Phe Ala Val Gly Gly Met Glu Gly Leu
20 25 30

Lys Glu Lys Tyr Phe Leu Ala Leu Ala Ser Asn Arg Ser Gly Asn Ser
35 40 45

Ser Cys Gly Leu Pro Arg Glu Asp Ala Phe His Ile Phe Arg Asp Pro
50 55 60

Leu Thr Ser Asp Leu Pro Trp Pro Gly Ile Leu Phe Gly Met Ser Ile
65 70 75 80

Pro Ser Leu Trp Tyr Trp Cys Thr Asp Gln Val Ile Val Gln Arg Thr
85 90 95

Leu Ala Ala Lys Asn Leu Ser His Ala Lys Gly Gly Ser Leu Met Ala
100 105 110

Ala Tyr Leu Lys Val Leu Pro Leu Phe Ile Met Val Phe Pro
115 120 125

<210> 613

<211> 226

<212> PRT

<213> Sus scrofa

<400> 613

Asn Leu Ser His Ala Lys Gly Gly Ser Leu Met Ala Ala Tyr Leu Lys
1 5 10 15

Val Leu Pro Leu Phe Ile Met Val Phe Pro Gly Met Val Ser Arg Val
20 25 30

Leu Phe Pro Asp Gln Val Ala Cys Ala Asp Pro Glu Ile Cys Gln Lys
35 40 45

Val Cys Ser Asn Pro Ala Gly Cys Ser Asp Ile Ala Tyr Pro Lys Leu
50 55 60

Val Leu Glu Leu Leu Pro Met Gly Leu Arg Gly Leu Met Met Ala Val
65 70 75 80

Met Val Ala Ala Leu Met Ser Ser Leu Thr Ser Ile Phe Asn Ser Ala
85 90 95

Ser Thr Ile Phe Thr Met Asp Leu Trp Asn His Leu Arg Pro Arg Ala
100 105 110

Ser Glu Arg Glu Leu Met Ile Val Gly Arg Val Phe Val Leu Leu Leu
115 120 125

Val Leu Val Ser Ile Leu Trp Ile Pro Val Val Gln Ala Ser Gln Gly
130 135 140

Gly Gln Leu Phe Ile Tyr Ile Gln Ser Ile Ser Ser Tyr Leu Gln Pro

145 150 155 160
 Pro Val Ala Val Val Phe Ile Met Gly Cys Phe Trp Lys Arg Thr Asn
 165 170 175
 Glu Lys Gly Ala Phe Ser Gly Leu Ile Leu Gly Leu Leu Leu Gly Leu
 180 185 190
 Val Arg Leu Val Leu Asp Phe Ile Tyr Pro Gln Pro Arg Cys Asp Gln
 195 200 205
 Pro Asp Glu Arg Pro Ala Val Val Arg Asp Val His Tyr Leu Tyr Phe
 210 215 220
 Ser Met
 225
 <210> 614
 <211> 101
 <212> PRT
 <213> Sus scrofa
 <400> 614
 His Glu Thr Gly Ser Asn Asn Pro Thr Gly Ile Ser Ser Asp Met Asp
 1 5 10 15
 Lys Ile Pro Phe His Pro Tyr Tyr Thr Ile Lys Asp Ile Leu Gly Ala
 20 25 30
 Leu Phe Met Met Leu Ile Leu Leu Ile Leu Val Leu Phe Ser Pro Asp
 35 40 45
 Leu Leu Gly Asp Pro Asp Asn Tyr Thr Pro Ala Asn Pro Leu Asn Thr
 50 55 60
 Pro Pro His Ile Lys Pro Glu Trp Tyr Phe Leu Phe Ala Tyr Ala Ile
 65 70 75 80
 Leu Arg Ser Ile Pro Asn Lys Leu Gly Gly Val Leu Ala Leu Val Ala
 85 90 95
 Ser Ile Leu Ile Leu
 100
 <210> 615
 <211> 126
 <212> PRT
 <213> Sus scrofa
 <400> 615
 Asp Thr Phe Phe Asp His Phe Asn Arg Val Gln Trp Ala Phe Ser Ile
 1 5 10 15
 Cys Glu Ile Asn Gly Met Ile Leu Val Gly Leu Trp Leu Ile Gln Trp
 20 25 30

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Leu Leu Leu Lys Tyr Lys Ser Ile Ile Ser Arg Arg Phe Phe Cys Ile
35 40 45

Val Gly Thr Leu Tyr Leu Tyr Arg Cys Ile Thr Met Tyr Val Thr Thr
50 55 60

Leu Pro Val Pro Gly Met His Phe Asn Cys Ser Pro Lys Leu Phe Gly
65 70 75 80

Asp Trp Glu Ala Gln Leu Arg Arg Ile Met Lys Leu Ile Ala Gly Gly
85 90 95

Gly Leu Ser Ile Thr Gly Ser His Asn Met Cys Gly Asp Tyr Leu Tyr
100 105 110

Ser Gly His Thr Val Met Leu Thr Leu Thr Tyr Leu Phe Ile
115 120 125

<210> 616
<211> 151
<212> PRT
<213> Sus scrofa

<400> 616
Asp Lys Arg Asp Ala Val Ile Gly Asn Tyr Thr Cys Glu Val Thr Glu
1 5 10 15

Leu Ser Arg Glu Gly Glu Thr Ile Ile Glu Leu Lys Arg Arg Phe Val
20 25 30

Ser Trp Phe Ser Pro Asn Glu Asn Ile Leu Ile Val Ile Phe Pro Ile
35 40 45

Leu Ala Ile Leu Leu Phe Trp Gly Gln Phe Gly Ile Leu Thr Leu Lys
50 55 60

Tyr Lys Ser Ser Tyr Thr Lys Glu Lys Thr Ile Phe Leu Leu Val Ala
65 70 75 80

Gly Leu Met Leu Thr Ile Ile Val Ile Val Gly Ala Ile Leu Phe Ile
85 90 95

Pro Gly Glu Tyr Ser Thr Lys Asn Ala Cys Gly Leu Gly Leu Ile Val
100 105 110

Ile Pro Thr Ala Ile Leu Ile Leu Leu Gln Tyr Cys Val Phe Met Met
115 120 125

Ala Leu Gly Met Ser Ser Phe Thr Ile Ala Ile Leu Ile Leu Gln Val
130 135 140

Leu Gly His Val Leu Ser Val
145 150

<210> 617

<211> 126

<212> PRT

<213> Sus scrofa

<400> 617

Ile Ser Ala Asp Ile Phe Ser Gly Ala Ile Phe Ile Thr Leu Ala Leu
 1 5 10 15

Gly Leu Asp Leu Tyr Leu Ala Ile Phe Leu Leu Leu Ala Ile Thr Gly
 20 25 30

Leu Tyr Thr Ile Thr Gly Gly Leu Ala Ala Val Ile Tyr Thr Asp Thr
 35 40 45

Leu Gln Thr Ala Ile Met Leu Val Gly Ser Phe Ile Leu Thr Gly Phe
 50 55 60

Ala Phe His Glu Val Gly Gly Tyr Asp Ala Phe Ile Glu Lys Tyr Met
 65 70 75 80

Asn Ala Ile Pro Thr Val Ile Ser Asp Gly Asn Ile Thr Ile Lys Lys
 85 90 95

Glu Cys Tyr Ala Pro Arg Ala Asp Ser Phe His Ile Phe Arg Asp Pro
 100 105 110

Leu Lys Gly Asp Leu Pro Trp Pro Gly Leu Thr Phe Gly Leu
 115 120 125

<210> 618

<211> 126

<212> PRT

<213> Sus scrofa

<400> 618

Thr Glu Phe Ala Val Arg Ser Gly Leu Leu Thr Val Met Val Trp Val
 1 5 10 15

Ser Ser Val Phe Phe Phe Leu Pro Val Phe Cys Leu Thr Val Leu Tyr
 20 25 30

Ser Leu Ile Gly Arg Lys Leu Trp Arg Arg Lys Arg Gly Glu Ala Ala
 35 40 45

Val Gly Ser Ser Leu Arg Asp Gln Asn His Lys Gln Thr Val Lys Met
 50 55 60

Leu Ala Val Val Val Phe Ala Phe Ile Leu Cys Trp Leu Pro Phe His
 65 70 75 80

Val Gly Arg Tyr Leu Phe Ser Lys Ser Leu Glu Pro Gly Ser Val Glu
 85 90 95

Ile Ala Gln Ile Ser Gln Tyr Cys Asn Leu Val Ser Phe Val Leu Phe
 100 105 110

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Tyr Leu Ser Ala Ala Ile Asn Pro Ile Leu Tyr Asn Ile Met
115 120 125

<210> 619
<211> 276
<212> PRT
<213> Sus scrofa

<400> 619
Thr Ser Leu Leu Gly Ser Met Phe Pro Leu Pro Arg Ile Leu Phe Ala
1 5 10 15

Met Ala Arg Asp Gly Leu Leu Phe Arg Phe Leu Ala Arg Val Ser Lys
20 25 30

Arg Gln Ser Pro Val Ala Ala Thr Leu Thr Ala Gly Val Ile Ser Ala
35 40 45

Val Met Ala Phe Leu Phe Asp Leu Lys Ala Leu Val Asp Met Met Ser
50 55 60

Ile Gly Thr Leu Leu Ala Tyr Ser Leu Val Ala Ala Cys Val Leu Ile
65 70 75 80

Leu Arg Tyr Gln Pro Gly Leu Ser Tyr Glu Gln Pro Lys Tyr Cys Pro
85 90 95

Glu Lys Glu Ala Leu Gly Ser Cys Ala Ser Ala Ala Ser Lys Ser Lys
100 105 110

Ser Gln Val Thr Val Leu Pro Glu Trp Gly Phe Ser Leu Arg Ala Phe
115 120 125

Phe Ser Pro Ser Leu Leu Pro Thr Lys Gln Ser Ala Ser Leu Val Ser
130 135 140

Phe Leu Val Gly Phe Leu Ala Phe Leu Ile Leu Gly Leu Ser Ile Leu
145 150 155 160

Thr Thr Tyr Gly Val His Ala Ile Ala Arg Leu Glu Ala Trp Ser Leu
165 170 175

Ala Leu Leu Val Leu Phe Leu Val Leu Cys Val Ala Val Val Leu Thr
180 185 190

Ile Trp Arg Gln Pro Gln Asn Gln Gln Lys Val Ala Phe Met Val Pro
195 200 205

Phe Leu Pro Phe Leu Pro Ala Phe Ser Ile Leu Val Asn Ile Tyr Leu
210 215 220

Met Val Gln Leu Ser Ala Asp Thr Trp Ile Arg Phe Ser Ile Trp Met
225 230 235 240

Ala Leu Gly Phe Leu Ile Tyr Phe Ala Tyr Gly Ile Arg His Ser Leu
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Glu Gly Asn Ser Arg Asp Glu Asp Glu Asp Glu Asp Thr His Ser Asn
 260 265 270

Asn Val His Thr
 275

<210> 620
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 620
 Met Ala Thr Leu Trp Arg Leu Ser Val Leu Cys Gly Ala Arg Gly Gly
 1 5 10 15

Gly Ala Leu Val Leu Arg Thr Ser Val Val Arg Pro Ala His Val Ser
 20 25 30

Ala Phe Leu Gln Asp Arg His Thr Pro Gly Trp Cys Gly Val Gln His
 35 40 45

Ile His Leu Ser Pro Ser His Gln Ala Ser Ser Lys Ala Ala Ser Leu
 50 55 60

His Trp Thr Gly Glu Arg Val Val Ser Val Leu Leu
 65 70 75

<210> 621
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 621
 Val Glu Met Val Asp Leu Ile Gln Asn Gln Glu Ala Lys Ser Ser Cys
 1 5 10 15

Val Ser Leu Leu Ser Pro Ser Pro Gly Gly Asp Met Arg Phe Ser Phe
 20 25 30

Leu Leu Arg Gly Tyr Val Val Pro Met Pro Thr Ala Gly Ile Leu Ser
 35 40 45

Cys Thr Val Ala Leu Arg Pro Arg Thr Trp Ser Leu Asp Val His Lys
 50 55 60

Thr Ala Ser Thr Arg Leu Asn Ile Val Ser Pro Gly Leu Pro Asp Lys
 65 70 75 80

Gly Leu Val Leu Pro Ala Val Leu Gly Ile Thr Phe Gly Ala Phe Leu
 85 90 95

Ile Gly Ala Leu Leu
 100

<210> 622
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 622
 Pro Met Thr Leu Leu His Trp Ala Ala Ser Pro Val Leu Leu Pro Pro
 1 5 10 15

Glu Ala Pro Glu Leu Leu Gln Leu Val Arg His Ile Val Leu Cys Leu
 20 25 30

Leu Leu Phe Asp Thr Glu Phe Phe Ile Trp His Val Leu His His Lys
 35 40 45

Val Pro Trp Leu Tyr Arg Thr Phe His Lys Met His His Gln Asn Ser
 50 55 60

Ser Ser Phe Ala Leu Ala Thr Gln Tyr Met Ser Val
 65 70 75

<210> 623
 <211> 176
 <212> PRT
 <213> Sus scrofa

<400> 623
 Phe Glu Trp Asn Ala Leu Leu Leu Leu Leu Val Leu Gly Trp Phe Phe
 1 5 10 15

Val Pro Ile Tyr Ile Lys Ala Gly Val Met Thr Met Pro Glu Tyr Leu
 20 25 30

Arg Lys Arg Phe Gly Gly Lys Arg Leu Gln Ile Tyr Leu Ser Ile Leu
 35 40 45

Ser Leu Phe Ile Cys Val Ala Leu Arg Ile Ser Ser Asp Ile Phe Ser
 50 55 60

Gly Ala Ile Phe Ile Lys Leu Ala Leu Gly Leu Asp Leu Tyr Leu Ala
 65 70 75 80

Ile Phe Ser Leu Leu Ala Ile Thr Ala Ile Tyr Thr Ile Thr Gly Gly
 85 90 95

Leu Ala Ser Val Ile Tyr Thr Asp Thr Leu Gln Thr Ile Ile Met Leu
 100 105 110

Ile Gly Ser Phe Ile Leu Met Gly Phe Ala Phe Val Glu Val Gly Gly
 115 120 125

Tyr Glu Ser Phe Thr Glu Lys Tyr Met Asn Ala Ile Pro Thr Ile Val
 130 135 140

Glu Gly Asp Asn Leu Thr Ile Ser Pro Lys Cys Tyr Thr Pro Gln Gly
 145 150 155 160

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Asp Ser Phe His Ile Phe Arg Asp Ala Val Thr Gly Asp Ile Pro Trp
165 170 175

<210> 624
<211> 76
<212> PRT
<213> Meleagris gallopavo

<400> 624
Leu His Glu Ser Gly Ser Asn Asn Pro Leu Gly Ile Ser Ser Asn Ala
1 5 10 15

Asp Lys Ile Pro Phe His Pro Tyr Tyr Ser Ile Lys Asp Ile Leu Gly
20 25 30

Leu Thr Ile Met Leu Thr Pro Leu Leu Thr Leu Thr Leu Phe Ser Pro
35 40 45

Asn Leu Leu Gly Asp Pro Glu Asn Phe Thr Pro Ala Asn Pro Leu Val
50 55 60

Thr ProPro His Ile Lys Pro Glu Trp Tyr Phe Leu
65 70 75

<210> 625
<211> 176
<212> PRT
<213> Sus scrofa

<400> 625
Pro Lys Leu Glu Thr Leu Asp Leu Ala Gly Asn Gln Leu Lys Ala Leu
1 5 10 15

Ser Asn Gly Ser Leu Pro Ser Gly Thr Gln Leu Arg Arg Leu Asp Leu
20 25 30

Ser Gly Asn Ser Ile Gly Phe Val Asn Pro Gly Phe Phe Ala Leu Ala
35 40 45

Lys Gln Leu Glu Glu Leu Asn Leu Ser Ala Asn Ala Leu Lys Thr Val
50 55 60

Glu Pro Ser Trp Phe Gly Ser Met Val Gly Asn Leu Lys Val Leu Asp
65 70 75 80

Val Ser Ala Asn Pro Leu His Cys Ala Cys Gly Ala Thr Phe Val Gly
85 90 95

Phe Leu Leu Glu Val Gln Ala Ala Val Pro Gly Leu Pro Ser Arg Val
100 105 110

Lys Cys Gly Ser Pro Gly Gln Leu Gln Gly His Ser Ile Phe Ala Gln
115 120 125

Asp Leu Arg Leu Cys Leu Asp Glu Thr Leu Ser Trp Asn Cys Phe Gly
130 135 140

Ile Ser Leu Leu Ala Met Ala Leu Gly Leu Val Val Pro Met Leu His
145 150 155 160

His Leu Cys Gly Trp Asp Leu Trp Tyr Cys Phe His Leu Cys Leu Ala
165 170 175

<210> 626
<211> 76
<212> PRT
<213> Sus scrofa

<400> 626
Met Leu Ser Ala Leu Gly Gly Leu Gln Arg Cys Phe Trp Ala Ile Leu
1 5 10 15

Leu Leu Ala Leu Thr Val Ser Leu Leu Ala Gly Phe Leu His Lys Asp
20 25 30

Val Arg Leu Leu Met Pro Leu Leu Lys Gly Gln Ala Glu Gly Pro Pro
35 40 45

Ile Thr Asn Val Met Phe Leu Lys Thr His Lys Thr Ala Ser Ser Thr
50 55 60

Val Leu Asn Ile Leu Phe Arg Phe Ala Glu Thr His
65 70 75

<210> 627
<211> 76
<212> PRT
<213> Sus scrofa

<400> 627
Val Thr Glu Arg Leu Ser Pro Ser Phe Leu Asp Leu Phe Arg Thr Gln
1 5 10 15

Asn Leu Arg Lys Tyr Thr Phe Ile Leu Met Tyr Leu Trp Phe Thr Ser
20 25 30

Ser Val Leu Tyr Gln Gly Leu Ile Met His Val Gly Ala Thr Gly Gly
35 40 45

Ser Leu Tyr Leu Asp Phe Leu Tyr Ser Ala Leu Val Glu Phe Pro Ala
50 55 60

Ala Phe Val Ile Leu Leu Ile Ile Asp Arg Phe Gly
65 70 75

<210> 628
<211> 101
<212> PRT
<213> Sus scrofa

<400> 628
Phe Gly Asp Val Lys Glu Lys Tyr Leu Ser Glu Tyr Cys Phe Ser Gly
1 5 10 15

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Thr Tyr Ile Leu Thr Leu Leu Leu Ser Gly Tyr His Phe Thr Ala Glu
20 25 30
Thr Trp Lys Asn Ile His Phe Met Gly Lys Val Gln Ser Thr Ser Val
35 40 45
Gly Trp Thr Leu Gly Tyr Met Leu Asn Leu Thr Asn Met Ile Pro Ser
50 55 60
Glu Glu Pro Ser Ser Thr Arg Leu Ser His Ser Thr Tyr Val Phe Leu
65 70 75 80
Met Val Leu Phe Ser Leu Ile Leu Val Ile Val Val Ile Ile Gly Leu
85 90 95
Phe Val Cys His Arg
100

<210> 629
<211> 76
<212> PRT
<213> Salmo salar

<400> 629
Met Ala His Pro Ser Gln Leu Gly Phe Gln Asp Ala Ala Ser Pro Val
1 5 10 15

Met Glu Glu Leu Leu His Phe His Asp His Ala Leu Met Ile Val Leu
20 25 30

Leu Ile Ser Thr Leu Val Leu Tyr Ile Ile Val Ala Met Val Ser Thr
35 40 45

Lys Leu Thr Asn Lys Tyr Ile Leu Asp Ser Gln Glu Ile Glu Ile Val
50 55 60

Trp Thr Val Leu Pro Ala Val Ile Leu Ile Leu Ile
65 70 75

<210> 630
<211> 201
<212> PRT
<213> Solanum tuberosum

<400> 630
Met Asn Tyr Phe Pro Trp Leu Thr Ile Ile Val Val Phe Pro Ile Phe
1 5 10 15

Ala Gly Ser Leu Ile Phe Phe Leu Pro His Lys Gly Asn Arg Val Ile
20 25 30

Arg Trp Tyr Thr Ile Cys Ile Cys Ile Leu Glu Leu Leu Leu Thr Thr
35 40 45

Tyr Ala Phe Cys Tyr His Phe Gln Ser Asp Asp Pro Leu Ile Gln Leu
50 55 60

Val Glu Asp Tyr Lys Trp Ile Asp Phe Phe Asp Phe His Trp Arg Leu
65 70 75 80

Gly Ile Asp Gly Leu Ser Ile Gly Pro Ile Leu Leu Thr Gly Phe Ile
85 90 95

Thr Thr Leu Ala Thr Leu Ala Ala Trp Pro Val Thr Arg Asp Ser Arg
100 105 110

Leu Phe His Phe Leu Met Leu Ala Met Tyr Ser Gly Gln Ile Gly Ser
115 120 125

Phe Ser Ser Arg Asp Leu Leu Leu Phe Phe Ile Met Trp Glu Leu Glu
130 135 140

Leu Ile Pro Val Tyr Leu Leu Leu Ala Met Trp Gly Gly Lys Lys Arg
145 150 155 160

Leu Tyr Ser Ala Thr Lys Phe Ile Leu Tyr Thr Ala Gly Gly Ser Val
165 170 175

Phe Leu Leu Met Gly Val Leu Gly Val Ala Leu Tyr Gly Ser Asn Glu
180 185 190

Pro Thr Leu Asn Phe Glu Thr Ser Val
195 200

<210> 631
<211> 176
<212> PRT
<213> Sus scrofa

<400> 631
Val Met Thr Ile Phe Leu Val Val Leu Tyr Lys Tyr Arg Cys Tyr Lys
1 5 10 15

Phe Ile His Gly Trp Leu Ile Thr Ser Ser Leu Met Leu Leu Phe Leu
20 25 30

Phe Thr Tyr Ile Tyr Leu Gly Glu Val Leu Lys Thr Tyr Asn Val Ala
35 40 45

Met Asp Tyr Pro Thr Leu Phe Leu Thr Val Trp Asn Phe Gly Ala Val
50 55 60

Gly Met Val Cys Ile His Trp Lys Gly Pro Leu Val Leu Gln Gln Ala
65 70 75 80

Tyr Leu Ile Met Ile Ser Ala Leu Met Ala Leu Val Phe Ile Lys Tyr
85 90 95

Leu Pro Glu Trp Ser Ala Trp Val Ile Leu Gly Ala Ile Ser Val Tyr
100 105 110

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Asp Leu Val Ala Val Leu Cys Pro Lys Gly Pro Leu Arg Met Leu Val
115 120 125

Glu Thr Ala Gln Glu Arg Asn Glu Pro Ile Phe Pro Ala Leu Ile Tyr
130 135 140

Ser Ser Ala Met Val Trp Thr Val Gly Met Ala Lys Leu Asp Pro Ser
145 150 155 160

Ser Gln Gly Ala Leu Gln Leu Pro Tyr Asp Pro Glu Met Glu Glu Asp
165 170 175

<210> 632

<211> 201

<212> PRT

<213> Sus scrofa

<400> 632

Met Thr Gly Asp Thr Asp Pro Pro Lys Gln Ser Arg Thr Gln Tyr Gly
1 5 10 15

Ser Ile Ser Ser Ser Pro Ser Pro Gly Pro Pro Gln Val Pro Pro Gly
20 25 30

Gly Thr Tyr Leu Ser Glu Lys Ile Pro Ile Pro Asn Ala Glu Pro Gly
35 40 45

Thr Phe Ser Leu Arg Lys Leu Trp Ala Phe Thr Gly Pro Gly Phe Leu
50 55 60

Met Ser Ile Ala Tyr Leu Asp Pro Gly Asn Ile Gln Ser Asp Leu Gln
65 70 75 80

Ala Gly Ala Val Ala Gly Phe Lys Leu Leu Trp Val Leu Leu Trp Ala
85 90 95

Thr Val Leu Gly Leu Leu Cys Gln Arg Leu Ala Ala Arg Leu Gly Val
100 105 110

Val Thr Gly Lys Asp Leu Gly Glu Ile Cys His Leu Tyr Tyr Pro Lys
115 120 125

Val Pro Arg Thr Leu Leu Trp Leu Asn Met Glu Leu Ala Ile Val Gly
130 135 140

Ser Asp Met Gln Glu Val Ile Gly Thr Ala Ile Ala Phe Asn Leu Leu
145 150 155 160

Ser Ala Gly Arg Ile Pro Leu Trp Gly Gly Val Leu Ile Thr Val Val
165 170 175

Asp Thr Phe Phe Phe Leu Tyr Leu Asn Asn Tyr Gly Leu Arg Lys Leu
180 185 190

Glu Ala Phe Phe Ala Phe Leu Ile Ala
195 200

<210> 633
<211> 226
<212> PRT
<213> Solanum tuberosum

<400> 633
Met Lys Thr Leu Tyr Ser Leu Arg Arg Phe Tyr His Val Glu Thr Leu
1 5 10 15

Phe Asn Gly Thr Leu Ala Leu Ala Gly Arg Asp Gln Glu Thr Thr Gly
20 25 30

Phe Ala Trp Trp Ala Gly Asn Ala Arg Leu Ile Asn Leu Ser Gly Lys
35 40 45

Leu Leu Gly Ala His Val Ala His Ala Gly Leu Ile Val Phe Trp Ala
50 55 60

Gly Ala Met Asn Leu Phe Glu Val Ala His Phe Val Pro Glu Lys Pro
65 70 75 80

Met Tyr Glu Gln Gly Leu Ile Leu Leu Pro His Leu Ala Thr Leu Gly
85 90 95

Trp Gly Val Gly Pro Gly Gly Glu Val Ile Asp Thr Phe Pro Tyr Phe
100 105 110

Val Ser Gly Val Leu His Leu Ile Ser Ser Ala Val Leu Gly Phe Gly
115 120 125

Gly Ile Tyr His Ala Leu Leu Gly Pro Glu Thr Leu Glu Glu Ser Phe
130 135 140

Pro Phe Phe Gly Tyr Val Trp Lys Asp Arg Asn Lys Met Thr Thr Ile
145 150 155 160

Leu Gly Ile His Leu Ile Leu Leu Gly Ile Gly Ala Phe Leu Leu Val
165 170 175

Phe Lys Ala Leu Tyr Phe Gly Gly Val Tyr Asp Thr Trp Ala Pro Gly
180 185 190

Gly Gly Asp Val Arg Lys Ile Thr Asn Leu Thr Leu Ser Pro Ser Ile
195 200 205

Ile Phe Gly Tyr Leu Leu Lys Ser Pro Phe Gly Gly Glu Gly Trp Ile
210 215 220

Val Ser
225

<210> 634

<211> 76
 <212> PRT
 <213> Sus scrofa

<400> 634
 Ser Ala Ala Lys Leu Asn Tyr Thr Leu Leu Met Tyr Leu Lys Ile Thr
 1 5 10 15
 Ser Gly Gly Ala Val Phe His Ser Pro Leu Met Ser Val Gln Pro Ile
 20 25 30
 Asn Val Val Lys Pro Asp Pro Pro Leu Gly Leu His Met Glu Ile Thr
 35 40 45
 Asp Thr Gly Asn Leu Lys Ile Ser Trp Ser Ser Pro Thr Leu Val Pro
 50 55 60
 Phe Gln Leu Gln Tyr Gln Val Lys Tyr Ser Glu Asn
 65 70 75

<210> 635
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 635
 Leu Leu Arg Thr Tyr Ile Ile Ser Ile Leu Phe Lys Ser Val Phe Glu
 1 5 10 15
 Val Ala Phe Leu Leu Ile Gln Trp Tyr Ile Tyr Gly Phe Ser Leu Ser
 20 25 30
 Ala Val Tyr Thr Cys Lys Arg Asp Pro Cys Pro His Gln Val Asp Cys
 35 40 45
 Phe Leu Ser Arg Pro Thr Glu Lys Thr Ile Phe Ile Ile Phe Met Leu
 50 55 60
 Val Val Ser Leu Val Ser Leu Ala Leu Asn Ile Ile
 65 70 75

<210> 636
 <211> 276
 <212> PRT
 <213> Solanum tuberosum

<400> 636
 Met Ile Trp His Val Gln Asn Glu Asn Phe Ile Leu Asp Ser Thr Arg
 1 5 10 15
 Ile Phe Met Lys Ala Phe His Leu Leu Leu Phe Asp Gly Ser Leu Ile
 20 25 30
 Phe Pro Glu Cys Ile Leu Ile Phe Gly Leu Ile Leu Leu Met Ile
 35 40 45
 Asp Ser Thr Ser Asp Gln Lys Asp Ile Pro Trp Leu Tyr Phe Ile Ser
 50 55 60

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Ser Thr Ser Leu Val Leu Ser Ile Thr Ala Leu Leu Phe Arg Trp Arg
65 70 75 80

Glu Glu Pro Met Ile Ser Phe Ser Gly Asn Phe Gln Thr Asn Asn Phe
85 90 95

Asn Glu Ile Phe Gln Phe Leu Ile Leu Leu Cys Ser Thr Leu Cys Ile
100 105 110

Pro Leu Ser Val Glu Tyr Ile Glu Cys Thr Glu Met Ala Ile Thr Glu
115 120 125

Phe Leu Leu Phe Val Leu Thr Ala Thr Leu Gly Gly Met Phe Leu Cys
130 135 140

Gly Ala Asn Asp Leu Ile Thr Ile Phe Val Ala Pro Glu Cys Phe Ser
145 150 155 160

Leu Cys Ser Tyr Leu Leu Ser Gly Tyr Thr Lys Lys Asp Val Arg Ser
165 170 175

Asn Glu Ala Thr Met Lys Tyr Leu Leu Met Gly Gly Ala Ser Ser Ser
180 185 190

Ile Leu Val His Gly Phe Ser Trp Leu Tyr Gly Ser Ser Gly Gly Glu
195 200 205

Ile Glu Leu Gln Glu Ile Val Asn Gly Leu Ile Asn Thr Gln Met Tyr
210 215 220

Asn Ser Pro Gly Ile Ser Ile Ala Leu Ile Phe Ile Thr Val Gly Ile
225 230 235 240

Gly Phe Lys Leu Ser Pro Ala Pro Ser His Gln Trp Thr Pro Asp Val
245 250 255

Tyr Glu Gly Ser Pro Thr Pro Val Val Ala Phe Leu Ser Val Thr Ser
260 265 270

Lys Val Ala Ala
275

<210> 637
<211> 276
<212> PRT
<213> Solanum tuberosum

<400> 637
Met Ile Trp His Val Gln Asn Glu Asn Phe Ile Leu Asp Ser Thr Arg
1 5 10 15

Ile Phe Met Lys Ala Phe His Leu Leu Leu Phe Asp Gly Ser Leu Ile
20 25 30

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Phe Pro Glu Cys Ile Leu Ile Phe Gly Leu Ile Leu Leu Leu Met Ile
35 40 45

Asp Ser Thr Ser Asp Gln Lys Asp Ile Pro Trp Leu Tyr Phe Ile Ser
50 55 60

Ser Thr Ser Leu Val Leu Ser Ile Thr Ala Leu Leu Phe Arg Trp Arg
65 70 75 80

Glu Glu Pro Met Ile Ser Phe Ser Gly Asn Phe Gln Thr Asn Asn Phe
85 90 95

Asn Glu Ile Phe Gln Phe Leu Ile Leu Leu Cys Ser Thr Leu Cys Ile
100 105 110

Pro Leu Ser Val Glu Tyr Ile Glu Cys Thr Glu Met Ala Ile Thr Glu
115 120 125

Phe Leu Leu Phe Val Leu Thr Ala Thr Leu Gly Gly Met Phe Leu Cys
130 135 140

Gly Ala Asn Asp Leu Ile Thr Ile Phe Val Ala Pro Glu Cys Phe Ser
145 150 155 160

Leu Cys Ser Tyr Leu Leu Ser Gly Tyr Thr Lys Lys Asp Val Arg Ser
165 170 175

Asn Glu Ala Thr Met Lys Tyr Leu Leu Met Gly Gly Ala Ser Ser Ser
180 185 190

Ile Leu Val His Gly Phe Ser Trp Leu Tyr Gly Ser Ser Gly Gly Glu
195 200 205

Ile Glu Leu Gln Glu Ile Val Asn Gly Leu Ile Asn Thr Gln Met Tyr
210 215 220

Asn Ser Pro Gly Ile Ser Ile Ala Leu Ile Phe Ile Thr Val Gly Ile
225 230 235 240

Gly Phe Lys Leu Ser Pro Ala Pro Ser His Gln Trp Thr Pro Asp Val
245 250 255

Tyr Glu Gly Ser Pro Thr Pro Val Val Ala Phe Leu Ser Val Thr Ser
260 265 270

Lys Val Ala Ala
275

<210> 638
<211> 251
<212> PRT
<213> Sus scrofa

<400> 638

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Phe Leu Met Cys Asn Leu Ala Phe Ala Asp Phe Cys Met Gly Met Tyr
1 5 10 15

Leu Leu Leu Ile Ala Ser Val Asp Leu Tyr Thr Gln Ser Glu Tyr Tyr
20 25 30

Asn His Ala Ile Asp Trp Gln Thr Gly Pro Gly Cys Asn Thr Ala Gly
35 40 45

Phe Phe Thr Val Phe Ala Ser Glu Leu Ser Val Tyr Thr Leu Thr Val
50 55 60

Ile Thr Leu Glu Arg Trp Tyr Ala Ile Thr Phe Ala Met Arg Leu Asp
65 70 75 80

Arg Lys Ile Arg Leu Arg His Ala Tyr Ala Ile Met Ala Gly Gly Trp
85 90 95

Val Cys Cys Phe Leu Leu Ala Leu Leu Pro Leu Val Gly Ile Ser Ser
100 105 110

Tyr Ala Lys Val Ser Ile Cys Leu Pro Met Asp Thr Glu Thr Pro Leu
115 120 125

Ala Leu Ala Tyr Ile Ile Leu Val Leu Leu Leu Asn Ile Val Ala Phe
130 135 140

Thr Ile Val Cys Ser Cys Tyr Val Lys Ile Tyr Ile Thr Val Arg Asn
145 150 155 160

Pro Gln Tyr Asn Pro Gly Asp Lys Asp Thr Lys Ile Ala Lys Arg Met
165 170 175

Ala Val Leu Ile Phe Thr Asp Phe Met Cys Met Ala Pro Ile Ser Phe
180 185 190

Tyr Ala Leu Ser Ala Leu Met Asn Lys Pro Leu Ile Thr Val Thr Asn
195 200 205

Ser Lys Ile Leu Leu Val Leu Phe Tyr Pro Leu Asn Ser Cys Ala Asn
210 215 220

Pro Phe Leu Tyr Ala Ile Phe Thr Lys Ala Phe Gln Arg Asp Val Phe
225 230 235 240

Ile Leu Leu Ser Lys Phe Gly Phe Cys Lys Arg
245 250

<210> 639

<211> 76

<212> PRT

<213> Sus scrofa

<400> 639

Met Ser Gly His Asn Asn Ser Glu Leu Phe Val Leu Cys Ser Ser Ser

1 5 10 15
 Gln Leu Phe Leu Gln Pro Leu Trp Asp His Leu Lys Thr Trp Glu Thr
 20 25 30
 Leu Ile Leu Ser Pro Phe Phe Pro Val Phe Phe Ser Ile Thr Thr Tyr
 35 40 45
 Leu Gly Phe Cys Leu Pro Phe Val Val Leu Asp Val Leu Cys Pro Trp
 50 55 60
 Val Pro Ala Leu Arg Arg Tyr Lys Ile His Pro Asp
 65 70 75

 <210> 640
 <211> 251
 <212> PRT
 <213> Sus scrofa

 <400> 640
 Met Leu Thr Val Asp Asp Ile Leu Glu His Thr Gly Glu Phe Asn Phe
 1 5 10 15

 Phe Gln Lys Gln Thr Phe Phe Leu Leu Ala Leu Leu Ser Ala Ala Phe
 20 25 30

 Thr Pro Ile Tyr Val Gly Ile Val Phe Leu Gly Phe Ile Pro Asp His
 35 40 45

 Arg Cys Arg Ser Pro Gly Val Ala Glu Leu Ser Gln Arg Cys Gly Trp
 50 55 60

 Ser Leu Ala Glu Glu Leu Asn Tyr Thr Val Pro Gly Pro Gly Pro Ala
 65 70 75 80

 Gly Gln Ala Phe Pro Arg Gln Cys Arg Arg Tyr Glu Val Asp Trp Asn
 85 90 95

 Gln Ser Thr Leu Gly Cys Val Asp Pro Leu Ala Gly Leu Ala Ala Asn
 100 105 110

 Ser Ser His Leu Pro Leu Gly Pro Cys Arg Tyr Gly Trp Val Tyr Asp
 115 120 125

 Thr Pro Gly Ser Ser Ile Val Thr Glu Phe Asp Leu Val Cys Ala Asn
 130 135 140

 Ser Trp Leu Leu Asp Leu Phe Gln Ser Ala Val Asn Val Gly Phe Phe
 145 150 155 160

 Ile Gly Ser Val Gly Ile Gly Tyr Ile Ala Asp Arg Phe Gly Arg Lys
 165 170 175

 Leu Cys Leu Leu Leu Thr Ile Leu Ile Asn Ala Val Ser Gly Val Leu
 180 185 190

Met Ala Ile Ser Pro Thr Tyr Thr Trp Met Leu Val Phe Arg Leu Ile
 195 200 205

Gln Gly Leu Val Ser Lys Ala Gly Trp Met Ile Gly Tyr Ile Leu Ile
 210 215 220

Thr Glu Phe Val Gly Leu Ser Tyr Arg Arg Thr Val Gly Ile Phe Tyr
 225 230 235 240

Gln Val Ala Phe Thr Phe Gly Leu Leu Val Leu
 245 250

<210> 641

<211> 76

<212> PRT

<213> Meleagris gallopavo

<400> 641

Cys Lys Leu Ala Ser Ala Gly Ile Ser Phe Asn Leu Tyr Ala Ser Val
 1 5 10 15

Phe Leu Leu Thr Cys Leu Ser Ile Asp Arg Tyr Leu Ala Ile Val His
 20 25 30

Pro Val Lys Ser Arg Ile Arg Arg Thr Met Phe Val Ala Arg Val Thr
 35 40 45

Cys Ile Val Ile Trp Leu Leu Ala Gly Val Ala Ser Leu Pro Val Ile
 50 55 60

Ile His Arg Asn Ile Phe Phe Ala Glu Asn Leu Asn
 65 70 75

<210> 642

<211> 176

<212> PRT

<213> Sus scrofa

<400> 642

Ser Val Leu Leu Asp Gln Trp Met Phe Gly Lys Val Met Cys His Ile
 1 5 10 15

Met Pro Phe Leu Gln Cys Val Thr Val Leu Val Ser Thr Leu Ile Leu
 20 25 30

Ile Ser Ile Ala Ile Val Arg Tyr His Met Ile Lys His Pro Val Ser
 35 40 45

Asn Asn Leu Thr Ala Asn His Gly Tyr Phe Leu Ile Ala Thr Val Trp
 50 55 60

Thr Leu Gly Leu Ala Ile Cys Ser Pro Leu Pro Val Phe His Ser Leu
 65 70 75 80

Val Glu Leu Gln Glu Ser Phe Gly Ser Ala Trp Leu Ser Ser Arg Tyr

Leu Cys Val Glu Ser Trp Pro Ser Asp Ser Tyr Arg Ile Ala Phe Thr
100 105 110

Ile Ser Leu Leu Leu Val Gln Tyr Ile Leu Pro Leu Val Cys Leu Thr
115 120 125

Val Ser His Thr Ser Val Cys Arg Thr Ile Ser Cys Gly Leu Ser Ser
130 135 140

Gln Asp Ser Lys Leu Glu Glu Asn Glu Met Ile Asn Leu Thr Leu Gln
145 150 155 160

Pro Ala Lys Arg Ser Gly Pro Gln Ala Lys Leu Ser His His Pro Lys
165 170 175

<210> 643

<211> 76

<212> PRT

<213> Sus scrofa

<400> 643

Met Lys Thr Pro Leu Leu Ala Leu Ala Leu Trp Ser Leu Leu Leu Gln
1 5 10 15

Leu Gly Leu Thr Phe Trp Pro Ser Ser Val Ser Gln Asn Cys His Asn
20 25 30

Gly Ser Tyr Glu Ile Ser Val Leu Met Met Asn Asn Ser Ala Phe Pro
35 40 45

Glu Ser Leu Asp Asn Leu Lys Ala Val Val Asn Glu Gly Val Asn Ile
50 55 60

Val Arg Gln Arg Leu Leu Glu Ala Gly Leu Thr Val
65 70 75

<210> 644

<211> 276

<212> PRT

<213> Sus scrofa

<400> 644

Met Ala Trp Asn Thr Asn Leu Arg Trp Arg Leu Pro Leu Thr Cys Leu
1 5 10 15

Leu Leu Gln Val Ile Met Val Ile Leu Phe Gly Val Phe Val Arg Tyr
20 25 30

Asp Pro Asp Ala Asp Ala His Trp Ile Asp Glu Arg Leu Gly Arg Asn
35 40 45

Ile Ser Ser Asp Met Asp Asn Glu Phe Tyr Tyr Arg Tyr Pro Ser Phe
50 55 60

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Gln Asp Val His Val Met Ile Phe Val Gly Phe Gly Phe Leu Met Thr
65 70 75 80

Phe Leu Gln Arg Tyr Gly Phe Ser Ser Val Gly Phe Asn Phe Leu Leu
85 90 95

Ala Ala Phe Gly Ile Gln Trp Ala Leu Leu Met Gln Gly Trp Leu His
100 105 110

Ser Phe His Ser Gly Tyr Ile Val Leu Gly Val Glu Asn Leu Ile Asn
115 120 125

Ala Asp Phe Cys Val Gly Ser Val Cys Val Ala Phe Gly Ala Val Leu
130 135 140

Gly Lys Val Ser Pro Val Gln Leu Leu Ile Met Thr Leu Phe Gln Val
145 150 155 160

Thr Leu Phe Ser Val Asn Glu Phe Ile Leu Leu Asn Leu Leu Glu Val
165 170 175

Lys Asp Ala Gly Gly Ser Met Thr Ile His Thr Phe Gly Ala Tyr Phe
180 185 190

Gly Leu Thr Val Thr Trp Ile Leu Tyr Arg Pro Asn Leu Tyr Gln Ser
195 200 205

Lys Glu Arg Gln Ser Ser Val Tyr His Ser Asp Leu Phe Ala Met Ile
210 215 220

Gly Thr Leu Phe Leu Trp Met Tyr Trp Pro Ser Phe Asn Ser Ala Val
225 230 235 240

Ser His His Gly Asp Ala Gln His Arg Ala Ala Ile Asn Thr Tyr Cys
245 250 255

Ser Leu Ala Ala Cys Val Leu Thr Ser Val Ala Leu Ser Ser Ala Leu
260 265 270

His Lys Lys Gly
275

<210> 645
<211> 101
<212> PRT
<213> Sus scrofa

<400> 645
Thr Glu Cys Ser Glu Glu Thr Pro Thr Thr Thr Ser His Ser Gln Ala
1 5 10 15

Phe Asn Phe Trp Asp Leu Ile Arg Leu Leu Cys Ser Val Gln Tyr Gly
20 25 30

Ser Val Leu Phe Val Ala Trp Phe Met Gly Phe Gly Tyr Gly Phe Val
Page 390

35

40

45

Phe Thr Phe Leu Tyr Trp His Leu Glu Asp Leu Asn Gly Thr Thr Thr
50 55 60

Leu Phe Gly Val Cys Ser Val Leu Ser His Val Ser Glu Leu Thr Ala
65 70 75 80

Tyr Phe Phe Ser His Lys Leu Ile Glu Leu Ile Gly His Ile Arg Val
85 90 95

Leu Tyr Ile Gly Leu
100

<210> 646

<211> 251

<212> PRT

<213> Sus scrofa

<400> 646

Ile Ser Ala Asp Ile Phe Ser Gly Ala Ile Phe Ile Thr Leu Ala Leu
1 5 10 15

Gly Leu Asp Leu Tyr Leu Ala Ile Phe Leu Leu Leu Ala Ile Thr Gly
20 25 30

Leu Tyr Thr Ile Thr Gly Gly Leu Ala Ala Val Ile Tyr Thr Asp Thr
35 40 45

Leu Gln Thr Ala Ile Met Leu Val Gly Ser Phe Ile Leu Thr Gly Phe
50 55 60

Ala Phe His Glu Val Gly Gly Tyr Asp Ala Phe Ile Glu Lys Tyr Met
65 70 75 80

Asn Ala Ile Pro Thr Val Ile Ser Asp Gly Asn Ile Thr Ile Lys Lys
85 90 95

Glu Cys Tyr Ala Pro Arg Ala Asp Ser Phe His Ile Phe Arg Asp Pro
100 105 110

Leu Lys Gly Asp Leu Pro Trp Pro Gly Leu Thr Phe Gly Leu Ser Ile
115 120 125

Leu Ala Leu Trp Tyr Trp Cys Thr Asp Gln Val Ile Val Gln Arg Cys
130 135 140

Leu Ser Ala Lys Asn Met Ser His Val Lys Ala Gly Cys Val Met Cys
145 150 155 160

Gly Tyr Phe Lys Leu Leu Pro Met Phe Val Ile Val Met Pro Gly Met
165 170 175

Ile Ser Arg Val Leu Tyr Thr Glu Lys Ile Ala Cys Thr Val Pro Ser
180 185 190

Glu Cys Glu Lys Tyr Cys Gly Thr Lys Val Gly Cys Ser Asn Ile Ala
195 200 205

Tyr Pro Thr Leu Val Val Glu Leu Met Pro Asn Gly Leu Arg Gly Leu
210 215 220

Met Leu Ser Val Ile Leu Ala Ser Leu Met Ser Ser Leu Thr Ser Ile
225 230 235 240

Phe Asn Ser Ala Thr Thr Leu Phe Thr Met Asp
245 250

<210> 647
<211> 176
<212> PRT
<213> Sus scrofa

<400> 647
Met Ala Ser Pro Ser Arg Pro Gly Asn Asp Cys Ser His Val Ile Asp
1 5 10 15

His Ser His Val Pro Glu Phe Glu Val Ala Thr Trp Ile Lys Ile Thr
20 25 30

Leu Ile Leu Leu Phe Leu Val Ile Phe Val Val Gly Ile Leu Gly Asn
35 40 45

Ser Val Thr Ile Arg Val Thr Gln Val Leu Gln Lys Lys Gly Tyr Leu
50 55 60

Gln Lys Glu Val Thr Asp His Met Val Ser Leu Ala Cys Ser Asp Ile
65 70 75 80

Leu Val Phe Leu Ile Gly Met Pro Val Glu Phe Tyr Ser Ile Ile Trp
85 90 95

Asn Pro Leu Thr Thr Pro Ser Tyr Thr Val Ser Cys Lys Leu His Ser
100 105 110

Phe Leu Phe Glu Thr Cys Ser Tyr Ala Thr Leu Leu His Val Leu Thr
115 120 125

Leu Ser Phe Glu Arg Tyr Ile Ala Ile Cys His Pro Phe Arg Tyr Lys
130 135 140

Ala Met Ser Gly Pro Cys Gln Val Lys Leu Leu Ile Gly Phe Val Trp
145 150 155 160

Val Thr Ser Thr Leu Val Ala Leu Pro Leu Leu Phe Ala Met Gly Val
165 170 175

<210> 648
<211> 276
<212> PRT

<213> Sus scrofa

<400> 648

Phe Val Gly Leu Gly Tyr Arg Lys Thr Val Ala Ile Leu Tyr Gln Thr
 1 5 10 15

Ala Phe Ser Val Gly Leu Val Leu Leu Ser Gly Leu Ala Tyr Ala Val
 20 25 30

Pro His Trp Arg Ser Leu Gln Leu Ala Val Ser Leu Pro Ile Phe Leu
 35 40 45

Leu Leu Leu Cys Tyr Trp Phe Val Pro Glu Ser Pro Arg Trp Leu Leu
 50 55 60

Ser Gln Lys Arg Asn Thr Gln Ala Ile Lys Ile Met Asp Arg Ile Ala
 65 70 75 80

Gln Lys Asn Gly Lys Leu Pro Pro Ala Asp Leu Lys Met Leu Ser Leu
 85 90 95

Glu Glu Glu Val Val Thr Glu Arg Leu Ser Pro Ser Phe Leu Asp Leu
 100 105 110

Phe Arg Thr Gln Asn Leu Arg Lys Tyr Thr Phe Ile Leu Met Tyr Leu
 115 120 125

Trp Phe Thr Ser Ser Val Leu Tyr Gln Gly Leu Ile Met His Val Gly
 130 135 140

Ala Thr Gly Gly Ser Leu Tyr Leu Asp Phe Leu Tyr Ser Ala Leu Val
 145 150 155 160

Glu Phe Pro Ala Ala Phe Val Ile Leu Leu Ile Ile Asp Arg Phe Gly
 165 170 175

Arg Leu Tyr Leu Leu Ala Gly Ser Asn Leu Leu Ala Gly Ala Ala Cys
 180 185 190

Phe Phe Met Ile Phe Ile Ser His Asp Leu His Trp Leu Ser Ile Val
 195 200 205

Ala Ala Cys Ile Gly Arg Met Gly Ile Thr Ile Val Phe Gln Met Val
 210 215 220

Cys Leu Val Ser Ala Glu Leu Tyr Pro Thr Phe Ile Arg Asn Leu Gly
 225 230 235 240

Val Met Val Cys Ser Ser Leu Cys Asp Leu Gly Gly Val Val Ala Pro
 245 250 255

Phe Leu Val Phe Arg Leu Thr Glu Val Trp Arg Gly Leu Pro Leu Val
 260 265 270

Leu Phe Ala Ala
275

<210> 649
<211> 251
<212> PRT
<213> Solanum tuberosum

<400> 649
Gly Gln Leu Ser Ile Ile Phe Leu Trp Leu Ser Gly Met Tyr Phe His
1 5 10 15

Gly Ala Arg Phe Ser Asn Tyr Glu Ala Trp Leu Ser Asp Pro Thr His
20 25 30

Ile Gly Pro Ser Ala Gln Val Val Trp Pro Ile Val Gly Gln Glu Ile
35 40 45

Leu Asn Gly Asp Val Gly Gly Gly Phe Arg Gly Ile Gln Ile Thr Ser
50 55 60

Gly Phe Phe Gln Leu Trp Arg Ala Ser Gly Ile Thr Ser Glu Leu Gln
65 70 75 80

Leu Tyr Cys Thr Ala Ile Gly Ala Leu Val Phe Ala Ala Leu Met Leu
85 90 95

Phe Ala Gly Trp Phe His Tyr His Lys Ala Ala Pro Lys Leu Ala Trp
100 105 110

Phe Gln Asp Val Glu Ser Met Leu Asn His His Leu Ala Gly Leu Leu
115 120 125

Gly Leu Gly Ser Leu Ser Trp Ala Gly His Gln Val His Val Ser Leu
130 135 140

Pro Ile Asn Gln Phe Leu Asn Ala Gly Val Asp Pro Lys Glu Ile Pro
145 150 155 160

Leu Pro His Glu Phe Ile Leu Asn Arg Asp Leu Leu Ala Gln Leu Tyr
165 170 175

Pro Ser Phe Ala Glu Gly Ala Thr Pro Phe Phe Thr Leu Asn Trp Ser
180 185 190

Lys Tyr Ala Asp Phe Leu Thr Phe Arg Gly Gly Leu Asp Pro Val Thr
195 200 205

Gly Gly Leu Trp Leu Thr Asp Ile Ala His His His Leu Ala Ile Ala
210 215 220

Ile Leu Phe Leu Ile Ala Gly His Met Tyr Arg Thr Asn Trp Gly Ile
225 230 235 240

Gly His Gly Leu Lys Asp Ile Leu Glu Ala His
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250

<210> 650

<211> 226

<212> PRT

<213> Meleagris gallopavo

<400> 650

Met Ser Met Ala Asn Phe Thr Ala Gly Arg Asn Ser Cys Thr Phe Gln
1 5 10 15Glu Glu Phe Lys Gln Val Leu Leu Pro Leu Val Tyr Ser Val Val Phe
20 25 30Leu Leu Gly Leu Pro Leu Asn Ala Val Val Ile Gly Gln Ile Trp Leu
35 40 45Ala Arg Lys Ala Leu Thr Arg Thr Thr Ile Tyr Met Leu Asn Leu Ala
50 55 60Thr Ala Asp Leu Leu Tyr Val Cys Ser Leu Pro Leu Leu Ile Tyr Asn
65 70 75 80Tyr Thr Gln Lys Asp Tyr Trp Pro Phe Gly Asp Phe Thr Cys Lys Phe
85 90 95Val Arg Phe Gln Phe Tyr Thr Asn Leu His Gly Ser Ile Leu Phe Leu
100 105 110Thr Cys Ile Ser Val Gln Arg Tyr Met Gly Ile Cys His Pro Leu Ala
115 120 125Ser Trp His Lys Lys Lys Gly Lys Lys Leu Thr Trp Leu Val Cys Ala
130 135 140Ala Val Trp Phe Ile Val Ile Ala Gln Cys Leu Pro Thr Phe Val Phe
145 150 155 160Ala Ser Thr Gly Thr Gln Arg Asn Arg Thr Val Cys Tyr Asp Leu Ser
165 170 175Pro Pro Asp Arg Ser Ala Ser Tyr Phe Pro Tyr Gly Ile Thr Leu Thr
180 185 190Ile Thr Gly Phe Leu Leu Pro Phe Ala Ala Ile Leu Ala Cys Tyr Cys
195 200 205Ser Met Ala Arg Ile Leu Cys Gln Lys Asp Glu Leu Ile Gly Leu Ala
210 215 220Val His
225

<210> 651

<211> 76

<212> PRT

<213> Sus scrofa

<400> 651

Thr Met Asn Tyr Val Ala Leu Val Val Gly Phe Val Leu Pro Phe Gly
 1 5 10 15

Thr Leu Ser Ile Cys Tyr Leu Leu Ile Ile Arg Ala Leu Leu Lys Val
 20 25 30

Glu Val Pro Glu Ser Gly Leu Arg Leu Ser His Arg Lys Ala Leu Ile
 35 40 45

Thr Val Ile Ile Ala Leu Ile Ile Phe Leu Leu Cys Phe Leu Pro Tyr
 50 55 60

His Val Leu Arg Thr Leu His Leu Leu Glu Trp Lys
 65 70 75

<210> 652

<211> 76

<212> PRT

<213> Sus scrofa

<400> 652

Ala Glu Tyr Ala Asn Ile Ile Met Met Asn Ala Phe Thr Ala Ile Leu
 1 5 10 15

Phe Leu Gly Ala Ser His Asp Pro His Thr Pro Glu Leu Tyr Thr Ile
 20 25 30

Asn Phe Val Leu Lys Thr Leu Ala Leu Thr Ile Thr Phe Leu Trp Ile
 35 40 45

Arg Ala Ser Tyr Pro Arg Phe Arg Tyr Asp Gln Leu Met His Leu Leu
 50 55 60

Trp Lys Ser Phe Leu Pro Leu Thr Leu Ala Leu Cys
 65 70 75

<210> 653

<211> 276

<212> PRT

<213> Sus scrofa

<400> 653

Arg Phe His Glu Asp Phe Lys Tyr Val Leu Leu Pro Leu Ser Tyr Gly
 1 5 10 15

Val Val Cys Val Leu Gly Leu Ser Leu Asn Ala Gly Ala Leu Tyr Ile
 20 25 30

Phe Leu Cys Arg Leu Lys Thr Trp Asn Ala Ser Thr Thr Tyr Met Phe
 35 40 45

His Leu Ala Val Ser Asp Ala Leu Tyr Ala Ala Ser Leu Pro Leu Leu
 50 55 60

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Val Tyr Tyr Tyr Ala Arg Gly Asp His Trp Pro Phe Ser Thr Ala Leu
65 70 75 80

Cys Lys Leu Val Arg Phe Leu Phe Tyr Thr Asn Leu Tyr Cys Ser Ile
85 90 95

Leu Phe Leu Thr Cys Ile Ser Val His Arg Cys Leu Gly Val Leu Arg
100 105 110

Pro Leu Arg Ser Leu Arg Trp Gly His Ala Arg Tyr Ala Arg Arg Val
115 120 125

Ala Ala Ala Val Trp Gly Leu Val Leu Ala Cys Gln Ala Pro Ala Leu
130 135 140

Tyr Phe Ile Thr Thr Thr Ala Gln Gly Gly Arg Ile Thr Cys His Asp
145 150 155 160

Thr Ser Ala Pro Glu Leu Phe Ser His Phe Val Ala Tyr Ser Leu Val
165 170 175

Met Leu Ser Val Leu Phe Ala Ala Pro Phe Ala Val Ile Leu Val Cys
180 185 190

Tyr Ala Leu Met Ala Arg Arg Leu Leu Arg Pro Ala Tyr Gly Thr Ala
195 200 205

Gly Gly Leu Pro Arg Ala Lys Arg Lys Ser Val Arg Thr Ile Ala Val
210 215 220

Val Leu Ala Val Phe Ala Leu Cys Phe Leu Pro Phe His Val Thr Arg
225 230 235 240

Thr Leu Tyr Tyr Ser Phe Arg Thr Leu Asp Leu Ser Cys His Thr Leu
245 250 255

Asp Ala Ile Asn Met Ala Tyr Lys Ile Thr Arg Pro Leu Ala Ser Ala
260 265 270

Asn Ser Cys Leu
275

<210> 654
<211> 76
<212> PRT
<213> Sus scrofa

<400> 654
Ile Ile Asp Leu Ile Val Val Val Ala Ser Met Val Val Leu Cys Val
1 5 10 15

Gly Ser Lys Gly Gln Val Phe Ala Thr Ser Ala Ile Arg Gly Ile Arg
20 25 30

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Phe Leu Gln Ile Leu Arg Met Leu His Val Asp Arg Gln Gly Gly Thr
 35 40 45

Trp Arg Leu Leu Gly Ser Val Val Phe Ile His Arg Gln Glu Leu Ile
 50 55 60

Thr Thr Leu Tyr Ile Gly Phe Leu Gly Leu Ile Phe
 65 70 75

<210> 655
 <211> 126
 <212> PRT
 <213> Sus scrofa

<400> 655
 Ile Thr Phe Arg Phe Tyr Gly Pro Asp Leu Leu Cys Arg Leu Val Lys
 1 5 10 15

Tyr Leu Gln Val Val Gly Met Phe Ala Ser Thr Tyr Leu Leu Leu
 20 25 30

Met Ser Leu Asp Arg Cys Leu Ala Ile Cys Gln Pro Leu Arg Ala Leu
 35 40 45

Arg Arg Pro Ala Asp Arg Leu Ala Val Leu Ala Thr Trp Leu Gly Cys
 50 55 60

Leu Val Ala Ser Ala Pro Gln Val His Ile Phe Ser Leu Arg Glu Val
 65 70 75 80

Ala Asp Gly Val Phe Asp Cys Trp Ala Val Phe Ile Gln Pro Trp Gly
 85 90 95

Pro Lys Ala Tyr Ile Thr Trp Ile Thr Leu Ala Val Tyr Ile Val Pro
 100 105 110

Val Ile Val Leu Ala Ala Cys Tyr Gly Leu Ile Ser Phe Lys
 115 120 125

<210> 656
 <211> 201
 <212> PRT
 <213> Sus scrofa

<400> 656
 Met Ala Ser Gln Thr Leu Val Val Phe Gln Ala Ser Asn Gln Ser Gln
 1 5 10 15

Leu Pro Pro Pro Asn Ala Thr Leu Cys Asp Gly Ala Gln Glu Ala Trp
 20 25 30

His Leu Leu His Lys Val Leu Pro Thr Cys Val Val Ala Ile Cys Ser
 35 40 45

Gly Gly Leu Leu Gly Asn Leu Phe Val Leu Ser Val Phe Leu Val Pro
 50 55 60

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Arg Arg Arg Leu Asn Ala Ala Glu Ile Tyr Leu Ala His Leu Ala Ala
65 70 75 80

Ser Asp Leu Val Phe Ala Leu Gly Leu Pro Phe Trp Ala Glu Thr Ile
85 90 95

Arg Asn Gly Phe His Trp Pro Phe Gly Ala Pro Leu Cys Arg Val Val
100 105 110

Asn Gly Val Ile Lys Ala Asn Leu Phe Ile Ser Ile Phe Leu Val Val
115 120 125

Ala Ile Ser Arg Asp Arg Tyr Arg Ala Leu Val His Pro Val Ala Ser
130 135 140

Trp Arg Arg Arg Arg Arg Arg His Trp Ala Gln Ala Thr Cys Val Leu
145 150 155 160

Ile Trp Thr Ala Gly Gly Leu Leu Ser Ile Pro Thr Phe Leu Leu Arg
165 170 175

Ser Val Gln Val Val Pro Glu Leu Asn Val Ser Ala Cys Val Leu Pro
180 185 190

Phe Pro His Glu Ala Trp Ala Phe Val
195 200

<210> 657
<211> 76
<212> PRT
<213> Sus scrofa

<400> 657
Val Leu Gly Val Leu Gly Leu Thr Trp Phe Ile Asn Lys Phe Arg Ile
1 5 10 15

Val Lys Leu Thr Pro Lys Asp Gln Phe Ile Ile Ala Tyr Gly Gly Leu
20 25 30

Arg Gly Ala Ile Ala Phe Ser Leu Gly His Leu Leu Asp Lys Asn His
35 40 45

Phe Pro Met Cys Asp Leu Phe Leu Thr Ala Ile Ile Thr Val Ile Phe
50 55 60

Phe Thr Val Phe Val Gln Gly Met Thr Ile Arg Pro
65 70 75

<210> 658
<211> 176
<212> PRT
<213> Sus scrofa

<400> 658
Met Ala Trp Asn Thr Asn Leu Arg Trp Arg Leu Pro Leu Thr Cys Leu
1 5 10 15

Leu Leu Gln Val Ile Met Val Ile Leu Phe Gly Val Phe Val Arg Tyr
20 25 30

Asp Pro Asp Ala Asp Ala His Trp Ile Asp Glu Arg Leu Gly Arg Asn
35 40 45

Ile Ser Ser Asp Met Asp Asn Glu Phe Tyr Tyr Arg Tyr Pro Ser Phe
50 55 60

Gln Asp Val His Val Met Ile Phe Val Gly Phe Gly Phe Leu Met Thr
65 70 75 80

Phe Leu Gln Arg Tyr Gly Phe Ser Ser Val Gly Phe Asn Phe Leu Leu
85 90 95

Ala Ala Phe Gly Ile Gln Trp Ala Leu Leu Met Gln Gly Trp Leu His
100 105 110

Ser Phe His Ser Gly Tyr Ile Val Leu Gly Val Glu Asn Leu Ile Asn
115 120 125

Ala Asp Phe Cys Val Gly Ser Val Cys Val Ala Phe Gly Ala Val Leu
130 135 140

Gly Lys Val Ser Pro Val Gln Leu Leu Ile Met Thr Leu Phe Gln Val
145 150 155 160

Thr Leu Phe Ser Val Asn Glu Phe Ile Leu Leu Asn Leu Leu Glu Val
165 170 175

<210> 659
<211> 76
<212> PRT
<213> Sus scrofa

<400> 659
Arg Phe His Glu Asp Phe Lys Tyr Val Leu Leu Pro Leu Ser Tyr Gly
1 5 10 15

Val Val Cys Val Leu Gly Leu Ser Leu Asn Ala Gly Ala Leu Tyr Ile
20 25 30

Phe Leu Cys Arg Leu Lys Thr Trp Asn Ala Ser Thr Thr Tyr Met Phe
35 40 45

His Leu Ala Val Ser Asp Ala Leu Tyr Ala Ala Ser Leu Pro Leu Leu
50 55 60

Val Tyr Tyr Tyr Ala Arg Gly Asp His Trp Pro Phe
65 70 75

<210> 660
<211> 176
<212> PRT

<213> Sus scrofa

<400> 660

Leu Ile Ile Phe Glu Ile Val His Arg Thr Leu Ala Ala Met Leu Gly
 1 5 10 15

Ser Leu Ala Ala Leu Ala Ala Leu Ala Val Ile Gly Asp Arg Pro Thr
 20 25 30

Leu Thr Gln Val Val Glu Trp Ile Asp Phe Glu Thr Leu Ala Leu Leu
 35 40 45

Phe Gly Met Met Ile Leu Val Ala Ile Phe Ser Glu Thr Gly Phe Phe
 50 55 60

Asp Tyr Cys Ala Val Lys Ala Tyr Gln Leu Ser Arg Gly Arg Val Trp
 65 70 75 80

Ala Met Ile Ile Met Leu Cys Leu Ile Ala Ala Val Leu Ser Ala Phe
 85 90 95

Leu Asp Asn Val Thr Thr Ala Leu Leu Phe Thr Pro Val Thr Ile Arg
 100 105 110

Leu Cys Glu Val Leu Asn Leu Asp Pro Arg Gln Val Leu Ile Ala Glu
 115 120 125

Val Ile Phe Thr Asn Ile Gly Gly Ala Ala Thr Ala Ile Gly Asp Pro
 130 135 140

Pro Asn Val Ile Ile Val Ser Asn Gln Glu Leu Arg Lys Met Gly Leu
 145 150 155 160

Asp Phe Ala Gly Phe Thr Ala His Met Phe Ala Gly Ile Cys Phe Val
 165 170 175

<210> 661

<211> 226

<212> PRT

<213> Sus scrofa

<400> 661

Met Asn Thr Ser Cys Asp Pro Met Asn Gln Pro Val Asn Ser Thr Cys
 1 5 10 15

Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Leu Ser Thr Gly Leu Val
 20 25 30

Gln Arg Ser Leu Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly Leu Phe
 35 40 45

Trp Thr Ile Asn Trp Val Leu Ala Leu Gly Gln Cys Val Leu Ala Gly
 50 55 60

Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro Arg Asp Ile Pro
 65 70 75 80

Thr Phe Pro Leu Ser Ser Ala Phe Ile Arg Thr Leu Arg Tyr His Thr
85 90 95

Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu Thr Leu Val Gln Ile Ala
100 105 110

Arg Ala Ile Leu Glu Tyr Ile Asp His Lys Leu Arg Gly Ala Gln Asn
115 120 125

Pro Val Ala Arg Cys Ile Met Cys Cys Phe Lys Cys Cys Leu Trp Cys
130 135 140

Leu Glu Lys Phe Ile Lys Phe Leu Asn Arg Asn Ala Tyr Ile Met Ile
145 150 155 160

Ala Ile Tyr Gly Lys Asn Phe Cys Val Ser Ala Lys Asn Ala Phe Met
165 170 175

Leu Leu Met Arg Asn Ile Val Arg Val Val Val Leu Asp Lys Val Thr
180 185 190

Asp Leu Leu Leu Phe Phe Gly Lys Leu Leu Val Val Gly Gly Val Gly
195 200 205

Val Leu Ser Phe Phe Phe Phe Thr Gly Arg Ile Gln Gly Leu Gly Lys
210 215 220

Asp Phe
225

<210> 662
<211> 151
<212> PRT
<213> Sus scrofa

<400> 662
Phe Val Ala Pro Asn Thr Leu Phe Ala Asn Gly Ser Val Tyr Pro Pro
1 5 10 15

Asn Glu Gly Phe Cys Pro Cys Met Glu Ser Gly Ile Gln Asn Val Ser
20 25 30

Thr Cys Arg Phe Asn Ala Pro Leu Phe Leu Ser His Pro His Phe Tyr
35 40 45

Asn Ala Asp Pro Val Leu Ala Glu Ala Val Ser Gly Leu His Pro Asn
50 55 60

Thr Glu Glu His Ser Leu Phe Leu Asp Ile His Pro Val Thr Gly Ile
65 70 75 80

Pro Met Asn Cys Ser Val Lys Leu Gln Leu Ser Leu Tyr Ile Lys Ser
85 90 95

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Val Lys Gly Ile Gly Gln Thr Gly Lys Ile Glu Pro Val Val Leu Pro
100 105 110

Leu Leu Trp Phe Ala Glu Ser Gly Ala Met Glu Gly Glu Thr Leu Gln
115 120 125

Thr Phe Tyr Thr Gln Leu Val Leu Met Pro Lys Val Leu His Tyr Ala
130 135 140

Gln Tyr Val Leu Leu Ala Leu
145 150

<210> 663
<211> 126
<212> PRT
<213> Sus scrofa

<400> 663
Leu Ala Pro Pro Val Thr Ala Val Phe Val Leu Gly Ile Phe Trp Arg
1 5 10 15

Arg Ala Asn Glu Gln Gly Ala Phe Trp Gly Leu Met Val Gly Leu Ala
20 25 30

Val Gly Ala Trp Arg Leu Val Leu Glu Phe Leu His Pro Ala Pro Pro
35 40 45

Cys Gly His Pro Asp Val Arg Pro Ala Leu Leu Arg Thr Val His Tyr
50 55 60

Leu His Phe Ala Val Ala Leu Phe Val Leu Ser Gly Ala Val Val Ala
65 70 75 80

Ala Val Ser Leu Leu Thr Pro Pro Pro Ala Gly Val Gln Ile Glu Asn
85 90 95

Leu Thr Trp Trp Thr Leu Ala Arg Asp Arg Pro Ser Gly Ala Lys Thr
100 105 110

Gly Asp Gly Pro Ala Ser Gln Lys His Ala Phe Trp Ala Arg
115 120 125

<210> 664
<211> 126
<212> PRT
<213> Solanum tuberosum

<400> 664
Met Lys Thr Leu Tyr Ser Leu Arg Arg Phe Tyr His Val Glu Thr Leu
1 5 10 15

Phe Asn Gly Thr Leu Ala Leu Ala Gly Arg Asp Gln Glu Thr Thr Gly
20 25 30

Phe Ala Trp Trp Ala Gly Asn Ala Arg Leu Ile Asn Leu Ser Gly Lys
35 40 45

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Leu Leu Gly Ala His Val Ala His Ala Gly Leu Ile Val Phe Trp Ala
50 55 60

Gly Ala Met Asn Leu Phe Glu Val Ala His Phe Val Pro Glu Lys Pro
65 70 75 80

Met Tyr Glu Gln Gly Leu Ile Leu Leu Pro His Leu Ala Thr Leu Gly
85 90 95

Trp Gly Val Gly Pro Gly Gly Glu Val Ile Asp Thr Phe Pro Tyr Phe
100 105 110

Val Ser Gly Val Leu His Leu Ile Ser Ser Ala Val Leu Gly
115 120 125

<210> 665
<211> 76
<212> PRT
<213> Salmo salar

<400> 665
Ile Ser Gly Leu Leu Ile Ala Leu Glu Leu Ala Ser Leu Thr Asn Lys
1 5 10 15

Gln Phe Lys Thr Thr Pro Asn Leu Ile Thr His Asn Phe Ser Asn Met
20 25 30

Leu Gly Phe Phe Pro Ala Ile Ile His Arg Leu Ala Pro Lys Leu Asn
35 40 45

Leu Thr Leu Gly Gln Thr Ile Ala Ser Gln Met Val Asp Gln Thr Trp
50 55 60

Phe Glu Lys Ile Gly Pro Lys Gly Val Val Ser Thr
65 70 75

<210> 666
<211> 126
<212> PRT
<213> Solanum tuberosum

<400> 666
Pro Lys Phe Met Gly Ile Glu Leu Val Thr Leu Lys Lys Ile Ile Pro
1 5 10 15

Leu Gly Ala Met Phe Phe Cys Ile Leu Phe Asn Tyr Thr Ile Leu Arg
20 25 30

Asp Thr Lys Asp Val Leu Val Val Thr Ala Lys Gly Ser Ser Ala Glu
35 40 45

Ile Ile Pro Phe Leu Lys Thr Trp Val Asn Leu Pro Met Ala Ile Gly
50 55 60

Phe Met Leu Leu Tyr Thr Lys Leu Ala Asn Val Leu Ser Lys Glu Ala
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Asp Tyr Trp Gly Pro Val Phe Ala Val Cys Ile Phe Leu Phe Ser Phe
210 215 220

Val Ile Pro Val Leu Ile Ile Ser Val Cys Tyr Ser Leu Met Val Arg
225 230 235 240

Arg Leu Arg Gly Val Arg Leu Leu Ser Gly Ser Arg Glu Lys Asp Arg
245 250 255

Asn Leu Arg Arg Ile Thr Arg Leu Val Leu Val Val Val Ala Val Phe
260 265 270

Val Gly Cys Trp
275

<210> 668
<211> 276
<212> PRT
<213> Sus scrofa

<400> 668
Met His Met Phe Arg Asp Pro Ala Thr Gly Asp Leu Pro Trp Thr Gly
1 5 10 15

Met Thr Phe Gly Leu Thr Ile Met Ala Thr Trp Tyr Trp Cys Thr Asp
20 25 30

Gln Val Ile Val Gln Arg Ser Leu Ser Ala Arg Asp Leu Asn His Ala
35 40 45

Lys Gly Gly Ser Ile Leu Ala Ser Tyr Leu Lys Met Leu Pro Met Gly
50 55 60

Leu Met Val Met Pro Gly Met Ile Ser Arg Val Leu Phe Pro Asp Asp
65 70 75 80

Val Gly Cys Val Val Pro Ser Glu Cys Leu Arg Ala Cys Gly Ala Glu
85 90 95

Ile Gly Cys Ser Asn Ile Ala Tyr Pro Lys Leu Val Met Glu Leu Met
100 105 110

Pro Thr Gly Leu Arg Gly Leu Met Val Ala Val Met Met Ala Ala Leu
115 120 125

Met Ser Ser Leu Thr Ser Ile Phe Asn Ser Ser Ser Thr Leu Phe Thr
130 135 140

Met Asp Val Trp Arg Arg Leu Arg Pro Arg Ala Gly Glu Arg Glu Leu
145 150 155 160

Leu Leu Val Gly Arg Leu Val Ile Val Val Leu Ile Gly Val Ser Val
165 170 175

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Ala Trp Ile Pro Val Leu Gln Gly Ser Asn Ser Gly Gln Leu Phe Ile
180 185 190

Tyr Met Gln Ser Val Thr Ser Ser Leu Ala Pro Pro Val Thr Ala Val
195 200 205

Phe Val Leu Gly Ile Phe Trp Arg Arg Ala Asn Glu Gln Gly Ala Phe
210 215 220

Trp Gly Leu Met Val Gly Leu Ala Val Gly Ala Trp Arg Leu Val Leu
225 230 235 240

Glu Phe Leu His Pro Ala Pro Pro Cys Gly His Pro Asp Val Arg Pro
245 250 255

Ala Leu Leu Arg Thr Val His Tyr Leu His Phe Ala Val Ala Leu Phe
260 265 270

Val Leu Ser Gly
275

<210> 669
<211> 201
<212> PRT
<213> Sus scrofa

<400> 669
Ile Ile Ser Ala Asp Glu Gly Ala Phe Ala Tyr Ile Val Asn Tyr Phe
1 5 10 15

Met Tyr Val Leu Trp Ala Leu Leu Phe Ala Phe Leu Ala Val Ser Leu
20 25 30

Val Lys Val Phe Ala Pro Tyr Ala Cys Gly Ser Gly Ile Pro Glu Ile
35 40 45

Lys Thr Ile Leu Ser Gly Phe Ile Ile Arg Gly Tyr Leu Gly Lys Trp
50 55 60

Thr Leu Ile Ile Lys Thr Ile Thr Leu Val Leu Ala Val Ser Ser Gly
65 70 75 80

Leu Ser Leu Gly Lys Glu Gly Pro Leu Val His Val Ala Cys Cys Cys
85 90 95

Gly Asn Ile Leu Cys His Cys Phe Asn Lys Tyr Arg Lys Asn Glu Ala
100 105 110

Lys Arg Arg Glu Val Leu Ser Ala Ala Ala Ala Ala Gly Val Ser Val
115 120 125

Ala Phe Gly Ala Pro Ile Gly Gly Val Leu Phe Ser Leu Glu Glu Val
130 135 140

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Ser Tyr Tyr Phe Pro Leu Lys Thr Leu Trp Arg Ser Phe Phe Ala Ala
145 150 155 160

Leu Val Ala Ala Phe Thr Leu Arg Ser Ile Asn Pro Phe Gly Asn Ser
165 170 175

Arg Leu Val Leu Phe Tyr Val Glu Phe His Thr Pro Trp His Leu Phe
180 185 190

Glu Leu Val Pro Phe Ile Leu Leu Gly
195 200

<210> 670
<211> 151
<212> PRT
<213> Sus scrofa

<400> 670
Ile Arg Val Ile Glu Pro Leu Phe Val Phe Leu Tyr Ser Tyr Met Ala
1 5 10 15

Tyr Leu Ser Ala Glu Leu Phe His Leu Ser Gly Ile Met Ala Leu Ile
20 25 30

Ala Ser Gly Val Val Met Arg Pro Tyr Val Glu Ala Asn Ile Ser His
35 40 45

Lys Ser His Thr Thr Ile Lys Tyr Phe Leu Lys Met Trp Ser Ser Val
50 55 60

Ser Glu Thr Leu Ile Phe Ile Phe Leu Gly Val Ser Thr Val Ala Gly
65 70 75 80

Ser His His Trp Asn Trp Thr Phe Val Ile Ser Thr Leu Leu Phe Cys
85 90 95

Leu Ile Ala Arg Val Leu Gly Val Leu Gly Leu Thr Trp Phe Ile Asn
100 105 110

Lys Phe Arg Ile Val Lys Leu Thr Pro Lys Asp Gln Phe Ile Ile Ala
115 120 125

Tyr Gly Gly Leu Arg Gly Ala Ile Ala Phe Ser Leu Gly His Leu Leu
130 135 140

Asp Lys Asn His Phe Pro Met
145 150

<210> 671
<211> 176
<212> PRT
<213> Sus scrofa

<400> 671
Cys Leu Leu Asp Phe Gln Arg Ala Leu Ala Leu Phe Val Leu Phe Cys
1 5 10 15

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Val Val Leu Phe Phe Leu Ala His Ser Leu Leu Lys Arg Leu Leu Gly
20 25 30

Pro Lys Leu Leu Arg Cys Val Lys Pro Leu Arg His Pro Cys Leu Asn
35 40 45

Leu Trp Phe Lys Arg Gly Leu Ala Leu Ala Ala Phe Leu Gly Leu Val
50 55 60

Leu Trp Leu Val Leu Asp Thr Ala Gln Arg Pro Glu Gln Leu Val Ser
65 70 75 80

Phe Gly Gly Ile Cys Val Phe Ile Leu Leu Leu Phe Ala Gly Ser Lys
85 90 95

His His Arg Ala Val Ser Trp Arg Ala Val Ser Trp Gly Leu Gly Leu
100 105 110

Gln Phe Ala Leu Gly Leu Phe Val Ile Arg Thr Glu Pro Gly Phe Ile
115 120 125

Ala Phe Gln Trp Leu Gly Asp Gln Ile Gln Ile Phe Leu Ser Tyr Thr
130 135 140

Glu Ala Gly Ser Ser Phe Val Phe Gly Glu Ala Leu Val Lys Asp Val
145 150 155 160

Phe Ala Phe Gln Val Leu Pro Ile Ile Val Phe Phe Ser Cys Ala Met
165 170 175

<210> 672
<211> 176
<212> PRT
<213> Sus scrofa

<400> 672
Arg Phe His Glu Asp Phe Lys Tyr Val Leu Leu Pro Leu Ser Tyr Gly
1 5 10 15

Val Val Cys Val Leu Gly Leu Ser Leu Asn Ala Gly Ala Leu Tyr Ile
20 25 30

Phe Leu Cys Arg Leu Lys Thr Trp Asn Ala Ser Thr Thr Tyr Met Phe
35 40 45

His Leu Ala Val Ser Asp Ala Leu Tyr Ala Ala Ser Leu Pro Leu Leu
50 55 60

Val Tyr Tyr Tyr Ala Arg Gly Asp His Trp Pro Phe Ser Thr Ala Leu
65 70 75 80

Cys Lys Leu Val Arg Phe Leu Phe Tyr Thr Asn Leu Tyr Cys Ser Ile
85 90 95

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Leu Phe Leu Thr Cys Ile Ser Val His Arg Cys Leu Gly Val Leu Arg
100 105 110

Pro Leu Arg Ser Leu Arg Trp Gly His Ala Arg Tyr Ala Arg Arg Val
115 120 125

Ala Ala Ala Val Trp Gly Leu Val Leu Ala Cys Gln Ala Pro Ala Leu
130 135 140

Tyr Phe Ile Thr Thr Thr Ala Gln Gly Gly Arg Ile Thr Cys His Asp
145 150 155 160

Thr Ser Ala Pro Glu Leu Phe Ser His Phe Val Ala Tyr Ser Leu Val
165 170 175

<210> 673

<211> 176

<212> PRT

<213> Sus scrofa

<400> 673

Asp Ala Ala Val Asp Phe His Arg Leu Ile Ala Ser Thr Ala Ile Ile
1 5 10 15

Leu Thr Val Leu His Ser Ala Gly His Val Val Asn Val Tyr Leu Phe
20 25 30

Ser Ile Ser Pro Leu Ser Val Leu Ser Cys Leu Phe Pro Gly Leu Phe
35 40 45

His Asp Asn Gly Ser Glu Phe Pro Gln Lys Tyr Tyr Trp Trp Phe Phe
50 55 60

Gln Thr Val Pro Gly Leu Thr Gly Val Met Leu Leu Leu Ile Leu Ala
65 70 75 80

Ile Met Tyr Val Phe Ala Ser His His Phe Arg Arg Cys Ser Phe Arg
85 90 95

Gly Phe Trp Leu Thr His His Leu Tyr Ile Leu Leu Tyr Met Leu Leu
100 105 110

Ile Ile His Gly Ser Phe Ala Leu Ile Gln Leu Pro Arg Phe His Ile
115 120 125

Phe Phe Leu Val Pro Ala Leu Ile Tyr Val Gly Asp Lys Leu Val Ser
130 135 140

Leu Ser Arg Lys Lys Val Glu Ile Ser Val Val Lys Ala Glu Leu Leu
145 150 155 160

Pro Ser Gly Val Thr His Leu Gln Phe Gln Arg Pro Gln Gly Phe Glu
165 170 175

<210> 674

<211> 276

<212> PRT

<213> Solanum tuberosum

<400> 674

Arg Gly Gly Leu Asp Pro Val Thr Gly Gly Leu Trp Leu Thr Asp Ile
 1 5 10 15

Ala His His His Leu Ala Ile Ala Ile Leu Phe Leu Ile Ala Gly His
 20 25 30

Met Tyr Arg Thr Asn Trp Gly Ile Gly His Gly Leu Lys Asp Ile Leu
 35 40 45

Glu Ala His Lys Gly Pro Phe Thr Gly Gln Gly His Lys Gly Leu Tyr
 50 55 60

Glu Ile Leu Thr Thr Ser Trp His Ala Gln Leu Ser Leu Asn Leu Ala
 65 70 75 80

Met Leu Gly Ser Leu Thr Ile Val Val Ala His His Met Tyr Ser Met
 85 90 95

Pro Pro Tyr Pro Tyr Leu Ala Thr Asp Tyr Gly Thr Gln Leu Ser Leu
 100 105 110

Phe Thr His His Met Trp Ile Gly Gly Phe Leu Ile Val Gly Ala Ala
 115 120 125

Ala His Ala Ala Ile Phe Met Val Arg Asp Tyr Asp Pro Thr Thr Arg
 130 135 140

Tyr Asn Asp Leu Leu Asp Arg Val Leu Arg His Arg Asp Ala Ile Ile
 145 150 155 160

Ser His Leu Asn Trp Ala Cys Ile Phe Leu Gly Phe His Ser Phe Gly
 165 170 175

Leu Tyr Ile His Asn Asp Thr Met Ser Ala Leu Gly Arg Pro Gln Asp
 180 185 190

Met Phe Ser Asp Thr Ala Ile Gln Leu Gln Pro Val Phe Ala Gln Trp
 195 200 205

Ile Gln Asn Thr His Ala Leu Ala Pro Gly Ala Thr Ala Pro Gly Ala
 210 215 220

Thr Ala Ser Thr Ser Leu Thr Trp Gly Gly Gly Asp Leu Val Ala Val
 225 230 235 240

Gly Gly Lys Val Ala Leu Leu Pro Ile Pro Leu Gly Thr Ala Asp Phe
 245 250 255

Leu Val His His Ile His Ala Phe Thr Ile His Val Thr Val Leu Ile
 260 265 270

Leu Leu Lys Gly
275

<210> 675
<211> 101
<212> PRT
<213> Salmo salar

<400> 675
His Glu Thr Gly Ser Asn Asn Pro Ala Gly Ile Asn Ser Asp Ala Asp
1 5 10 15

Lys Ile Ser Phe His Pro Tyr Phe Ser Tyr Lys Asp Leu Leu Gly Phe
20 25 30

Val Ala Met Leu Leu Gly Leu Thr Ser Leu Ala Leu Phe Ala Pro Asn
35 40 45

Leu Leu Gly Asp Pro Asp Asn Phe Thr Pro Ala Asn Pro Leu Val Thr
50 55 60

Pro Pro His Ile Lys Pro Glu Trp Tyr Phe Leu Phe Ala Tyr Ala Ile
65 70 75 80

Leu Arg Ser Ile Pro Asn Lys Leu Gly Gly Val Leu Ala Leu Leu Phe
85 90 95

Ser Ile Leu Val Leu
100

<210> 676
<211> 226
<212> PRT
<213> Sus scrofa

<400> 676
Gly Cys Val Asp Pro Leu Ala Gly Leu Ala Ala Asn Ser Ser His Leu
1 5 10 15

Pro Leu Gly Pro Cys Arg Tyr Gly Trp Val Tyr Asp Thr Pro Gly Ser
20 25 30

Ser Ile Val Thr Glu Phe Asp Leu Val Cys Ala Asn Ser Trp Leu Leu
35 40 45

Asp Leu Phe Gln Ser Ala Val Asn Val Gly Phe Phe Ile Gly Ser Val
50 55 60

Gly Ile Gly Tyr Ile Ala Asp Arg Phe Gly Arg Lys Leu Cys Leu Leu
65 70 75 80

Leu Thr Ile Leu Ile Asn Ala Val Ser Gly Val Leu Met Ala Ile Ser
85 90 95

Pro Thr Tyr Thr Trp Met Leu Val Phe Arg Leu Ile Gln Gly Leu Val
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100

105

110

Ser Lys Ala Gly Trp Met Ile Gly Tyr Ile Leu Ile Thr Glu Phe Val
 115 120 125

Gly Leu Ser Tyr Arg Arg Thr Val Gly Ile Phe Tyr Gln Val Ala Phe
 130 135 140

Thr Phe Gly Leu Leu Val Leu Ala Gly Val Ala Tyr Ala Leu Pro His
 145 150 155 160

Trp Arg Trp Leu Gln Phe Thr Val Thr Leu Pro Asn Phe Cys Phe Leu
 165 170 175

Phe Tyr Tyr Trp Cys Val Pro Glu Ser Pro Arg Trp Leu Ile Ser Gln
 180 185 190

Asn Lys Asn Ala Lys Ala Met Ser Ile Ile Lys His Ile Ala Lys Lys
 195 200 205

Asn Gly Lys Ser Leu Pro Ala Ser Leu Gln Ser Leu Arg Pro Asp Glu
 210 215 220

Glu Val
 225

<210> 677
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 677
 Met Arg Thr Leu Asn Thr Ser Thr Met Asp Gly Thr Gly Leu Val Val
 1 5 10 15

Glu Arg Asp Phe Ser Phe Arg Ile Leu Thr Ala Cys Phe Leu Ser Leu
 20 25 30

Leu Ile Leu Ser Thr Leu Leu Gly Asn Thr Leu Val Cys Ala Ala Val
 35 40 45

Ile Arg Phe Arg His Leu Arg Ser Lys Val Thr Asn Phe Phe Val Ile
 50 55 60

Ser Leu Ala Val Ser Asp Leu Leu Val Ala Val Leu Val Met Pro Trp
 65 70 75 80

Lys Ala Val Ala Glu Ile Ala Gly Phe Trp Pro Phe Gly Ser Phe Cys
 85 90 95

Asn Ile Trp Val Ala
 100

<210> 678
 <211> 101

<212> PRT

<213> Sus scrofa

<400> 678

Thr Met Asp Leu Trp Asn His Leu Arg Pro Arg Ala Ser Glu Arg Glu
1 5 10 15

Leu Met Ile Val Gly Arg Val Phe Val Leu Leu Leu Val Leu Val Ser
20 25 30

Ile Leu Trp Ile Pro Val Val Gln Ala Ser Gln Gly Gly Gln Leu Phe
35 40 45

Ile Tyr Ile Gln Ser Ile Ser Ser Tyr Leu Gln Pro Pro Val Ala Val
50 55 60

Val Phe Ile Met Gly Cys Phe Trp Lys Arg Thr Asn Glu Lys Gly Ala
65 70 75 80

Phe Ser Gly Leu Ile Leu Gly Leu Leu Leu Gly Leu Val Arg Leu Val
85 90 95

Leu Asp Phe Ile Tyr
100

<210> 679

<211> 176

<212> PRT

<213> Sus scrofa

<400> 679

Trp Pro Gly Met Ile Phe Gly Met Thr Val Val Ala Ala Trp Tyr Trp
1 5 10 15

Cys Thr Asp Gln Val Ile Val Gln Arg Cys Leu Ser Gly Lys Asp Met
20 25 30

Ser His Val Lys Ala Ala Cys Ile Met Cys Gly Tyr Leu Lys Leu Leu
35 40 45

Pro Met Phe Leu Met Val Met Pro Gly Met Ile Ser Arg Ile Leu Tyr
50 55 60

Thr Glu Lys Val Ala Cys Val Val Pro Ser Glu Cys Val Lys His Cys
65 70 75 80

Gly Thr Glu Val Gly Cys Ser Asn Tyr Ala Tyr Pro Leu Leu Val Met
85 90 95

Glu Leu Met Pro Ser Gly Leu Arg Gly Leu Met Leu Ser Val Met Leu
100 105 110

Ala Ser Leu Met Ser Ser Leu Thr Ser Ile Phe Asn Ser Ala Ser Thr
115 120 125

Leu Phe Thr Met Asp Leu Tyr Thr Lys Ile Arg Lys Gln Ala Ser Glu

Ile Ser Phe Leu Ile Ile Gly Leu Ala Trp Gly Ile
65 70 75

<210> 682

<211> 226

<212> PRT

<213> Solanum tuberosum

<400> 682

Met Ile Ile Asp Thr Thr Glu Ile Glu Thr Ile Asn Ser Phe Ser Lys
1 5 10 15

Leu Glu Ser Leu Lys Glu Val Tyr Gly Ile Ile Trp Met Leu Val Pro
20 25 30

Ile Val Thr Leu Val Leu Gly Ile Thr Ile Gly Val Leu Val Ile Val
35 40 45

Trp Leu Glu Arg Glu Ile Ser Ala Gly Ile Gln Gln Arg Ile Gly Pro
50 55 60

Glu Tyr Ala Gly Pro Leu Gly Ile Leu Gln Ala Leu Ala Asp Gly Thr
65 70 75 80

Lys Leu Leu Leu Lys Glu Asn Leu Ile Pro Ser Thr Gly Asp Thr Arg
85 90 95

Leu Phe Ser Ile Gly Pro Ser Ile Ala Val Ile Ser Ile Phe Leu Ser
100 105 110

Tyr Ser Val Ile Pro Phe Gly Asp His Leu Val Leu Ala Asp Leu Ser
115 120 125

Ile Gly Val Phe Phe Trp Ile Ala Ile Ser Ser Ile Ala Pro Val Gly
130 135 140

Leu Leu Met Ser Gly Tyr Gly Ser Asn Asn Lys Tyr Ser Phe Leu Gly
145 150 155 160

Gly Leu Arg Ala Ala Ala Gln Ser Ile Ser Tyr Glu Ile Pro Leu Ala
165 170 175

Leu Cys Val Leu Ser Ile Ser Leu Leu Ser Asn Ser Ser Ser Thr Val
180 185 190

Asp Ile Val Glu Ala Gln Ser Lys Tyr Gly Phe Trp Gly Trp Asn Leu
195 200 205

Trp Arg Gln Pro Ile Gly Phe Ile Val Phe Leu Ile Ser Ser Leu Ala
210 215 220

Glu Cys
225

<210> 683

<211> 201

<212> PRT

<213> Sus scrofa

<400> 683

Ser Gly Leu Arg Gly Leu Met Leu Ser Val Met Leu Ala Ser Leu Met
 1 5 10 15

Ser Ser Leu Thr Ser Ile Phe Asn Ser Ala Ser Thr Leu Phe Thr Met
 20 25 30

Asp Leu Tyr Thr Lys Ile Arg Lys Gln Ala Ser Glu Lys Glu Leu Leu
 35 40 45

Ile Ala Gly Arg Leu Phe Ile Ile Leu Leu Ile Val Ile Ser Ile Val
 50 55 60

Trp Val Pro Leu Val Gln Val Ala Gln Asn Gly Gln Leu Phe His Tyr
 65 70 75 80

Ile Glu Ser Ile Ser Ser Tyr Leu Gly Pro Pro Ile Ala Ala Val Phe
 85 90 95

Leu Leu Ala Ile Phe Cys Lys Arg Val Asn Glu Gln Gly Ala Phe Trp
 100 105 110

Gly Leu Ile Ile Gly Phe Val Met Gly Leu Ile Arg Met Ile Ala Glu
 115 120 125

Phe Val Tyr Gly Thr Gly Ser Cys Leu Ala Ala Ser Asn Cys Pro Gln
 130 135 140

Ile Ile Cys Gly Val His Tyr Leu Tyr Phe Ala Leu Ile Leu Phe Phe
 145 150 155 160

Val Ser Ile Leu Val Val Leu Ala Ile Ser Leu Leu Thr Lys Pro Ile
 165 170 175

Pro Asp Val His Leu Tyr Arg Leu Cys Trp Ala Leu Arg Asn Ser Thr
 180 185 190

Glu Glu Arg Ile Asp Leu Asp Ala Glu
 195 200

<210> 684

<211> 126

<212> PRT

<213> Sus scrofa

<400> 684

Phe Arg Asp Ile Ser Lys Trp Asn Asn Arg Val Val Ser Asn Leu Leu
 1 5 10 15

Tyr Tyr Gln Thr Asn Tyr Leu Val Val Ala Ala Met Met Ile Ser Val
 20 25 30

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Val Gly Phe Leu Ser Pro Phe Asn Met Ile Leu Gly Gly Ile Val Val
35 40 45

Val Leu Val Phe Thr Gly Phe Val Trp Ala Ala His Asn Lys Asp Ile
50 55 60

Leu Arg Arg Leu Lys Lys Gln Tyr Pro Thr Val Phe Val Met Val Val
65 70 75 80

Met Leu Ala Ser Tyr Phe Leu Ile Ser Met Phe Gly Gly Val Met Val
85 90 95

Phe Val Phe Gly Ile Thr Phe Pro Leu Leu Leu Met Phe Ile His Ala
100 105 110

Ser Leu Arg Leu Arg Asn Leu Lys Asn Lys Leu Glu Asn Lys
115 120 125

<210> 685
<211> 126
<212> PRT
<213> Sus scrofa

<400> 685
Met Asn Ser Thr Leu Ser Ser Gln Val Glu Asn His Ser Ile Tyr Tyr
1 5 10 15

Asn Phe Ser Glu Lys Asn Ser Gln Phe Leu Ala Phe Glu Asn Asp Asp
20 25 30

Cys His Leu Pro Leu Ala Met Ile Phe Thr Leu Ala Leu Ala Tyr Gly
35 40 45

Ala Val Ile Ile Leu Gly Val Ser Gly Asn Leu Ala Leu Ile Ile Ile
50 55 60

Ile Leu Lys Gln Lys Glu Met Arg Asn Val Thr Asn Ile Leu Ile Val
65 70 75 80

Asn Leu Ser Phe Ser Asp Leu Leu Val Ala Ile Met Cys Leu Pro Phe
85 90 95

Thr Phe Val Tyr Thr Leu Met Asp His Trp Val Phe Gly Glu Val Met
100 105 110

Cys Lys Leu Asn Pro Phe Val Gln Cys Val Ser Ile Thr Val
115 120 125

<210> 686
<211> 76
<212> PRT
<213> Capra hircus

<400> 686
Ile Ala Ile Leu Leu Leu Thr Gly Phe Leu Leu Leu Val Trp Asn Tyr
1 5 10 15

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Glu Asp Thr Ser Ser Ile Pro Gly Pro Ser Tyr Phe Leu Gly Ile Gly
20 25 30

Pro Leu Ile Ser His Cys Arg Phe Leu Trp Met Gly Ile Gly Ser Ala
35 40 45

Cys Asn Tyr Tyr Asn Lys Met Tyr Gly Glu Phe Met Arg Val Trp Val
50 55 60

Cys Gly Glu Glu Thr Leu Ile Ile Ser Lys Ser Ser
65 70 75

<210> 687
<211> 176
<212> PRT
<213> Sus scrofa

<400> 687
Thr Ser Leu Leu Gly Ser Met Phe Pro Leu Pro Arg Ile Leu Phe Ala
1 5 10 15

Met Ala Arg Asp Gly Leu Leu Phe Arg Phe Leu Ala Arg Val Ser Lys
20 25 30

Arg Gln Ser Pro Val Ala Ala Thr Leu Thr Ala Gly Val Ile Ser Ala
35 40 45

Val Met Ala Phe Leu Phe Asp Leu Lys Ala Leu Val Asp Met Met Ser
50 55 60

Ile Gly Thr Leu Leu Ala Tyr Ser Leu Val Ala Ala Cys Val Leu Ile
65 70 75 80

Leu Arg Tyr Gln Pro Gly Leu Ser Tyr Glu Gln Pro Lys Tyr Cys Pro
85 90 95

Glu Lys Glu Ala Leu Gly Ser Cys Ala Ser Ala Ala Ser Lys Ser Lys
100 105 110

Ser Gln Val Thr Val Leu Pro Glu Trp Gly Phe Ser Leu Arg Ala Phe
115 120 125

Phe Ser Pro Ser Leu Leu Pro Thr Lys Gln Ser Ala Ser Leu Val Ser
130 135 140

Phe Leu Val Gly Phe Leu Ala Phe Leu Ile Leu Gly Leu Ser Ile Leu
145 150 155 160

Thr Thr Tyr Gly Val His Ala Ile Ala Arg Leu Glu Ala Trp Ser Leu
165 170 175

<210> 688
<211> 76
<212> PRT
<213> Capra hircus

<400> 688

Met Ala Tyr Pro Met Gln Leu Gly Phe Gln Asp Ala Thr Ser Pro Ile
 1 5 10 15

Met Glu Glu Leu Leu His Phe His Asp His Thr Leu Met Ile Val Phe
 20 25 30

Leu Ile Ser Ser Leu Val Leu Tyr Ile Ile Ser Leu Met Leu Thr Thr
 35 40 45

Lys Leu Thr His Thr Ser Thr Met Asp Ala Gln Glu Val Glu Thr Val
 50 55 60

Trp Thr Ile Leu Pro Ala Ile Ile Leu Ile Met Ile
 65 70 75

<210> 689

<211> 76

<212> PRT

<213> Sus scrofa

<400> 689

Gly Gln Thr Gly Lys Ile Glu Pro Val Val Leu Pro Leu Leu Trp Phe
 1 5 10 15

Ala Glu Ser Gly Ala Met Glu Gly Glu Thr Leu Gln Thr Phe Tyr Thr
 20 25 30

Gln Leu Val Leu Met Pro Lys Val Leu His Tyr Ala Gln Tyr Val Leu
 35 40 45

Leu Ala Leu Gly Cys Val Leu Leu Phe Ile Pro Ile Val Tyr Gln Ile
 50 55 60

Arg Ser Gln Glu Lys Cys Tyr Leu Phe Trp Ser Ser
 65 70 75

<210> 690

<211> 201

<212> PRT

<213> Sus scrofa

<400> 690

Met Ala Pro Ala Leu Leu Leu Val Pro Ala Ala Leu Ala Ser Phe Ile
 1 5 10 15

Leu Ala Phe Gly Thr Gly Val Glu Phe Val Arg Phe Thr Ser Leu Arg
 20 25 30

Pro Leu Leu Gly Gly Ile Pro Glu Ser Gly Gly Pro Asp Ala Arg Gln
 35 40 45

Gly Trp Leu Ala Ala Leu Gln Asp Gln Ser Ile Leu Val Pro Leu Ala
 50 55 60

Trp Asp Leu Gly Leu Leu Leu Leu Phe Val Gly Gln His Ser Leu Met
 Page 420

Phe Trp Met Leu Cys Glu Gly Ile Tyr Leu His Thr Leu Ile Val Val
130 135 140

Ala Val Phe Ala Glu Lys Gln His Leu Met Trp Tyr Tyr Phe Leu Gly
145 150 155 160

Trp Gly Phe Pro Leu Ile Pro Ala Cys Ile His Ala Val Ala Arg Arg
165 170 175

Leu Tyr Tyr Asn Asp Asn Cys Trp Ile Ser Ser Asp Thr His Leu Leu
180 185 190

Tyr Ile Ile His Gly Pro Ile Cys Ala Ala Leu Leu Val Asn Leu Phe
195 200 205

Phe Leu Leu Asn Ile Val Arg Val Leu Ile Thr Lys Leu Lys Val Thr
210 215 220

His Gln Ala Glu Ser Asn Leu Tyr Met Lys Ala Val Arg Ala Thr Leu
225 230 235 240

Ile Leu Val Pro Leu Leu Gly Ile Glu Phe Val
245 250

<210> 692
<211> 76
<212> PRT
<213> Sus scrofa

<400> 692
Met Ala Tyr Pro Phe Gln Leu Gly Phe Gln Asp Ala Thr Ser Pro Ile
1 5 10 15

Met Glu Glu Leu Leu His Phe His Asp His Thr Leu Met Ile Val Phe
20 25 30

Leu Ile Ser Ser Leu Val Leu Tyr Ile Ile Ser Leu Met Leu Thr Thr
35 40 45

Lys Leu Thr His Thr Ser Thr Met Asp Ala Gln Glu Val Glu Thr Ile
50 55 60

Trp Thr Ile Leu Pro Ala Ile Ile Leu Ile Leu Ile
65 70 75

<210> 693
<211> 226
<212> PRT
<213> Solanum tuberosum

<400> 693
Thr Ile Gly Leu Arg Thr Asn Glu Asp Leu Tyr Thr Gly Ala Leu Phe
1 5 10 15

Leu Leu Phe Leu Ser Ala Ile Ser Leu Ile Ala Gly Trp Leu His Leu
Page 422

20

25

30

Gln Pro Lys Trp Lys Pro Ser Val Ser Trp Phe Lys Asn Ala Glu Ser
35 40 45

Arg Leu Asn His His Leu Ser Gly Leu Phe Gly Val Ser Ser Leu Ala
50 55 60

Trp Thr Gly His Leu Val His Val Ala Ile Pro Ala Ser Arg Gly Glu
65 70 75 80

Tyr Val Arg Trp Asn Asn Phe Leu Asp Val Leu Pro His Pro Gln Gly
85 90 95

Leu Gly Pro Leu Phe Thr Gly Gln Trp Asn Leu Tyr Ala Gln Asn Pro
100 105 110

Asp Ser Ser Ser His Leu Phe Gly Thr Ala Glu Gly Ala Gly Thr Ala
115 120 125

Ile Leu Thr Leu Leu Gly Gly Phe His Pro Gln Thr Gln Ser Leu Trp
130 135 140

Leu Thr Asp Met Ala His His His Leu Ala Ile Ala Phe Ile Phe Leu
145 150 155 160

Val Ala Gly His Met Tyr Arg Thr Asn Phe Gly Ile Gly His Ser Met
165 170 175

Lys Asp Leu Leu Asp Ala His Ile Pro Pro Gly Gly Arg Leu Gly Arg
180 185 190

Gly His Lys Gly Leu Tyr Asp Thr Ile Asn Asn Ser Leu His Phe Gln
195 200 205

Leu Gly Leu Ala Leu Ala Ser Leu Gly Val Ile Thr Ser Leu Val Ala
210 215 220

Gln His
225

<210> 694
<211> 76
<212> PRT
<213> Sus scrofa

<400> 694
Met Asp Phe Leu Leu Leu Leu Leu Leu Ala Ser Ser Ala Leu Ala
1 5 10 15

Gly Leu Ala Ser Trp Thr Val Ser Arg Pro Glu Thr Val Gln Gly Ile
20 25 30

Lys Gly Ser Cys Leu Ile Ile Pro Cys Thr Phe Gly Phe Pro Ala Asn
35 40 45

Val Glu Val Pro His Gly Ile Thr Ala Ile Trp Tyr Tyr Asp Tyr Ser
 50 55 60

Gly Lys Arg Leu Val Val Ser His Ser Arg Asn Pro
 65 70 75

<210> 695
 <211> 101
 <212> PRT
 <213> Solanum tuberosum

<400> 695
 Gln Phe Leu Ile Leu Leu Cys Ser Thr Leu Cys Ile Pro Leu Ser Val
 1 5 10 15

Glu Tyr Ile Glu Cys Thr Glu Met Ala Ile Thr Glu Phe Leu Leu Phe
 20 25 30

Val Leu Thr Ala Thr Leu Gly Gly Met Phe Leu Cys Gly Ala Asn Asp
 35 40 45

Leu Ile Thr Ile Phe Val Ala Pro Glu Cys Phe Ser Leu Cys Ser Tyr
 50 55 60

Leu Leu Ser Gly Tyr Thr Lys Lys Asp Val Arg Ser Asn Glu Ala Thr
 65 70 75 80

Met Lys Tyr Leu Leu Met Gly Gly Ala Ser Ser Ser Ile Leu Val His
 85 90 95

Gly Phe Ser Trp Leu
 100

<210> 696
 <211> 101
 <212> PRT
 <213> Solanum tuberosum

<400> 696
 Gln Phe Leu Ile Leu Leu Cys Ser Thr Leu Cys Ile Pro Leu Ser Val
 1 5 10 15

Glu Tyr Ile Glu Cys Thr Glu Met Ala Ile Thr Glu Phe Leu Leu Phe
 20 25 30

Val Leu Thr Ala Thr Leu Gly Gly Met Phe Leu Cys Gly Ala Asn Asp
 35 40 45

Leu Ile Thr Ile Phe Val Ala Pro Glu Cys Phe Ser Leu Cys Ser Tyr
 50 55 60

Leu Leu Ser Gly Tyr Thr Lys Lys Asp Val Arg Ser Asn Glu Ala Thr
 65 70 75 80

Met Lys Tyr Leu Leu Met Gly Gly Ala Ser Ser Ser Ile Leu Val His
 Page 424

Gly Phe Ser Trp Leu
100

<210> 697
<211> 226
<212> PRT
<213> Sus scrofa

<400> 697
Tyr Arg Pro Gln Leu Glu Lys Ser Lys His Arg Gln Ser Ser Val Tyr
1 5 10 15

His Ser Asp Leu Phe Ala Met Ile Gly Thr Ile Phe Leu Trp Ile Phe
20 25 30

Trp Pro Ser Phe Asn Ser Ala Pro Thr Pro Leu Gly Asp Gly Gln His
35 40 45

Arg Thr Ala Leu Asn Thr Tyr Tyr Ser Leu Thr Ala Ser Thr Leu Ser
50 55 60

Thr Phe Ala Leu Ser Ala Leu Val Gly Arg Asp Gly Arg Leu Asp Met
65 70 75 80

Val His Val Gln Asn Ala Ala Leu Ala Gly Gly Val Val Val Gly Thr
85 90 95

Ser Ala Glu Met Met Leu Thr Pro Phe Gly Ala Leu Ala Ala Gly Phe
100 105 110

Leu Ala Gly Thr Val Ser Thr Leu Gly Phe Lys Phe Phe Thr Pro Ile
115 120 125

Leu Glu Ser Lys Phe Lys Ile Gln Asp Thr Cys Gly Val His Asn Leu
130 135 140

His Gly Met Pro Gly Val Leu Gly Ala Leu Leu Gly Val Leu Val Ala
145 150 155 160

Gly Leu Ala Thr His Asp Ser Tyr Gly Glu Gly Leu Glu Ser Val Phe
165 170 175

Pro Leu Ile Ala Glu Gly Gln Arg Ser Ser Thr Ser Gln Ala Leu His
180 185 190

Gln Leu Phe Gly Leu Phe Val Thr Leu Ile Phe Ala Ser Val Gly Gly
195 200 205

Gly Leu Gly Gly Leu Leu Leu Arg Leu Pro Phe Leu Asp Ser Pro Pro
210 215 220

Asp Ser
225

<210> 698
 <211> 276
 <212> PRT
 <213> Salmo salar

<400> 698

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Met Thr Leu Leu Thr His Val Leu Ala Cys Leu Phe Gly Met Gly Ser
 1          5          10          15

Trp Val Ala Ile Asn Gly Ile Trp Val Glu Leu Pro Leu Ile Val Pro
      20          25          30

Glu Ile Pro Glu Gly Trp Tyr Leu Pro Ser Tyr Leu Thr Val Leu Ile
      35          40          45

Gln Met Ala Asn Val Gly Pro Leu Phe Val Thr Leu Met His Arg Phe
 50          55          60

Arg Pro Gly Lys Leu Asp Glu Arg Pro Val Ile Tyr Ser Ile Val Gly
65          70          75          80

Leu Gly Val Val Ala Thr Phe Leu Leu Ala Phe Phe Trp Lys His Thr
      85          90          95

Val Pro Leu Ala Gly Ala Thr His Ser Val Pro Leu Leu Val Leu Cys
      100          105          110

Phe Leu Leu Ser Val Val Asp Cys Thr Ser Ser Val Thr Phe Leu Pro
      115          120          125

Phe Met Met Arg Leu Gly Pro Gln Tyr Leu Thr Thr Tyr Phe Val Gly
      130          135          140

Glu Gly Val Ser Gly Leu Val Pro Ala Val Val Ala Leu Val Gln Gly
145          150          155          160

Val Gly Val Val His Cys Arg Asn Ala Thr Val Ala Ser Leu Ala Asn
      165          170          175

Gly Thr Leu Gly Val Asn Ser Thr Val Gly Ala Ser Gly Glu Leu Gln
      180          185          190

Ala Gln Tyr Gln Pro Ala Asn Phe Ser Ala Gln Val Phe Phe Leu Phe
      195          200          205

Leu Ser Ala Met Met Val Val Cys Leu Ala Ala Phe Leu Leu Leu Asn
      210          215          220

His His Pro Ala Val Ala Arg Glu Lys Lys Cys Glu Gln Tyr Phe Asn
225          230          235          240

Gly Gly Leu Ala Glu Glu Lys Ser Asp Gln Ala Leu Ser Leu Ser His
      245          250          255

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Arg Pro Gln Glu Glu Lys Pro Met Ile Ser Ser Pro Asp Ser His Arg
260 265 270

Arg Ala Arg Gln
275

<210> 699
<211> 226
<212> PRT
<213> Sus scrofa

<400> 699
Met Leu Leu Trp Ser Gly Ile Cys Gly Leu Ser Pro Pro Arg Ile Phe
1 5 10 15

Pro Ser Leu Leu Val Val Val Ala Leu Val Gly Leu Leu Pro Val Leu
20 25 30

Arg Ser His Gly Leu Gln Pro Ser Pro Thr Ala Ser Thr Ile Arg Gly
35 40 45

Ser GluPro Pro Arg Glu Arg Ser Ile Gly Asp Val Thr Thr Ala Pro
50 55 60

Pro Glu Leu Ala Pro Glu Ser Arg Pro Val Asn His Ser Val Thr Glu
65 70 75 80

His Gly Met Lys Ala Arg Lys Ala Phe Pro Val Leu Gly Ile Asp Tyr
85 90 95

Thr His Val Arg Thr Pro Phe Glu Ile Ser Leu Trp Ile Leu Leu Ala
100 105 110

Cys Leu Met Lys Ile Gly Phe His Val Ile Pro Thr Ile Ser Ser Ile
115 120 125

Val Pro Glu Ser Cys Leu Leu Ile Val Val Gly Leu Leu Val Gly Gly
130 135 140

Leu Ile Lys Ala Val Gly Glu Thr Pro Pro Phe Leu Gln Ser Glu Val
145 150 155 160

Phe Phe Leu Phe Leu Leu Pro Pro Ile Ile Leu Asp Ala Gly Tyr Phe
165 170 175

Leu Pro Leu Arg Gln Phe Thr Glu Asn Leu Gly Thr Ile Leu Ile Phe
180 185 190

Ala Val Val Gly Thr Leu Trp Asn Ala Phe Phe Leu Gly Gly Leu Met
195 200 205

Tyr Ala Val Cys Leu Val Gly Gly Glu Gln Ile Asn Asn Ile Gly Leu
210 215 220

Leu Asp
225

<210> 700
<211> 176
<212> PRT
<213> Solanum tuberosum

<400> 700
Met Ile Phe Ser Thr Leu Glu His Ile Leu Thr His Ile Ser Phe Ser
1 5 10 15

Ile Val Ser Ile Val Ile Thr Ile His Leu Ile Thr Phe Leu Val Asp
20 25 30

Glu Ile Val Lys Leu Tyr Asp Ser Ser Glu Lys Gly Ile Ile Val Thr
35 40 45

Phe Phe Cys Ile Thr Gly Leu Leu Val Thr Arg Trp Ile Ser Ser Gly
50 55 60

His Phe Pro Leu Ser Asp Leu Tyr Glu Ser Leu Ile Phe Leu Ser Trp
65 70 75 80

Ser Phe Ser Leu Ile His Ile Ile Pro Tyr Phe Lys Lys Asn Val Leu
85 90 95

Ile Leu Ser Lys Ile Thr Gly Pro Ser Ala Ile Leu Thr Gln Gly Phe
100 105 110

Ala Thr Ser Gly Ile Leu Thr Glu Ile His Gln Ser Gly Ile Leu Val
115 120 125

Pro Ala Leu Gln Ser Glu Trp Leu Ile Met His Val Ser Met Met Ile
130 135 140

Leu Gly Tyr Ala Ala Leu Leu Cys Gly Ser Leu Leu Ser Val Ala Leu
145 150 155 160

Leu Val Ile Thr Phe Arg Lys Asn Arg Lys Leu Phe Tyr Lys Ser Asn
165 170 175

<210> 701
<211> 76
<212> PRT
<213> Sus scrofa

<400> 701
Ile Tyr Val Leu Gln Leu Leu Ala Arg Thr Met Phe Glu Val Gly Phe
1 5 10 15

Leu Ile Gly Gln Tyr Phe Leu Tyr Gly Phe Gln Val His Pro Phe Tyr
20 25 30

Val Cys Ser Arg Val Pro Cys Pro His Lys Ile Asp Cys Phe Ile Ser
35 40 45

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Arg Pro Thr Glu Lys Thr Ile Phe Leu Leu Ile Met Tyr Gly Val Thr
50 55 60

Gly Leu Cys Leu Leu Leu Asn Ile Trp Glu Met Leu
65 70 75

<210> 702
<211> 201
<212> PRT
<213> Solanum tuberosum

<400> 702
Gln Phe Leu Ile Leu Leu Cys Ser Thr Leu Cys Ile Pro Leu Ser Val
1 5 10 15

Glu Tyr Ile Glu Cys Thr Glu Met Ala Ile Thr Glu Phe Leu Leu Phe
20 25 30

Val Leu Thr Ala Thr Leu Gly Gly Met Phe Leu Cys Gly Ala Asn Asp
35 40 45

Leu Ile Thr Ile Phe Val Ala Pro Glu Cys Phe Ser Leu Cys Ser Tyr
50 55 60

Leu Leu Ser Gly Tyr Thr Lys Lys Asp Val Arg Ser Asn Glu Ala Thr
65 70 75 80

Met Lys Tyr Leu Leu Met Gly Gly Ala Ser Ser Ser Ile Leu Val His
85 90 95

Gly Phe Ser Trp Leu Tyr Gly Ser Ser Gly Gly Glu Ile Glu Leu Gln
100 105 110

Glu Ile Val Asn Gly Leu Ile Asn Thr Gln Met Tyr Asn Ser Pro Gly
115 120 125

Ile Ser Ile Ala Leu Ile Phe Ile Thr Val Gly Ile Gly Phe Lys Leu
130 135 140

Ser Pro Ala Pro Ser His Gln Trp Thr Pro Asp Val Tyr Glu Gly Ser
145 150 155 160

Pro Thr Pro Val Val Ala Phe Leu Ser Val Thr Ser Lys Val Ala Ala
165 170 175

Ser Ala Ser Ala Thr Arg Ile Phe Asp Ile Pro Phe Tyr Phe Ser Ser
180 185 190

Asn Glu Trp His Leu Leu Leu Glu Ile
195 200

<210> 703
<211> 201
<212> PRT
<213> Solanum tuberosum

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<400> 703

Gln Phe Leu Ile Leu Leu Cys Ser Thr Leu Cys Ile Pro Leu Ser Val
1 5 10 15

Glu Tyr Ile Glu Cys Thr Glu Met Ala Ile Thr Glu Phe Leu Leu Phe
20 25 30

Val Leu Thr Ala Thr Leu Gly Gly Met Phe Leu Cys Gly Ala Asn Asp
35 40 45

Leu Ile Thr Ile Phe Val Ala Pro Glu Cys Phe Ser Leu Cys Ser Tyr
50 55 60

Leu Leu Ser Gly Tyr Thr Lys Lys Asp Val Arg Ser Asn Glu Ala Thr
65 70 75 80

Met Lys Tyr Leu Leu Met Gly Gly Ala Ser Ser Ser Ile Leu Val His
85 90 95

Gly Phe Ser Trp Leu Tyr Gly Ser Ser Gly Gly Glu Ile Glu Leu Gln
100 105 110

Glu Ile Val Asn Gly Leu Ile Asn Thr Gln Met Tyr Asn Ser Pro Gly
115 120 125

Ile Ser Ile Ala Leu Ile Phe Ile Thr Val Gly Ile Gly Phe Lys Leu
130 135 140

Ser Pro Ala Pro Ser His Gln Trp Thr Pro Asp Val Tyr Glu Gly Ser
145 150 155 160

Pro Thr Pro Val Val Ala Phe Leu Ser Val Thr Ser Lys Val Ala Ala
165 170 175

Ser Ala Ser Ala Thr Arg Ile Phe Asp Ile Pro Phe Tyr Phe Ser Ser
180 185 190

Asn Glu Trp His Leu Leu Leu Glu Ile
195 200

<210> 704

<211> 176

<212> PRT

<213> Sus scrofa

<400> 704

Asn Leu Gln Lys Glu Ile Ser Leu Ala Lys Ala Arg His Gly Ile Ala
1 5 10 15

Asp Leu Phe Arg Thr Pro Val Leu Arg Arg Val Thr Leu Cys Leu Ser
20 25 30

Leu Ala Trp Phe Ala Thr Gly Phe Ala Tyr Tyr Ser Leu Ala Met Gly
35 40 45

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Val Glu Glu Phe Gly Val Asn Leu Tyr Val Leu Gln Leu Ile Phe Gly
50 55 60

Gly Val Asp Val Pro Ala Lys Phe Ile Thr Met Leu Ser Ile Ser Tyr
65 70 75 80

Leu Gly Arg His Ile Thr Glu Gly Ile Val Leu Leu Leu Ala Gly Gly
85 90 95

Cys Ile Leu Ala Leu Ile Phe Val Pro Leu Asp Leu Met Thr Leu Arg
100 105 110

Thr Val Leu Ala Val Phe Gly Lys Gly Cys Leu Ser Gly Ser Phe Ser
115 120 125

Cys Leu Phe Leu Tyr Thr Ser Glu Leu Tyr Pro Thr Val Ile Arg Gln
130 135 140

Thr Gly Met Gly Ala Ser Asn Leu Trp Ala Arg Val Gly Ser Met Thr
145 150 155 160

Ala Pro Leu Val Lys Ile Thr Gly Glu Leu Gln Pro Phe Ile Pro Asn
165 170 175

<210> 705
<211> 176
<212> PRT
<213> Sus scrofa

<400> 705
Met Gly Pro Arg Cys Thr Leu His Pro Leu Ser Leu Leu Val Gln Val
1 5 10 15

Thr Ala Leu Ala Ala Ala Leu Ala Gln Gly Arg Leu Pro Ala Phe Leu
20 25 30

Pro Cys Glu Leu Gln Pro His Gly Leu Val Asn Cys Asn Trp Leu Phe
35 40 45

Leu Lys Ser Val Pro His Phe Ser Ala Ala Ala Pro Arg Ala Asn Val
50 55 60

Thr Ser Leu Ser Leu Leu Ser Asn Arg Ile His His Leu His Asp Ser
65 70 75 80

Asp Phe Val His Leu Ser Ser Leu Arg Thr Leu Asn Leu Lys Trp Asn
85 90 95

Cys Pro Pro Ala Gly Leu Ser Pro Met His Phe Pro Cys His Met Thr
100 105 110

Ile Glu Pro Asn Thr Phe Leu Ala Val Pro Thr Leu Glu Glu Leu Asn
115 120 125

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Leu Ser Tyr Asn Ser Ile Thr Thr Val Pro Ala Leu Pro Asp Ser Leu
130 135 140

Val Ser Leu Ser Leu Ser Arg Thr Asn Ile Leu Val Leu Asp Pro Thr
145 150 155 160

His Leu Thr Gly Leu His Ala Leu Arg Tyr Leu Tyr Met Asp Gly Asn
165 170 175

<210> 706

<211> 76

<212> PRT

<213> Solanum tuberosum

<400> 706

Pro Gly Gly Glu Val Ile Asp Thr Phe Pro Tyr Phe Val Ser Gly Val
1 5 10 15

Leu His Leu Ile Ser Ser Ala Val Leu Gly Phe Gly Gly Ile Tyr His
20 25 30

Ala Leu Leu Gly Pro Glu Thr Leu Glu Glu Ser Phe Pro Phe Phe Gly
35 40 45

Tyr Val Trp Lys Asp Arg Asn Lys Met Thr Thr Ile Leu Gly Ile His
50 55 60

Leu Ile Leu Leu Gly Ile Gly Ala Phe Leu Leu Val
65 70 75

<210> 707

<211> 76

<212> PRT

<213> Salmo salar

<400> 707

Val Leu Leu Arg Phe Leu Ala Gly Ile Met Val Trp Val Met Ile Val
1 5 10 15

Met Val Ile Leu Val Ile Gly Tyr Gly Ile Phe His Cys Ser Met Glu
20 25 30

Tyr Val Ser Leu Lys Ser Glu Ala Gly Ser Asn Val Thr Leu Lys Asp
35 40 45

Leu Gly Phe Gln Thr Asp Phe Ser Val Tyr Leu His Ile Arg Gln Thr
50 55 60

Trp Leu Ala Phe Ile Ile Ile Leu Ala Ile Val Glu
65 70 75

<210> 708

<211> 76

<212> PRT

<213> Sus scrofa

<400> 708

Phe Pro Ile Pro Leu Pro Phe Cys Trp Leu Cys Arg Thr Leu Ile Lys

1	5				10				15						
Arg	Ile	Gln	Ala 20	Val	Val	Pro	Lys	Gly 25	Val	Leu	Leu	Lys	Ala 30	Val	Ala
Gln	Val	Cys 35	His	Val	Val	Pro	Leu 40	Pro	Val	Gly	Gly	Ile 45	Cys	Gln	Cys
Leu	Ala 50	Glu	Arg	Tyr	Ile	Val 55	Ile	Cys	Leu	Asn	Met 60	Leu	Leu	Asp	Arg
Thr 65	Leu	Pro	Gln	Leu	Val 70	Cys	Gly	Leu	Val	Leu 75	Arg				
<210> 709															
<211> 201															
<212> PRT															
<213> Sus scrofa															
<400> 709															
Ala 1	Phe	Phe	Leu	Gly 5	Gly	Leu	Met	Tyr	Ala 10	Val	Cys	Leu	Val	Gly 15	Gly
Glu	Gln	Ile	Asn 20	Asn	Ile	Gly	Leu	Leu 25	Asp	Asn	Leu	Leu	Phe 30	Gly	Ser
Ile	Ile	Ser 35	Ala	Val	Asp	Pro	Val 40	Ala	Val	Leu	Ala 45	Val	Phe	Glu	Glu
Ile 50	His	Ile	Asn	Glu	Leu	Leu 55	His	Ile	Leu	Val	Phe 60	Gly	Glu	Ser	Leu
Leu 65	Asn	Asp	Ala	Val	Thr 70	Val	Val	Leu	Tyr	His 75	Leu	Phe	Glu	Glu	Phe 80
Ala	Asn	Tyr	Asp	Arg 85	Val	Gly	Ile	Val	Asp 90	Ile	Val	Leu	Gly	Phe 95	Leu
Ser	Phe	Phe	Val 100	Val	Ser	Leu	Gly	Gly 105	Val	Phe	Val	Gly	Val 110	Val	Tyr
Gly	Val	Ile 115	Ala	Ala	Phe	Thr	Ser 120	Arg	Phe	Thr	Ser	His 125	Ile	Arg	Val
Ile 130	Glu	Pro	Leu	Phe	Val	Phe 135	Leu	Tyr	Ser	Tyr	Met 140	Ala	Tyr	Leu	Ser
Ala 145	Glu	Leu	Phe	His	Leu 150	Ser	Gly	Ile	Met	Ala 155	Leu	Ile	Ala	Ser	Gly 160
Val	Val	Met	Arg	Pro 165	Tyr	Val	Glu	Ala	Asn 170	Ile	Ser	His	Lys	Ser 175	His
Thr	Thr	Ile	Lys 180	Tyr	Phe	Leu	Lys	Met 185	Trp	Ser	Ser	Val	Ser 190	Glu	Thr

Leu Ile Phe Ile Phe Leu Gly Val Ser
 195 200

<210> 710
 <211> 226
 <212> PRT
 <213> Meleagris gallopavo

<400> 710
 Met Val Pro Asn Tyr Ser Thr Glu Glu Thr Val Lys Arg Ile His Val
 1 5 10 15

Asp Cys Pro Val Ser Gly Arg His Ser Tyr Ile Tyr Ile Met Val Pro
 20 25 30

Thr Val Tyr Ser Ile Ile Phe Ile Ile Gly Ile Phe Gly Asn Ser Leu
 35 40 45

Val Val Ile Val Ile Tyr Cys Tyr Met Lys Leu Lys Thr Val Ala Ser
 50 55 60

Ile Phe Leu Leu Asn Leu Ala Leu Ala Asp Leu Cys Phe Leu Ile Thr
 65 70 75 80

Leu Pro Leu Trp Ala Ala Tyr Thr Ala Met Glu Tyr Gln Trp Pro Phe
 85 90 95

Gly Asn Cys Leu Cys Lys Leu Ala Ser Ala Gly Ile Ser Phe Asn Leu
 100 105 110

Tyr Ala Ser Val Phe Leu Leu Thr Cys Leu Ser Ile Asp Arg Tyr Leu
 115 120 125

Ala Ile Val His Pro Val Lys Ser Arg Ile Arg Arg Thr Met Phe Val
 130 135 140

Ala Arg Val Thr Cys Ile Val Ile Trp Leu Leu Ala Gly Val Ala Ser
 145 150 155 160

Leu Pro Val Ile Ile His Arg Asn Ile Phe Phe Ala Glu Asn Leu Asn
 165 170 175

Met Thr Val Cys Gly Phe Arg Tyr Asp Asn Asn Asn Thr Thr Leu Arg
 180 185 190

Val Gly Leu Gly Leu Ser Lys Asn Leu Leu Gly Phe Leu Ile Pro Phe
 195 200 205

Leu Ile Ile Leu Thr Ser Tyr Thr Leu Ile Trp Lys Thr Leu Lys Lys
 210 215 220

Ala Tyr
 225

<210> 711
 <211> 276
 <212> PRT
 <213> Sus scrofa

<400> 711

Ala Ile Met Ala Phe Thr Phe Gly Tyr Glu Tyr Val Val Ala Arg Pro
 1 5 10 15

Ala Gln Gly Ala Leu Leu Arg Gly Leu Phe Leu Pro Ser Cys Ser Gly
 20 25 30

Cys Gly Gln Pro Glu Leu Leu Gln Ala Val Gly Ile Val Gly Ala Ile
 35 40 45

Ile Met Pro His Asn Ile Tyr Leu His Ser Ala Leu Val Lys Ser Arg
 50 55 60

Glu Val Asp Arg Thr Arg Arg Glu Asp Ile Arg Glu Ala Asn Met Tyr
 65 70 75 80

Phe Leu Ile Glu Ser Thr Ile Ala Leu Phe Val Ser Phe Phe Ile Asn
 85 90 95

Leu Phe Val Met Ala Val Phe Gly Gln Ala Phe Tyr Gln Gln Thr Asn
 100 105 110

Gln Ala Ala Phe Asn Ile Cys Ala Asn Ser Ser Leu His Asp Tyr Ala
 115 120 125

Lys Ile Phe Pro Arg Asn Asn Leu Thr Val Ala Val Asp Phe Tyr Gln
 130 135 140

Gly Gly Val Ile Leu Gly Cys Leu Phe Gly Pro Ala Ala Leu Tyr Ile
 145 150 155 160

Trp Ala Val Gly Leu Leu Ala Ala Gly Gln Ser Ser Thr Met Thr Gly
 165 170 175

Thr Tyr Ala Gly Gln Phe Val Met Glu Gly Phe Leu Lys Leu Arg Trp
 180 185 190

Ser Arg Phe Ala Arg Leu Leu Leu Thr Arg Ser Cys Ala Ile Leu Pro
 195 200 205

Ala Leu Leu Val Ala Val Phe Lys Glu Leu Gln Asp Leu Ser Ser Leu
 210 215 220

Asn Asp Leu Leu Asn Val Leu Gln Ser Leu Leu Leu Pro Phe Ala Val
 225 230 235 240

Leu Pro Ile Leu Thr Phe Thr Ser Met Pro Ala Leu Met Gln Glu Phe
 245 250 255

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Ala Ser Gly Arg Val Asn Lys Val Ile Thr Ser Ser Ile Met Leu Leu
260 265 270

Val Cys Ala Ile
275

<210> 712
<211> 126
<212> PRT
<213> Sus scrofa

<400> 712
Arg Arg Val Ala Ala Ala Val Trp Gly Leu Val Leu Ala Cys Gln Ala
1 5 10 15

Pro Ala Leu Tyr Phe Ile Thr Thr Thr Ala Gln Gly Gly Arg Ile Thr
20 25 30

Cys His Asp Thr Ser Ala Pro Glu Leu Phe Ser His Phe Val Ala Tyr
35 40 45

Ser Leu Val Met Leu Ser Val Leu Phe Ala Ala Pro Phe Ala Val Ile
50 55 60

Leu Val Cys Tyr Ala Leu Met Ala Arg Arg Leu Leu Arg Pro Ala Tyr
65 70 75 80

Gly Thr Ala Gly Gly Leu Pro Arg Ala Lys Arg Lys Ser Val Arg Thr
85 90 95

Ile Ala Val Val Leu Ala Val Phe Ala Leu Cys Phe Leu Pro Phe His
100 105 110

Val Thr Arg Thr Leu Tyr Tyr Ser Phe Arg Thr Leu Asp Leu
115 120 125

<210> 713
<211> 101
<212> PRT
<213> Sus scrofa

<400> 713
Leu Ser Phe Ala Asp Phe Cys Met Gly Leu Tyr Leu Leu Leu Ile Ala
1 5 10 15

Ser Val Asp Ala Gln Thr Lys Gly Gln Tyr Tyr Asn His Ala Ile Asp
20 25 30

Trp Gln Thr Gly Asn Gly Cys Ser Val Ala Gly Phe Phe Thr Val Phe
35 40 45

Ala Ser Glu Leu Ser Val Tyr Thr Leu Thr Val Ile Thr Leu Glu Arg
50 55 60

Trp His Thr Ile Thr Tyr Ala Ile Gln Leu Asp Gln Lys Leu Arg Leu
65 70 75 80

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Arg His Ala Ile Pro Ile Met Leu Gly Gly Trp Leu Phe Ser Thr Leu
85 90 95

Ile Ala Met Leu Pro
100

<210> 714
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 714
His Phe Phe Trp Asn Asn His Lys His Phe Phe Asp Tyr Gly Ser Thr
1 5 10 15

Thr Arg Asn Ser Met Arg Asn Leu Ser Ile Gln Cys Val Phe Leu Asn
20 25 30

Asn Leu Ile Phe Gln Leu Phe Asn His Phe Ile Leu Pro Ser Ser Met
35 40 45

Leu Ala Arg Leu Val Asn Ile Tyr Leu Phe Arg Cys Asn Asn Lys Ile
50 55 60

Leu Phe Val Thr Ser Gly Phe Val Gly Trp Leu Ile Gly His Ile Leu
65 70 75 80

Phe Met Lys Trp Leu Gly Leu Val Leu Val Trp Ile Arg Gln Asn His
85 90 95

Ser Ile Arg Ser Asn
100

<210> 715
<211> 251
<212> PRT
<213> Sus scrofa

<400> 715
Met Thr Phe Ala Glu Leu Val Asp Arg Val Gly Ser Lys Gly Pro Phe
1 5 10 15

Gln Leu Leu His Thr Val Leu Leu Gly Leu Pro Ile Leu Gly Met Ala
20 25 30

Asn His Asn Leu Leu Gln Ile Phe Thr Ala Pro Thr Pro Ala His His
35 40 45

Cys Arg Pro Pro Pro Asn Ala Ser Ala Gly Pro Trp Val Leu Pro Thr
50 55 60

Gly Leu Asn Gly Lys Pro Glu Thr Cys Leu Arg Phe Val Tyr Pro Pro
65 70 75 80

Asn Ala Ser Leu Pro Asn Asp Thr Arg Gly Ala Thr Glu Pro Cys Leu
85 90 95

Asp Gly Trp Ile Tyr Asn Ile Val Asp Arg Asp Ser Ile Val Thr Glu
100 105 110

Trp Asp Leu Val Cys Ser Ser Ser Lys Leu Lys Glu Met Ala Gln Ser
115 120 125

Val Phe Met Ala Gly Ile Leu Val Gly Gly Leu Val Leu Gly Ala Leu
130 135 140

Ser Asp Arg Phe Gly Arg Lys Pro Ile Leu Ile Phe Ser Tyr Leu Leu
145 150 155 160

Leu Gly Ala Ser Gly Ser Gly Ala Ala Phe Ser Pro Thr Phe Ser Ile
165 170 175

Tyr Ala Val Phe Arg Phe Leu Cys Gly Phe Ser Ile Ser Gly Ile Ser
180 185 190

Leu Ser Thr Ala Ile Leu Asn Val Glu Trp Val Ser Thr Arg Phe Arg
195 200 205

Ala Ile Lys Ser Ile Ala Val Gly Phe Phe Tyr Thr Phe Gly Gln Phe
210 215 220

Ile Leu Pro Gly Leu Ala Tyr Ala Ile Pro Gln Trp Arg Trp Leu Gln
225 230 235 240

Leu Thr Val Ser Val Pro Phe Leu Thr Phe Phe
245 250

<210> 716
<211> 226
<212> PRT
<213> Sus scrofa

<400> 716

Met Gly Ser Glu Ile Pro Asp Tyr Tyr Asn Lys Thr Leu Ala Ser Glu
1 5 10 15

Asn Asn Thr Val Ala Thr Arg Asn Ser Gly Phe Pro Val Trp Glu Asp
20 25 30

Tyr Lys Gly Ser Val Asp Asp Leu Gln Tyr Phe Leu Ile Gly Leu Tyr
35 40 45

Thr Phe Val Ser Leu Leu Gly Phe Met Gly Asn Leu Leu Ile Leu Met
50 55 60

Ala Val Met Arg Lys Arg Asn Gln Lys Thr Thr Val Asn Phe Leu Ile
65 70 75 80

Gly Asn Leu Ala Phe Ser Asp Ile Leu Val Val Leu Phe Cys Ser Pro
85 90 95

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Phe Thr Leu Thr Ser Val Leu Leu Asp Gln Trp Met Phe Gly Lys Val
100 105 110

Met Cys His Ile Met Pro Phe Leu Gln Cys Val Thr Val Leu Val Ser
115 120 125

Thr Leu Ile Leu Ile Ser Ile Ala Ile Val Arg Tyr His Met Ile Lys
130 135 140

His Pro Val Ser Asn Asn Leu Thr Ala Asn His Gly Tyr Phe Leu Ile
145 150 155 160

Ala Thr Val Trp Thr Leu Gly Leu Ala Ile Cys Ser Pro Leu Pro Val
165 170 175

Phe His Ser Leu Val Glu Leu Gln Glu Ser Phe Gly Ser Ala Trp Leu
180 185 190

Ser Ser Arg Tyr Leu Cys Val Glu Ser Trp Pro Ser Asp Ser Tyr Arg
195 200 205

Ile Ala Phe Thr Ile Ser Leu Leu Leu Val Gln Tyr Ile Leu Pro Leu
210 215 220

Val Cys
225

<210> 717
<211> 76
<212> PRT
<213> Salmo salar

<400> 717
Met Thr Leu Leu Thr His Val Leu Ala Cys Leu Phe Gly Met Gly Ser
1 5 10 15

Trp Val Ala Ile Asn Gly Ile Trp Val Glu Leu Pro Leu Ile Val Pro
20 25 30

Glu Ile Pro Glu Gly Trp Tyr Leu Pro Ser Tyr Leu Thr Val Leu Ile
35 40 45

Gln Met Ala Asn Val Gly Pro Leu Phe Val Thr Leu Met His Arg Phe
50 55 60

Arg Pro Gly Lys Leu Asp Glu Arg Pro Val Ile Tyr
65 70 75

<210> 718
<211> 76
<212> PRT
<213> Salmo salar

<400> 718
Met Ala Asn Leu Arg Lys Thr His Pro Leu Leu Lys Ile Ala Asn Asp
1 5 10 15

Ala Leu Val Asp Leu Pro Ala Pro Ser Asn Ile Ser Val Trp Trp Asn
20 25 30

Phe Gly Ser Leu Leu Gly Leu Cys Leu Ala Thr Gln Ile Leu Thr Gly
35 40 45

Leu Phe Leu Ala Met His Tyr Thr Ser Asp Ile Ser Thr Ala Phe Ser
50 55 60

Ser Val Cys His Ile Cys Arg Asp Val Ser Tyr Gly
65 70 75

<210> 719
<211> 276
<212> PRT
<213> Sus scrofa

<400> 719
Met Leu Asn Leu Thr Ser Gln Val Pro Glu Pro Ala Leu Asn Gly Thr
1 5 10 15

Leu Pro Gln Ser Ser Ser Cys Phe His Ser Asp Trp Trp Asn Trp Leu
20 25 30

Asn Thr Ile Gln Ala Pro Phe Leu Trp Val Leu Phe Leu Leu Ala Ala
35 40 45

Leu Glu Asn Ile Phe Val Leu Ser Val Phe Cys Leu His Lys Asn Ser
50 55 60

Cys Thr Val Ala Glu Ile Tyr Leu Gly Asn Leu Ala Met Ala Asp Leu
65 70 75 80

Ile Leu Ala Leu Gly Leu Pro Phe Trp Ala Ile Thr Ile Ala Asn His
85 90 95

Phe Asp Trp Leu Phe Gly Glu Val Leu Cys Arg Val Val Asn Thr Met
100 105 110

Ile Tyr Met Asn Leu Tyr Ser Ser Ile Cys Phe Leu Met Leu Val Ser
115 120 125

Ile Asp Arg Tyr Leu Ala Leu Val Lys Thr Met Ser Met Gly Arg Met
130 135 140

Arg Gly Val Arg Trp Ala Lys Leu Tyr Ser Leu Val Ile Trp Gly Cys
145 150 155 160

Thr Leu Leu Leu Ser Ser Pro Met Leu Ala Phe Arg Thr Met His Glu
165 170 175

Tyr Ala Ala Glu Gly His Asn Val Thr Ala Cys Ile Ile Lys Tyr Pro
180 185 190

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Ser Arg Ser Trp Met Val Phe Thr Asn Ile Leu Leu Asn Ser Val Gly
195 200 205

Phe Leu Leu Pro Leu Ser Ile Ile Thr Tyr Cys Thr Val Gln Ile Leu
210 215 220

Gln Val Leu Arg Asn Asn Glu Met Gln Lys Phe Lys Glu Ile Gln Thr
225 230 235 240

Glu Arg Lys Ala Thr Val Leu Val Leu Ala Val Leu Leu Leu Phe Val
245 250 255

Val Cys Trp Leu Pro Phe Gln Ile Ser Thr Phe Leu Asp Thr Leu Leu
260 265 270

Arg Leu Gly Val
275

<210> 720
<211> 176
<212> PRT
<213> Solanum tuberosum

<400> 720
Thr Leu Ala Ala Trp Pro Val Thr Arg Asp Ser Arg Leu Phe His Phe
1 5 10 15

Leu Met Leu Ala Met Tyr Ser Gly Gln Ile Gly Ser Phe Ser Ser Arg
20 25 30

Asp Leu Leu Leu Phe Phe Ile Met Trp Glu Leu Glu Leu Ile Pro Val
35 40 45

Tyr Leu Leu Leu Ala Met Trp Gly Gly Lys Lys Arg Leu Tyr Ser Ala
50 55 60

Thr Lys Phe Ile Leu Tyr Thr Ala Gly Gly Ser Val Phe Leu Leu Met
65 70 75 80

Gly Val Leu Gly Val Ala Leu Tyr Gly Ser Asn Glu Pro Thr Leu Asn
85 90 95

Phe Glu Thr Ser Val Asn Gln Ser Tyr Pro Val Val Leu Glu Ile Ile
100 105 110

Phe Tyr Ile Gly Phe Phe Ile Ala Phe Ala Val Lys Ser Pro Ile Ile
115 120 125

Pro Leu His Thr Trp Leu Pro Asp Thr His Gly Glu Ala His Tyr Ser
130 135 140

Thr Cys Met Leu Leu Ala Gly Ile Leu Leu Lys Met Gly Ala Tyr Gly
145 150 155 160

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Leu Ile Arg Ile Asn Met Glu Leu Leu Pro His Ala His Ser Ile Phe
165 170 175

<210> 721
<211> 101
<212> PRT
<213> Sus scrofa

<400> 721
Thr Ser Ala Phe Lys Tyr Ile Asn Thr Val Ile Ser Cys Thr Ile Phe
1 5 10 15

Ile Val Gly Met Val Gly Asn Ala Thr Leu Leu Arg Ile Ile Tyr Gln
20 25 30

Asn Lys Cys Met Arg Asn Gly Pro Asn Ala Leu Ile Ala Ser Leu Ala
35 40 45

Leu Gly Asp Leu Ile Tyr Val Val Ile Asp Leu Pro Ile Asn Val Phe
50 55 60

Lys Leu Leu Ala Gly Arg Trp Pro Phe Glu Asn His Asp Phe Gly Val
65 70 75 80

Phe Leu Cys Lys Leu Phe Pro Phe Leu Gln Lys Ser Ser Val Gly Ile
85 90 95

Thr Val Leu Asn Leu
100

<210> 722
<211> 126
<212> PRT
<213> Sus scrofa

<400> 722
Ala Ala Trp Phe Leu Gln Glu Leu Pro Ser Phe Val Val Pro Ala Gly
1 5 10 15

Ile Leu Ala Gly Gln Pro Arg Ser Leu Phe Gly Pro Pro Ala Thr Val
20 25 30

Leu Leu Gly Leu Phe Cys Ala His Tyr Phe His Arg Thr Phe Val Tyr
35 40 45

Ser Leu Leu Thr Arg Gly Arg Pro Phe Pro Val Val Phe Leu Phe Arg
50 55 60

Gly Phe Val Phe Cys Met Gly Asn Gly Leu Leu Gln Gly Tyr Tyr Leu
65 70 75 80

Val Tyr Cys Ala Glu Tyr Pro Ala Glu Trp Tyr Thr Asp Ile Arg Phe
85 90 95

Ser Leu Gly Val Phe Leu Phe Ile Leu Gly Met Gly Ile Asn Ile His
100 105 110

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Ser Asp Tyr Ile Leu Arg Gln Leu Arg Lys Pro Gly Glu Val
115 120 125

<210> 723
<211> 126
<212> PRT
<213> Meleagris gallopavo

<400> 723
Met Ser Met Ala Asn Phe Thr Ala Gly Arg Asn Ser Cys Thr Phe Gln
1 5 10 15

Glu Glu Phe Lys Gln Val Leu Leu Pro Leu Val Tyr Ser Val Val Phe
20 25 30

Leu Leu Gly Leu Pro Leu Asn Ala Val Val Ile Gly Gln Ile Trp Leu
35 40 45

Ala Arg Lys Ala Leu Thr Arg Thr Thr Ile Tyr Met Leu Asn Leu Ala
50 55 60

Thr Ala Asp Leu Leu Tyr Val Cys Ser Leu Pro Leu Leu Ile Tyr Asn
65 70 75 80

Tyr Thr Gln Lys Asp Tyr Trp Pro Phe Gly Asp Phe Thr Cys Lys Phe
85 90 95

Val Arg Phe Gln Phe Tyr Thr Asn Leu His Gly Ser Ile Leu Phe Leu
100 105 110

Thr Cys Ile Ser Val Gln Arg Tyr Met Gly Ile Cys His Pro
115 120 125

<210> 724
<211> 251
<212> PRT
<213> Capra hircus

<400> 724
Asp Tyr Gly Glu Asn Glu Thr Tyr Phe Cys Cys Thr Ser Pro Pro Cys
1 5 10 15

Pro Gln Asp Phe Ser Leu Asn Phe Asp Arg Thr Phe Leu Pro Val Leu
20 25 30

Tyr Ser Leu Leu Phe Val Leu Gly Leu Leu Gly Asn Gly Val Val Ala
35 40 45

Val Val Leu Leu Ser Gln Arg Ala Ala Leu Ser Ser Thr Asp Thr Phe
50 55 60

Leu Leu His Leu Ala Val Ala Asp Ala Leu Leu Val Leu Thr Leu Pro
65 70 75 80

Leu Trp Ala Val Asp Ala Ala Ile Gln Trp Val Phe Gly Ser Gly Leu
85 90 95

Cys Lys Val Ala Gly Ala Leu Phe Asn Ile Asn Phe Tyr Ala Gly Ala
 100 105 110
 Leu Leu Leu Ala Cys Ile Ser Phe Asp Arg Tyr Leu Ser Ile Val His
 115 120 125
 Ala Thr Gln Phe Tyr Arg Arg Gly Pro Pro Ala Arg Val Ala Leu Thr
 130 135 140
 Cys Val Ala Val Trp Gly Leu Cys Leu Leu Phe Ala Leu Pro Asp Phe
 145 150 155 160
 Ile Phe Leu Ser Ser His His Asp Asn Arg Leu Asn Ala Thr His Cys
 165 170 175
 Gln Tyr Asn Phe Pro Gln Glu Gly Arg Thr Ala Leu Arg Val Leu Gln
 180 185 190
 Leu Val Ala Gly Phe Leu Leu Pro Leu Leu Val Met Ala Tyr Cys Tyr
 195 200 205
 Ala Arg Ile Leu Thr Val Leu Leu Val Ser Arg Gly Gln Arg Arg Leu
 210 215 220
 Arg Ala Met Arg Leu Val Val Val Val Val Val Ala Phe Ala Leu Cys
 225 230 235 240
 Trp Thr Pro Tyr His Leu Val Val Leu Val Asp
 245 250
 <210> 725
 <211> 126
 <212> PRT
 <213> Sus scrofa
 <400> 725
 Pro Ala Leu Asp Leu Cys Ile Ala Ile Asn Pro Ser Ile Leu Pro Thr
 1 5 10 15
 Ala Phe Met Gly Thr Ala Met Ile Phe Thr Cys Phe Thr Leu Ser Ala
 20 25 30
 Leu Tyr Ala Arg Arg Arg Ser Tyr Leu Phe Leu Gly Gly Ile Leu Met
 35 40 45
 Ser Ala Met Ser Leu Met Val Leu Ser Ser Leu Gly Asn Leu Phe Phe
 50 55 60
 Gly Ser Ile Trp Leu Phe Gln Ala Asn Leu Tyr Val Gly Leu Val Val
 65 70 75 80
 Met Cys Gly Phe Val Leu Phe Asp Thr Gln Leu Ile Ile Glu Lys Ala
 85 90 95

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Glu Asn Gly Asp Lys Asp Tyr Ile Trp His Cys Val Asp Leu Phe Ser
100 105 110

Asp Phe Val Thr Leu Phe Arg Lys Leu Met Met Ile Leu Ala
115 120 125

<210> 726
<211> 201
<212> PRT
<213> Sus scrofa

<400> 726
Met Glu Ser Pro Ala Gly Arg Thr Pro Ala Pro Gly Ala Leu Pro Tyr
1 5 10 15

Tyr Val Ala Phe Ser Gln Leu Leu Gly Leu Thr Val Val Ala Val Thr
20 25 30

Gly Ala Trp Leu Gly Ala Tyr Arg Gly Gly Ile Ala Trp Glu Ser Ala
35 40 45

Leu Gln Phe Asn Val His Pro Leu Cys Met Ile Ile Gly Leu Val Phe
50 55 60

Leu Gln Gly Asp Ala Leu Leu Val Tyr Arg Val Phe Arg Asn Glu Ala
65 70 75 80

Lys Arg Thr Thr Lys Ile Leu His Gly Leu Leu His Val Leu Ala Phe
85 90 95

Val Ile Ala Leu Val Gly Leu Val Ala Val Phe Asp Tyr His Arg Lys
100 105 110

Lys Gly Ile Ala Asp Leu Tyr Ser Leu His Ser Trp Cys Gly Ile Leu
115 120 125

Val Phe Val Leu Phe Leu Ala Gln Trp Leu Val Gly Leu Gly Phe Phe
130 135 140

Leu Phe Pro Gly Ala Ser Phe Ser Leu Arg Ser Arg Tyr Arg Pro Gln
145 150 155 160

His Val Phe Phe Gly Ala Ala Ile Phe Leu Leu Ser Val Gly Thr Ala
165 170 175

Leu Leu Gly Leu Lys Glu Ala Leu Leu Phe Gln Leu Gly Thr Lys Tyr
180 185 190

Ser Ala Phe Glu Ser Glu Gly Val Leu
195 200

<210> 727
<211> 201
<212> PRT
<213> Sus scrofa

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<400> 727

Phe Leu Asp Leu Gln Leu Asn Ala Thr Glu Gly Asn Val Ser Gly Pro
1 5 10 15

Ser Val Gly Asn Thr Ser Ser Pro Cys Glu Asp Met Gly Ile Glu Val
20 25 30

Glu Val Phe Leu Thr Leu Gly Leu Ile Ser Leu Leu Glu Asn Ile Leu
35 40 45

Val Ile Gly Ala Ile Ala Arg Asn Lys Asn Leu His Val Pro Met Tyr
50 55 60

Phe Phe Val Cys Ser Leu Ala Val Ala Asp Met Leu Val Ser Leu Ser
65 70 75 80

Asn Ser Trp Glu Thr Ile Thr Ile Tyr Leu Ile Ala Asn Lys His Leu
85 90 95

Val Leu Ser Asp Thr Ser Val Arg His Leu Asp Asn Val Phe Asp Ser
100 105 110

Met Ile Cys Ile Ser Leu Val Ala Ser Met Cys Ser Leu Leu Ala Val
115 120 125

Ala Val Asp Arg Tyr Val Thr Ile Phe Tyr Ala Leu Arg Tyr Gln His
130 135 140

Leu Met Thr Gly Arg Arg Cys Gly Ala Ile Ile Ala Gly Ile Trp Ala
145 150 155 160

Leu Cys Thr Gly Cys Gly Pro Val Phe Ile Val Tyr Tyr Glu Ser Thr
165 170 175

Tyr Val Val Val Cys Leu Val Ala Met Phe Leu Thr Met Leu Leu Leu
180 185 190

Met Ala Ser Leu Tyr Ala His Met Phe
195 200

<210> 728

<211> 226

<212> PRT

<213> Sus scrofa

<400> 728

Gly Leu Phe Val Glu Arg Ala Tyr Tyr Tyr Ala Phe Val Ser Pro Pro
1 5 10 15

Ser Gly Ile Ala Glu Thr Thr Phe Val Gly Ile Ile Leu Ser Arg Gly
20 25 30

Thr Ala Ala Ser Val Ser Phe Met Phe Ser Tyr Ile Leu Leu Thr Met
35 40 45

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Cys Arg Asn Leu Ile Thr Phe Leu Arg Glu Thr Phe Leu Asn His Tyr
 50 55 60
 Val Pro Phe Asp Ala Ala Val Asp Phe His Arg Trp Ile Ala Met Ala
 65 70 75 80
 Ala Leu Val Leu Ala Ile Leu His Ser Val Gly His Val Val Asn Val
 85 90 95
 Tyr Ile Phe Ser Val Ser Pro Leu Ser Leu Leu Ala Cys Val Phe Pro
 100 105 110
 Ser Val Phe Val Asn Asp Gly Ser Lys Leu Pro Gln Lys Phe Tyr Trp
 115 120 125
 Trp Phe Phe Gln Thr Ile Pro Gly Met Thr Gly Val Leu Leu Leu Val
 130 135 140
 Val Leu Ala Ile Met Tyr Val Phe Ala Ser Pro Tyr Phe Arg Arg Arg
 145 150 155 160
 Ser Phe Arg Gly Phe Trp Leu Thr His His Phe Tyr Ile Leu Leu Tyr
 165 170 175
 Val Leu Leu Ile Ile His Gly Ser Phe Ala Leu Ile Gln Leu Pro Arg
 180 185 190
 Phe His Ile Phe Phe Leu Val Pro Ala Leu Ile Tyr Val Gly Asp Lys
 195 200 205
 Leu Val Ser Leu Ser Arg Lys Lys Val Glu Ile Ser Val Val Lys Ala
 210 215 220
 Glu Leu
 225
 <210> 729
 <211> 101
 <212> PRT
 <213> Solanum tuberosum
 <400> 729
 Tyr Pro Leu Ser Asn Tyr Phe His Pro Thr Ala Phe Ala Asp Lys Leu
 1 5 10 15
 Leu Asn Thr Leu Gly Pro Arg Phe Leu Gly Pro Ile Ala Ile Leu Arg
 20 25 30
 Ile Trp Ser Phe Cys Leu Phe Tyr Val Met Ala Glu Leu Trp Gly Ser
 35 40 45
 Val Val Val Ser Val Leu Phe Trp Gly Phe Ala Asn Gln Ile Thr Thr
 50 55 60

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Val Asp Glu Ala Lys Arg Phe Tyr Pro Leu Phe Gly Leu Gly Ala Asn
65 70 75 80

Val Ala Leu Ile Phe Ser Gly Arg Thr Val Lys Tyr Phe Ser Ser Leu
85 90 95

Arg Ser Ser Leu Gly
100

<210> 730
<211> 76
<212> PRT
<213> Sus scrofa

<400> 730
Pro Met Pro Val Leu Tyr Gly Val Phe Leu Tyr Met Gly Val Ala Ser
1 5 10 15

Leu Asn Gly Val Gln Phe Met Asp Arg Leu Lys Leu Leu Leu Met Pro
20 25 30

Leu Lys His Gln Pro Asp Phe Ile Tyr Leu Arg His Val Pro Leu Arg
35 40 45

Arg Val His Leu Phe Thr Phe Leu Gln Val Leu Cys Leu Ala Leu Leu
50 55 60

Trp Ile Leu Lys Ser Thr Val Ala Ala Ile Ile Phe
65 70 75

<210> 731
<211> 101
<212> PRT
<213> Sus scrofa

<400> 731
Met Glu Arg Gly Pro Val Val Gly Ala Gly Leu Gly Ala Arg Ala Arg
1 5 10 15

Ile Arg Thr Leu Leu Gly Cys Leu Val Lys Val Leu Leu Trp Val Ala
20 25 30

Ser Ala Leu Leu Tyr Phe Gly Ser Glu Gln Ala Ala Arg Leu Leu Gly
35 40 45

Ser Pro Cys Leu Arg Arg Leu Tyr His Ala Trp Leu Ala Ala Val Val
50 55 60

Ile Phe Gly Pro Leu Leu Gln Phe His Val Asn Pro Arg Thr Ile Phe
65 70 75 80

Ala Ser His Gly Asn Phe Phe Asn Ile Lys Phe Val Asn Ser Ala Trp
85 90 95

Gly Trp Thr Cys Thr
100

<210> 732
<211> 176
<212> PRT
<213> Sus scrofa

<400> 732
Pro Gly Val His Leu Asp Leu Gly Trp Ile Ala Ile Leu Gly Ala Ile
1 5 10 15
Trp Leu Leu Ile Leu Ala Asp Ile His Asp Phe Glu Ile Ile Leu His
20 25 30
Arg Val Glu Trp Ala Thr Leu Leu Phe Phe Ala Ala Leu Phe Ile Leu
35 40 45
Met Glu Ala Leu Ala His Leu His Leu Ile Glu Tyr Val Gly Glu Gln
50 55 60
Thr Ala Leu Leu Ile Lys Met Val Pro Glu Asp Gln Arg Leu Ala Ala
65 70 75 80
Ala Ile Ile Val Val Val Trp Val Ser Ala Ile Ala Ser Ser Leu Ile
85 90 95
Asp Asn Ile Pro Phe Thr Ala Thr Met Ile Pro Val Leu Leu Asn Leu
100 105 110
Ser Arg Asp Pro Glu Ile Ser Leu Pro Ala Pro Pro Leu Met Tyr Ala
115 120 125
Leu Ala Leu Gly Ala Cys Leu Gly Gly Asn Gly Thr Leu Ile Gly Ala
130 135 140
Ser Ala Asn Val Val Cys Ala Gly Ile Ala Glu Gln His Gly Tyr Gly
145 150 155 160
Phe Ser Phe Met Glu Phe Phe Arg Leu Gly Phe Pro Met Met Val Val
165 170 175

<210> 733
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 733
Gln Leu Gly Tyr Met Met Leu Ala Leu Gly Met Gly Ser Tyr Arg Ser
1 5 10 15
Ala Leu Phe His Leu Ile Thr His Ala Tyr Ser Lys Ala Leu Leu Phe
20 25 30
Leu Gly Ser Gly Ser Ile Ile His Ser Met Glu Thr Ile Val Gly Tyr
35 40 45
Ser Pro Ala Lys Ser Gln Asn Met Gly Leu Met Gly Gly Leu Arg Lys
50 55 60

His Val Pro Ile Thr Lys Ile Thr Phe Leu Leu Gly Thr Leu Ser Leu
65 70 75 80

Cys Gly Ile Pro Pro Leu Ala Cys Phe Trp Ser Lys Asp Glu Ile Leu
85 90 95

Asn Asp Ser Trp Leu
100

<210> 734
<211> 176
<212> PRT
<213> Sus scrofa

<400> 734
Met Ser Gly His Asn Asn Ser Glu Leu Phe Val Leu Cys Ser Ser Ser
1 5 10 15

Gln Leu Phe Leu Gln Pro Leu Trp Asp His Leu Lys Thr Trp Glu Thr
20 25 30

Leu Ile Leu Ser Pro Phe Phe Pro Val Phe Phe Ser Ile Thr Thr Tyr
35 40 45

Leu Gly Phe Cys Leu Pro Phe Val Val Leu Asp Val Leu Cys Pro Trp
50 55 60

Val Pro Ala Leu Arg Arg Tyr Lys Ile His Pro Asp Phe Ser Pro Ser
65 70 75 80

Val Trp Gln Leu Leu Pro Cys Leu Gly Leu Thr Leu Tyr Gln His Val
85 90 95

Val Phe Val Phe Pro Met Thr Leu Leu His Trp Ala Ala Ser Pro Val
100 105 110

Leu Leu Pro Pro Glu Ala Pro Glu Leu Leu Gln Leu Val Arg His Ile
115 120 125

Val Leu Cys Leu Leu Leu Phe Asp Thr Glu Phe Phe Ile Trp His Val
130 135 140

Leu His His Lys Val Pro Trp Leu Tyr Arg Thr Phe His Lys Met His
145 150 155 160

His Gln Asn Ser Ser Ser Phe Ala Leu Ala Thr Gln Tyr Met Ser Val
165 170 175

<210> 735
<211> 76
<212> PRT
<213> Sus scrofa

<400> 735
Met Thr Ala Leu Gly Ile Thr Val Ala Leu Leu Val Trp Leu Val Thr

1 5 10 15
 Leu Leu Leu Ile Ser Ile Trp Lys His Ile His Ser Ser Trp Lys Leu
 20 25 30
 Pro Pro Gly Pro Phe Pro Leu Pro Ile Val Gly Asn Ile Phe Gln Leu
 35 40 45
 Asp Leu Lys Asn Ile Pro Lys Ser Phe Thr Met Leu Ala Glu Arg Tyr
 50 55 60
 Gly Pro Val Phe Thr Val Tyr Leu Gly Ser Arg Arg
 65 70 75
 <210> 736
 <211> 101
 <212> PRT
 <213> Salmo salar
 <400> 736
 Met Asp Thr Leu Arg Ile Ala Val Asn Gly Val Ser Tyr Asn Glu Ala
 1 5 10 15
 Ser Glu Ile Tyr Lys Pro His Ala Asp Pro Phe Thr Gly Pro Ile Thr
 20 25 30
 Asn Leu Ala Pro Trp Asn Phe Ala Val Leu Ala Thr Leu Met Phe Val
 35 40 45
 Ile Thr Ser Leu Ser Leu Phe Glu Asn Phe Thr Val Met Leu Ala Thr
 50 55 60
 Tyr Lys Phe Lys Gln Leu Arg Gln Pro Leu Asn Tyr Ile Ile Val Asn
 65 70 75 80
 Leu Ser Leu Ala Asp Phe Leu Val Ser Leu Thr Gly Gly Thr Ile Ser
 85 90 95
 Phe Leu Thr Asn Ala
 100
 <210> 737
 <211> 226
 <212> PRT
 <213> Solanum tuberosum
 <400> 737
 Pro Lys Phe Met Gly Ile Glu Leu Val Thr Leu Lys Lys Ile Ile Pro
 1 5 10 15
 Leu Gly Ala Met Phe Phe Cys Ile Leu Phe Asn Tyr Thr Ile Leu Arg
 20 25 30
 Asp Thr Lys Asp Val Leu Val Val Thr Ala Lys Gly Ser Ser Ala Glu
 35 40 45

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Ile Ile Pro Phe Leu Lys Thr Trp Val Asn Leu Pro Met Ala Ile Gly
50 55 60

Phe Met Leu Leu Tyr Thr Lys Leu Ala Asn Val Leu Ser Lys Glu Ala
65 70 75 80

Leu Phe Tyr Thr Val Ile Leu Pro Phe Ile Ala Phe Phe Gly Ala Phe
85 90 95

Gly Phe Val Leu Tyr Pro Leu Ser Asn Tyr Phe His Pro Thr Ala Phe
100 105 110

Ala Asp Lys Leu Leu Asn Thr Leu Gly Pro Arg Phe Leu Gly Pro Ile
115 120 125

Ala Ile Leu Arg Ile Trp Ser Phe Cys Leu Phe Tyr Val Met Ala Glu
130 135 140

Leu Trp Gly Ser Val Val Val Ser Val Leu Phe Trp Gly Phe Ala Asn
145 150 155 160

Gln Ile Thr Thr Val Asp Glu Ala Lys Arg Phe Tyr Pro Leu Phe Gly
165 170 175

Leu Gly Ala Asn Val Ala Leu Ile Phe Ser Gly Arg Thr Val Lys Tyr
180 185 190

Phe Ser Ser Leu Arg Ser Ser Leu Gly Pro Gly Val Asp Gly Trp Ala
195 200 205

Ile Ser Leu Lys Gly Met Met Ser Ile Val Val Met Met Gly Gly Ala
210 215 220

Ile Cys
225

<210> 738
<211> 126
<212> PRT
<213> Sus scrofa

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Any amino acid

<400> 738
Arg Gly Ser Asn Xaa Ile Phe Gly Asp Thr Pro Cys Arg Ile Met Ser
1 5 10 15

Tyr Ser Met Tyr Val Asn Met Tyr Ser Ser Ile Tyr Phe Leu Thr Val
20 25 30

Leu Ser Val Val Arg Phe Leu Ala Thr Val His Pro Phe Arg Leu Leu
35 40 45

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His Thr Thr Ser Ile Lys Asn Ala Trp Ile Leu Cys Gly Val Ile Trp
50 55 60

Ile Phe Ile Met Ala Ser Ser Thr Val Leu Leu Lys Asn Gly Ser Glu
65 70 75 80

Gln Lys Asp Asn Val Thr Leu Cys Leu Glu Leu Asn Ser Asn Lys Val
85 90 95

Thr Lys Leu Lys Thr Met Asn Tyr Val Ala Leu Val Val Gly Phe Val
100 105 110

Leu Pro Phe Gly Thr Leu Ser Ile Cys Tyr Leu Leu Ile Ile
115 120 125

<210> 739

<211> 276

<212> PRT

<213> Solanum tuberosum

<400> 739

Thr Leu Ala Ala Trp Pro Val Thr Arg Asp Ser Arg Leu Phe His Phe
1 5 10 15

Leu Met Leu Ala Met Tyr Ser Gly Gln Ile Gly Ser Phe Ser Ser Arg
20 25 30

Asp Leu Leu Leu Phe Phe Ile Met Trp Glu Leu Glu Leu Ile Pro Val
35 40 45

Tyr Leu Leu Leu Ala Met Trp Gly Gly Lys Lys Arg Leu Tyr Ser Ala
50 55 60

Thr Lys Phe Ile Leu Tyr Thr Ala Gly Gly Ser Val Phe Leu Leu Met
65 70 75 80

Gly Val Leu Gly Val Ala Leu Tyr Gly Ser Asn Glu Pro Thr Leu Asn
85 90 95

Phe Glu Thr Ser Val Asn Gln Ser Tyr Pro Val Val Leu Glu Ile Ile
100 105 110

Phe Tyr Ile Gly Phe Phe Ile Ala Phe Ala Val Lys Ser Pro Ile Ile
115 120 125

Pro Leu His Thr Trp Leu Pro Asp Thr His Gly Glu Ala His Tyr Ser
130 135 140

Thr Cys Met Leu Leu Ala Gly Ile Leu Leu Lys Met Gly Ala Tyr Gly
145 150 155 160

Leu Ile Arg Ile Asn Met Glu Leu Leu Pro His Ala His Ser Ile Phe
165 170 175

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Ser Pro Trp Leu Met Ile Ile Gly Thr Ile Gln Ile Ile Tyr Ala Ala
180 185 190

Ser Thr Ser Leu Gly Gln Arg Asn Leu Lys Lys Arg Ile Ala Tyr Pro
195 200 205

Ser Val Ser His Met Gly Phe Ile Ile Ile Gly Ile Ser Ser Leu Thr
210 215 220

Asp Thr Gly Leu Asn Gly Ala Leu Leu Gln Ile Ile Ser His Gly Phe
225 230 235 240

Ile Gly Ala Ala Leu Phe Phe Leu Ala Gly Thr Thr Tyr Asp Arg Ile
245 250 255

Arg Leu Val Tyr Leu Asp Glu Met Gly Gly Ile Ala Ile Pro Met Pro
260 265 270

Lys Met Phe Thr
275

<210> 740
<211> 76
<212> PRT
<213> Sus scrofa

<400> 740
Leu Gly Tyr Tyr Pro Ser Ile Met His Arg Leu Pro Thr Tyr His Asn
1 5 10 15

Leu Ser Met Ser Gln Lys Ser Ala Ser Ser Leu Leu Asp Leu Ile Trp
20 25 30

Leu Glu Thr Ile Leu Pro Lys Thr Thr Ser Phe Ile Gln Met Lys Met
35 40 45

Ser Ile Met Val Ser Asn Gln Lys Gly Leu Ile Lys Leu Tyr Phe Leu
50 55 60

Ser Phe Leu Ile Thr Ile Met Ile Ser Met Thr Leu
65 70 75

<210> 741
<211> 76
<212> PRT
<213> Salmo salar

<400> 741
Trp Glu Ile Gln Gln Met Phe Ala Ser Ser Lys Glu Leu Asp Leu Thr
1 5 10 15

Leu Pro Leu Met Gly Leu Ile Leu Ala Ala Thr Gly Lys Ser Ala Gln
20 25 30

Phe Gly Leu His Pro Trp Leu Pro Ser Ala Met Glu Gly Pro Thr Pro
35 40 45

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Val Ser Ala Leu Leu His Ser Ser Thr Met Val Val Ala Gly Ile Phe
50 55 60

Leu Leu Ile Arg Leu His Pro Leu Met Glu Asn Asn
65 70 75

<210> 742
<211> 251
<212> PRT
<213> Sus scrofa

<400> 742
Val Ser Trp Arg Ala Val Ser Trp Gly Leu Gly Leu Gln Phe Ala Leu
1 5 10 15

Gly Leu Phe Val Ile Arg Thr Glu Pro Gly Phe Ile Ala Phe Gln Trp
20 25 30

Leu Gly Asp Gln Ile Gln Ile Phe Leu Ser Tyr Thr Glu Ala Gly Ser
35 40 45

Ser Phe Val Phe Gly Glu Ala Leu Val Lys Asp Val Phe Ala Phe Gln
50 55 60

Val Leu Pro Ile Ile Val Phe Phe Ser Cys Ala Met Ser Val Leu Tyr
65 70 75 80

Tyr Val Gly Leu Met Gln Trp Val Ile Leu Lys Ile Ser Trp Leu Met
85 90 95

Gln Ala Thr Met Gly Thr Thr Ala Thr Glu Thr Leu Ser Val Ala Gly
100 105 110

Asn Ile Phe Val Ser Gln Thr Glu Ala Pro Leu Leu Ile Arg Pro Tyr
115 120 125

Leu Ala Asp Met Thr Leu Ser Glu Ile His Val Val Met Thr Gly Gly
130 135 140

Tyr Ala Thr Ile Ala Gly Ser Leu Leu Gly Ala Tyr Ile Ser Phe Gly
145 150 155 160

Ile Asp Ala Ala Ser Leu Ile Ala Ala Ser Val Met Ala Ala Pro Cys
165 170 175

Ala Leu Ala Leu Ser Lys Leu Val Tyr Pro Glu Val Glu Glu Ser Lys
180 185 190

Phe Lys Arg Glu Glu Gly Val Lys Leu Thr Tyr Gly Asp Ala Gln Asn
195 200 205

Leu Leu Glu Ala Ala Ser Ser Gly Ala Ala Met Ser Val Arg Val Val
210 215 220

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Thr Asn Ile Ala Ala Asn Leu Ile Ala Phe Leu Ala Val Leu Ala Phe
 225 230 235 240

Ile Asn Ala Ala Leu Ser Trp Leu Gly Asp Met
 245 250

<210> 743

<211> 226

<212> PRT

<213> Solanum tuberosum

<400> 743

Met Ile Phe Gln Ser Phe Leu Leu Gly Asn Leu Val Ser Leu Cys Met
 1 5 10 15

Lys Ile Ile Asn Ser Val Val Val Val Gly Leu Tyr Tyr Gly Phe Leu
 20 25 30

Thr Thr Phe Ser Ile Gly Pro Ser Tyr Leu Phe Leu Leu Arg Ala Leu
 35 40 45

Val Met Glu Glu Gly Thr Glu Lys Lys Val Ser Ala Thr Thr Gly Phe
 50 55 60

Ile Thr Gly Gln Leu Met Met Phe Ile Ser Ile Tyr Tyr Ala Pro Leu
 65 70 75 80

His Leu Ala Leu Gly Arg Pro His Thr Ile Thr Val Leu Ala Leu Pro
 85 90 95

Tyr Leu Leu Phe His Phe Phe Trp Asn Asn His Lys His Phe Phe Asp
 100 105 110

Tyr Gly Ser Thr Thr Arg Asn Ser Met Arg Asn Leu Ser Ile Gln Cys
 115 120 125

Val Phe Leu Asn Asn Leu Ile Phe Gln Leu Phe Asn His Phe Ile Leu
 130 135 140

Pro Ser Ser Met Leu Ala Arg Leu Val Asn Ile Tyr Leu Phe Arg Cys
 145 150 155 160

Asn Asn Lys Ile Leu Phe Val Thr Ser Gly Phe Val Gly Trp Leu Ile
 165 170 175

Gly His Ile Leu Phe Met Lys Trp Leu Gly Leu Val Leu Val Trp Ile
 180 185 190

Arg Gln Asn His Ser Ile Arg Ser Asn Lys Tyr Ile Arg Ser Asn Lys
 195 200 205

Tyr Leu Val Leu Glu Leu Arg Asn Ser Met Ala Arg Ile Phe Ser Ile
 210 215 220

Leu Leu

225

<210> 744
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 744
 Met Ala Glu Ala Gly Thr Gly Phe Leu Glu Gln Leu Lys Ser Cys Ile
 1 5 10 15
 Val Trp Ser Trp Thr Tyr Leu Trp Thr Val Trp Phe Phe Ile Val Leu
 20 25 30
 Phe Leu Val Tyr Ile Leu Arg Val Pro Leu Lys Ile Asn Asp Asn Leu
 35 40 45
 Ser Thr Val Ser Met Phe Leu Asn Thr Leu Thr Pro Lys Phe Tyr Val
 50 55 60
 Ala Leu Thr Gly Thr Ser Ser Leu Ile Ser Gly Leu Ile Leu Ile Phe
 65 70 75 80
 Glu Trp Trp Tyr Phe Arg Lys Tyr Gly Thr Ser Phe Ile Glu Gln Val
 85 90 95
 Ser Val Ser His Leu
 100

<210> 745
 <211> 176
 <212> PRT
 <213> Capra hircus

<400> 745
 His Glu Thr Gly Ser Asn Asn Pro Thr Gly Ile Pro Ser Asp Thr Asp
 1 5 10 15
 Lys Ile Pro Phe His Pro Tyr Tyr Thr Ile Lys Asp Ile Leu Gly Ala
 20 25 30
 Met Leu Leu Ile Leu Val Leu Met Leu Leu Val Leu Phe Thr Pro Asp
 35 40 45
 Leu Leu Gly Asp Pro Asp Asn Tyr Thr Pro Ala Asn Pro Leu Asn Thr
 50 55 60
 Pro Pro His Ile Lys Pro Glu Trp Tyr Phe Leu Phe Ala Tyr Ala Ile
 65 70 75 80
 Leu Arg Ser Ile Pro Asn Lys Leu Gly Gly Val Leu Ala Leu Val Leu
 85 90 95
 Ser Ile Leu Ile Leu Val Leu Val Pro Phe Leu His Thr Ser Lys Gln
 100 105 110

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Arg Ser Met Met Phe Arg Pro Ile Ser Gln Cys Met Phe Trp Ile Leu
 115 120 125

Val Ala Asp Leu Leu Thr Leu Thr Trp Ile Gly Gly Gln Pro Val Glu
 130 135 140

His Pro Tyr Ile Ile Ile Gly Gln Leu Ala Ser Ile Met Tyr Phe Leu
 145 150 155 160

Ile Ile Leu Val Met Met Pro Val Ala Ser Thr Ile Glu Asn Asn Leu
 165 170 175

<210> 746

<211> 101

<212> PRT

<213> Sus scrofa

<400> 746

Met Ala Pro Ala Leu Leu Leu Val Pro Ala Ala Leu Ala Ser Phe Ile
 1 5 10 15

Leu Ala Phe Gly Thr Gly Val Glu Phe Val Arg Phe Thr Ser Leu Arg
 20 25 30

Pro Leu Leu Gly Gly Ile Pro Glu Ser Gly Gly Pro Asp Ala Arg Gln
 35 40 45

Gly Trp Leu Ala Ala Leu Gln Asp Gln Ser Ile Leu Val Pro Leu Ala
 50 55 60

Trp Asp Leu Gly Leu Leu Leu Leu Phe Val Gly Gln His Ser Leu Met
 65 70 75 80

Ala Thr Glu Thr Val Lys Ala Trp Met Ser Arg Tyr Phe Gly Val Leu
 85 90 95

Gln Arg Ser Leu Tyr
 100

<210> 747

<211> 76

<212> PRT

<213> Solanum tuberosum

<400> 747

Cys Leu Leu Ser Leu Gly Gly Leu Pro Pro Leu Ala Gly Phe Phe Gly
 1 5 10 15

Lys Leu Tyr Leu Phe Trp Cys Gly Trp Gln Ala Gly Leu Tyr Phe Leu
 20 25 30

Val Leu Ile Gly Leu Leu Thr Ser Val Val Ser Ile Tyr Tyr Tyr Leu
 35 40 45

Lys Ile Ile Lys Leu Leu Met Thr Gly Arg Asn Gln Glu Ile Thr Pro
 50 55 60

His Val Arg Asn Tyr Arg Arg Ser Pro Leu Arg Ser
65 70 75

<210> 748
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 748
Cys Leu Leu Ser Leu Gly Gly Leu Pro Pro Leu Ala Gly Phe Phe Gly
1 5 10 15

Lys Leu Tyr Leu Phe Trp Cys Gly Trp Gln Ala Gly Leu Tyr Phe Leu
20 25 30

Val Leu Ile Gly Leu Leu Thr Ser Val Val Ser Ile Tyr Tyr Tyr Leu
35 40 45

Lys Ile Ile Lys Leu Leu Met Thr Gly Arg Asn Gln Glu Ile Thr Pro
50 55 60

His Val Arg Asn Tyr Arg Arg Ser Pro Leu Arg Ser
65 70 75

<210> 749
<211> 201
<212> PRT
<213> Sus scrofa

<400> 749
Tyr Glu Phe Asn Gly Ile Phe Ser Val Leu Met Leu Ala Trp Ile Phe
1 5 10 15

Leu Pro Ile Tyr Ile Ala Gly Gln Val Thr Thr Met Pro Glu Tyr Leu
20 25 30

Arg Lys Arg Phe Gly Gly Ser Arg Ile Pro Ile Thr Leu Ala Val Leu
35 40 45

Tyr Leu Phe Ile Tyr Ile Phe Thr Lys Ile Ser Val Asp Met Tyr Ala
50 55 60

Gly Ala Ile Phe Ile Gln Gln Ser Leu His Leu Asn Leu Tyr Leu Ala
65 70 75 80

Ile Val Gly Leu Leu Ala Ile Thr Ala Leu Tyr Thr Ile Ala Gly Gly
85 90 95

Leu Ala Ala Val Ile Tyr Thr Asp Ala Leu Gln Thr Leu Ile Met Leu
100 105 110

Ile Gly Ala Leu Thr Leu Met Gly Tyr Ser Phe Ala Ala Val Gly Gly
115 120 125

Met Glu Gly Leu Lys Glu Lys Tyr Phe Leu Ala Leu Ala Ser Asn Arg
130 135 140

Ser Gly Asn Ser Ser Cys Gly Leu Pro Arg Glu Asp Ala Phe His Ile
145 150 155 160

Phe Arg Asp Pro Leu Thr Ser Asp Leu Pro Trp Pro Gly Ile Leu Phe
165 170 175

Gly Met Ser Ile Pro Ser Leu Trp Tyr Trp Cys Thr Asp Gln Val Ile
180 185 190

Val Gln Arg Thr Leu Ala Ala Lys Asn
195 200

<210> 750
<211> 76
<212> PRT
<213> Sus scrofa

<400> 750
Met Asn Ile Phe Asp Arg Lys Ile Asn Phe Asp Ala Leu Leu Lys Phe
1 5 10 15

Ser His Ile Thr Pro Ser Thr Gln Gln His Leu Lys Lys Val Tyr Ala
20 25 30

Ser Phe Ala Leu Cys Met Phe Val Ala Ala Ala Gly Ala Tyr Val His
35 40 45

Val Val Thr Arg Phe Ile Gln Ala Gly Leu Leu Ser Ala Leu Gly Ser
50 55 60

Leu Gly Leu Met Ile Trp Leu Met Ala Thr Pro His
65 70 75

<210> 751
<211> 76
<212> PRT
<213> Sus scrofa

<400> 751
Met Val Leu Val Trp Leu Leu Leu Leu Leu Thr Leu Leu Ala Gly Ala
1 5 10 15

Arg Leu Leu Trp Gly Gln Trp Lys Leu Arg Asn Leu His Leu Pro Pro
20 25 30

Leu Val Pro Gly Phe Leu His Leu Leu Gln Pro Asn Leu Pro Ile Tyr
35 40 45

Leu Leu Gly Leu Thr Gln Arg Leu Gly Pro Ile Tyr Arg Leu Arg Leu
50 55 60

Gly Leu Gln Asp Val Val Val Leu Asn Ser Lys Arg
65 70 75

<210> 752

<211> 276

<212> PRT

<213> Sus scrofa

<400> 752

Leu Gln Trp Ser Thr Leu Val Gln Gly Phe Leu His Thr Phe His Gly
 1 5 10 15

Gly His Ile His Ile Gly Val Glu Ser Met Ile Asn Ala Asp Phe Cys
 20 25 30

Ala Gly Ala Val Leu Ile Ser Phe Gly Ala Ile Leu Gly Lys Thr Gly
 35 40 45

Pro Ala Gln Leu Leu Leu Met Ala Leu Leu Glu Val Val Leu Phe Gly
 50 55 60

Leu Asn Glu Phe Val Leu Leu Ser Leu Leu Gly Val Lys Asp Ala Gly
 65 70 75 80

Gly Ser Met Thr Ile His Thr Phe Gly Ala Tyr Phe Gly Leu Val Leu
 85 90 95

Ser Arg Val Leu Tyr Arg Pro Gln Leu Glu Lys Ser Lys His Arg Gln
 100 105 110

Ser Ser Val Tyr His Ser Asp Leu Phe Ala Met Ile Gly Thr Ile Phe
 115 120 125

Leu Trp Ile Phe Trp Pro Ser Phe Asn Ser Ala Pro Thr Pro Leu Gly
 130 135 140

Asp Gly Gln His Arg Thr Ala Leu Asn Thr Tyr Tyr Ser Leu Thr Ala
 145 150 155 160

Ser Thr Leu Ser Thr Phe Ala Leu Ser Ala Leu Val Gly Arg Asp Gly
 165 170 175

Arg Leu Asp Met Val His Val Gln Asn Ala Ala Leu Ala Gly Gly Val
 180 185 190

Val Val Gly Thr Ser Ala Glu Met Met Leu Thr Pro Phe Gly Ala Leu
 195 200 205

Ala Ala Gly Phe Leu Ala Gly Thr Val Ser Thr Leu Gly Phe Lys Phe
 210 215 220

Phe Thr Pro Ile Leu Glu Ser Lys Phe Lys Ile Gln Asp Thr Cys Gly
 225 230 235 240

Val His Asn Leu His Gly Met Pro Gly Val Leu Gly Ala Leu Leu Gly
 245 250 255

Val Leu Val Ala Gly Leu Ala Thr His Asp Ser Tyr Gly Glu Gly Leu
 260 265 270

Glu Ser Val Phe
275

<210> 753
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 753
Gly Thr Ala Ile Leu Thr Leu Leu Gly Gly Phe His Pro Gln Thr Gln
1 5 10 15

Ser Leu Trp Leu Thr Asp Met Ala His His His Leu Ala Ile Ala Phe
20 25 30

Ile Phe Leu Val Ala Gly His Met Tyr Arg Thr Asn Phe Gly Ile Gly
35 40 45

His Ser Met Lys Asp Leu Leu Asp Ala His Ile Pro Pro Gly Gly Arg
50 55 60

Leu Gly Arg Gly His Lys Gly Leu Tyr Asp Thr Ile Asn Asn Ser Leu
65 70 75 80

His Phe Gln Leu Gly Leu Ala Leu Ala Ser Leu Gly Val Ile Thr Ser
85 90 95

Leu Val Ala Gln His
100

<210> 754
<211> 176
<212> PRT
<213> Sus scrofa

<400> 754
Leu Gln Trp Ser Thr Leu Val Gln Gly Phe Leu His Thr Phe His Gly
1 5 10 15

Gly His Ile His Ile Gly Val Glu Ser Met Ile Asn Ala Asp Phe Cys
20 25 30

Ala Gly Ala Val Leu Ile Ser Phe Gly Ala Ile Leu Gly Lys Thr Gly
35 40 45

Pro Ala Gln Leu Leu Leu Met Ala Leu Leu Glu Val Val Leu Phe Gly
50 55 60

Leu Asn Glu Phe Val Leu Leu Ser Leu Leu Gly Val Lys Asp Ala Gly
65 70 75 80

Gly Ser Met Thr Ile His Thr Phe Gly Ala Tyr Phe Gly Leu Val Leu
85 90 95

Ser Arg Val Leu Tyr Arg Pro Gln Leu Glu Lys Ser Lys His Arg Gln
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100

105

110

Ser Ser Val Tyr His Ser Asp Leu Phe Ala Met Ile Gly Thr Ile Phe
 115 120 125

Leu Trp Ile Phe Trp Pro Ser Phe Asn Ser Ala Pro Thr Pro Leu Gly
 130 135 140

Asp Gly Gln His Arg Thr Ala Leu Asn Thr Tyr Tyr Ser Leu Thr Ala
 145 150 155 160

Ser Thr Leu Ser Thr Phe Ala Leu Ser Ala Leu Val Gly Arg Asp Gly
 165 170 175

<210> 755

<211> 76

<212> PRT

<213> Salmo salar

<400> 755

Phe His Trp Pro Leu Gly Glu Thr Leu Cys Lys Ile Val Gly Leu Ile
 1 5 10 15

Phe Tyr Ile Asn Thr Tyr Ala Gly Val Asn Phe Met Thr Cys Leu Ser
 20 25 30

Val Asp Arg Phe Ile Ala Val Val Leu Pro Leu Arg Phe Ala Arg Phe
 35 40 45

Arg Lys Val Ser Asn Val Arg Tyr Ile Cys Val Gly Val Trp Leu Leu
 50 55 60

Val Leu Met Gln Thr Leu Pro Leu Leu Ser Met Pro
 65 70 75

<210> 756

<211> 276

<212> PRT

<213> Sus scrofa

<400> 756

Pro Tyr Gly Phe Thr Gly Thr Leu Ala Gly Ala Ala Thr Cys Phe Tyr
 1 5 10 15

Ala Phe Val Gly Phe Asp Cys Ile Ala Thr Thr Gly Glu Glu Val Arg
 20 25 30

Asn Pro Gln Lys Ala Ile Pro Ile Gly Ile Val Thr Ser Leu Leu Val
 35 40 45

Cys Phe Met Ala Tyr Phe Gly Val Ser Ala Ala Leu Thr Leu Met Met
 50 55 60

Pro Tyr Tyr Val Leu Asp Glu Lys Ser Pro Leu Pro Val Ala Phe Glu
 65 70 75 80

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Tyr Val Gly Trp Gly Pro Ala Lys Tyr Val Val Ala Ala Gly Ser Leu
85 90 95

Cys Ala Leu Ser Thr Ser Leu Leu Gly Ser Met Phe Pro Leu Pro Arg
100 105 110

Ile Leu Phe Ala Met Ala Arg Asp Gly Leu Leu Phe Arg Phe Leu Ala
115 120 125

Arg Val Ser Lys Arg Gln Ser Pro Val Ala Ala Thr Leu Thr Ala Gly
130 135 140

Val Ile Ser Ala Val Met Ala Phe Leu Phe Asp Leu Lys Ala Leu Val
145 150 155 160

Asp Met Met Ser Ile Gly Thr Leu Leu Ala Tyr Ser Leu Val Ala Ala
165 170 175

Cys Val Leu Ile Leu Arg Tyr Gln Pro Gly Leu Ser Tyr Glu Gln Pro
180 185 190

Lys Tyr Cys Pro Glu Lys Glu Ala Leu Gly Ser Cys Ala Ser Ala Ala
195 200 205

Ser Lys Ser Lys Ser Gln Val Thr Val Leu Pro Glu Trp Gly Phe Ser
210 215 220

Leu Arg Ala Phe Phe Ser Pro Ser Leu Leu Pro Thr Lys Gln Ser Ala
225 230 235 240

Ser Leu Val Ser Phe Leu Val Gly Phe Leu Ala Phe Leu Ile Leu Gly
245 250 255

Leu Ser Ile Leu Thr Thr Tyr Gly Val His Ala Ile Ala Arg Leu Glu
260 265 270

Ala Trp Ser Leu
275

<210> 757
<211> 101
<212> PRT
<213> Salmo salar

<400> 757
Met Tyr Thr Ile His Phe Tyr Val Leu Phe Val Leu Leu Thr Val Arg
1 5 10 15

Cys Ser Ser Ser Phe Ile Gly Asn Gly Glu Asn Tyr Arg Arg Asn Leu
20 25 30

Ser Leu Glu Leu Asn Pro Gly Leu Asn Ser Ser Leu Met Pro Leu Pro
35 40 45

Pro Gly Val Gly Leu Leu His Val Arg Ala Leu Gly Lys Asn Asn Thr
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50 55 60

Leu His Tyr Leu Leu Cys Ser Gln Gly Ala Pro Ala Leu Leu Leu Val
65 70 75 80

His Thr Asn Ser Thr Ser Ser Lys Val Lys Val Asp Trp Pro Ala Phe
85 90 95

Leu Val Gln Asn Thr
100

<210> 758
<211> 101
<212> PRT
<213> Sus scrofa

<400> 758
Met Val Leu Glu Met Leu Asn Pro Met Asn Ile Ser Ser Met Val Ser
1 5 10 15

Glu Ala Val Leu Phe Gly Ser Ile Ala Ile Leu Leu Leu Ile Gly Leu
20 25 30

Leu Leu Trp Val Trp Asn Tyr Glu Asp Thr Ser Ser Ile Pro Gly Pro
35 40 45

Gly Tyr Phe Leu Gly Ile Gly Pro Leu Ile Ser His Phe Arg Phe Leu
50 55 60

Trp Met Gly Ile Gly Ser Ala Cys Asn Tyr Tyr Asn Lys Met Tyr Gly
65 70 75 80

Glu Phe Met Arg Val Trp Ile Gly Gly Glu Glu Thr Leu Ile Ile Ser
85 90 95

Lys Ser Ser Ser Ile
100

<210> 759
<211> 76
<212> PRT
<213> Sus scrofa

<400> 759
Asn Gln Val Tyr Ser Thr Leu Tyr Ser Met Ile Thr Val Val Gly Phe
1 5 10 15

Phe Gly Asn Gly Phe Val Leu Tyr Val Leu Ile Lys Thr Tyr His Glu
20 25 30

Lys Ser Ala Tyr Gln Val Tyr Met Ile Asn Leu Ala Val Ala Asp Leu
35 40 45

Leu Cys Val Cys Thr Leu Pro Leu Arg Val Val Tyr Tyr Val His Lys
50 55 60

Gly Ile Trp Leu Phe Gly Asp Phe Leu Cys Arg Leu
65 70 75

<210> 760
<211> 151
<212> PRT
<213> Sus scrofa

<400> 760
Val Tyr Asp Thr Pro Gly Ser Ser Ile Val Thr Glu Phe Asn Leu Val
1 5 10 15

Cys Glu Ala Ala Trp Lys Val Asp Leu Phe Gln Ser Cys Val Asn Val
20 25 30

Gly Phe Phe Val Gly Ser Met Gly Ile Gly Tyr Ile Ala Asp Arg Leu
35 40 45

Val Gly Ser Ser Ala Ser Trp Pro Pro Pro His Gln Cys Arg Leu Gly
50 55 60

Arg Pro Asp Ala Val Ala Pro Asp Tyr Val Ser Leu Leu Val Phe Arg
65 70 75 80

Leu Leu Gln Gly Leu Val Ser Lys Gly Ser Trp Met Ala Gly Tyr Thr
85 90 95

Leu Ile Thr Glu Phe Val Gly Leu Gly Tyr Arg Lys Thr Val Ala Ile
100 105 110

Leu Tyr Gln Thr Ala Phe Ser Val Gly Leu Val Leu Leu Ser Gly Leu
115 120 125

Ala Tyr Ala Val Pro His Trp Arg Ser Leu Gln Leu Ala Val Ser Leu
130 135 140

Pro Ile Phe Leu Leu Leu Leu
145 150

<210> 761
<211> 201
<212> PRT
<213> Sus scrofa

<400> 761
Gln Lys Arg Tyr Gly Gly Gln Arg Ile Arg Met Tyr Leu Ser Val Leu
1 5 10 15

Ser Leu Leu Leu Ser Ile Phe Thr Lys Ile Ser Ile Asp Leu Tyr Ala
20 25 30

Gly Ala Leu Phe Val His Ile Cys Leu Gly Trp Asn Phe Tyr Leu Ser
35 40 45

Thr Cys Leu Met Leu Val Ile Thr Ala Leu Tyr Thr Ile Ala Gly Gly
50 55 60

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Leu Ala Ala Val Ile Tyr Thr Asp Ala Leu Gln Thr Leu Ile Met Val
65 70 75 80

Val Gly Ala Val Ile Leu Thr Val Lys Ala Phe Gln Gln Ile Gly Gly
85 90 95

Tyr Glu Gln Leu Ala Ala Ala Tyr Ala Gln Ala Ile Pro Ser Lys Thr
100 105 110

Ile Ser Asn Thr Thr Cys His Leu Pro Arg Ala Asp Ala Met His Met
115 120 125

Phe Arg Asp Pro Ala Thr Gly Asp Leu Pro Trp Thr Gly Met Thr Phe
130 135 140

Gly Leu Thr Ile Met Ala Thr Trp Tyr Trp Cys Thr Asp Gln Val Ile
145 150 155 160

Val Gln Arg Ser Leu Ser Ala Arg Asp Leu Asn His Ala Lys Gly Gly
165 170 175

Ser Ile Leu Ala Ser Tyr Leu Lys Met Leu Pro Met Gly Leu Met Val
180 185 190

Met Pro Gly Met Ile Ser Arg Val Leu
195 200

<210> 762
<211> 101
<212> PRT
<213> Salmo salar

<400> 762
Lys Cys Leu Phe Ala Phe Tyr Gly Gly Glu Thr Val Tyr His Lys Tyr
1 5 10 15

Leu Ile Gly Leu Gln Phe Tyr Asn Val Phe Leu Phe Phe Trp Cys Ala
20 25 30

Asn Phe Val Thr Ala Leu Gly Gln Met Thr Leu Ala Gly Ala Phe Ala
35 40 45

Ser Tyr Tyr Trp Ala Leu Val Lys Pro Asp Asp Met Pro Ala Phe Pro
50 55 60

Ile Phe Ser Ser Leu Gly Arg Ser Leu Arg Tyr His Thr Gly Ser Leu
65 70 75 80

Ala Phe Gly Ser Leu Ile Leu Ser Ile Ile Gln Ile Ile Arg Val Leu
85 90 95

Leu Glu Tyr Ile Asp
100

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<210> 763

<211> 76

<212> PRT

<213> Solanum tuberosum

<400> 763

Met Thr Ile Arg Asn Gln Arg Leu Ser Leu Leu Lys Gln Pro Ile Ser
1 5 10 15

Ser Ile Leu Asn Gln His Leu Ile Asp Tyr Pro Thr Pro Ser Asn Leu
20 25 30

Ser Tyr Trp Trp Gly Phe Gly Ser Leu Ala Gly Ile Cys Leu Val Ile
35 40 45

Gln Ile Val Thr Gly Val Phe Leu Ala Met His Tyr Thr Pro His Val
50 55 60

Asp Leu Ala Phe Asn Ser Val Glu His Ile Met Arg
65 70 75

<210> 764

<211> 126

<212> PRT

<213> Solanum tuberosum

<400> 764

Arg Val Leu Arg His Arg Asp Ala Ile Ile Ser His Leu Asn Trp Ala
1 5 10 15

Cys Ile Phe Leu Gly Phe His Ser Phe Gly Leu Tyr Ile His Asn Asp
20 25 30

Thr Met Ser Ala Leu Gly Arg Pro Gln Asp Met Phe Ser Asp Thr Ala
35 40 45

Ile Gln Leu Gln Pro Val Phe Ala Gln Trp Ile Gln Asn Thr His Ala
50 55 60

Leu Ala Pro Gly Ala Thr Ala Pro Gly Ala Thr Ala Ser Thr Ser Leu
65 70 75 80

Thr Trp Gly Gly Gly Asp Leu Val Ala Val Gly Gly Lys Val Ala Leu
85 90 95

Leu Pro Ile Pro Leu Gly Thr Ala Asp Phe Leu Val His His Ile His
100 105 110

Ala Phe Thr Ile His Val Thr Val Leu Ile Leu Leu Lys Gly
115 120 125

<210> 765

<211> 151

<212> PRT

<213> Sus scrofa

<400> 765

Met Ala Arg Gly Cys Leu Cys Cys Leu Lys Tyr Met Met Phe Leu Phe
Page 468

1 5 10 15
 Asn Leu Ile Phe Trp Leu Cys Gly Cys Gly Leu Leu Gly Val Gly Ile
 20 25 30
 Trp Leu Ser Val Ser Gln Gly Asn Phe Ala Thr Phe Ser Pro Ser Phe
 35 40 45
 Pro Ser Leu Ser Ala Ala Asn Leu Val Ile Ala Ile Gly Thr Ile Val
 50 55 60
 Met Val Thr Gly Phe Leu Gly Cys Leu Gly Ala Ile Lys Glu Asn Arg
 65 70 75 80
 Cys Leu Leu Leu Ser Phe Phe Ile Val Leu Leu Ile Ile Leu Leu Ala
 85 90 95
 Glu Leu Ile Leu Ile Ile Leu Phe Phe Val Tyr Met Asp Lys Val Asn
 100 105 110
 Glu Asn Ala Arg Lys Asp Leu Lys Glu Gly Leu Leu Leu Tyr Asn Ser
 115 120 125
 Glu Asn Asn Val Gly Leu Lys Asn Ala Trp Asn Ile Ile Gln Ala Glu
 130 135 140
 Met His Cys Cys Gly Val Thr
 145 150

 <210> 766
 <211> 76
 <212> PRT
 <213> Capra hircus

 <400> 766
 His Tyr Glu Lys Gly Ser Ile Pro Val Leu Ile Ile His Ile Phe Leu
 1 5 10 15
 Val Phe Ser Phe Phe Leu Val Phe Leu Ile Ile Leu Phe Cys Asn Leu
 20 25 30
 Val Ile Ile Arg Thr Leu Leu Thr Gln Gln Val Gln Met Gln Arg Asn
 35 40 45
 Ala Glu Val Lys Arg Arg Ala Leu Trp Met Val Cys Thr Val Leu Ala
 50 55 60
 Val Phe Val Ile Cys Phe Val Pro His His Leu Val
 65 70 75

<210> 767
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 767

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Asp Leu His Trp Leu Ser Ile Val Ala Ala Cys Ile Gly Arg Met Gly
1 5 10 15

Ile Thr Ile Val Phe Gln Met Val Cys Leu Val Ser Ala Glu Leu Tyr
20 25 30

Pro Thr Phe Ile Arg Asn Leu Gly Val Met Val Cys Ser Ser Leu Cys
35 40 45

Asp Leu Gly Gly Val Val Ala Pro Phe Leu Val Phe Arg Leu Thr Glu
50 55 60

Val Trp Arg Gly Leu Pro Leu Val Leu Phe Ala Ala Leu Gly Leu Val
65 70 75 80

Ala Gly Gly Met Ser Leu Leu Leu Pro Glu Thr Lys Gly Val Ala Leu
85 90 95

Pro Glu Thr Ile Glu
100

<210> 768

<211> 176

<212> PRT

<213> Sus scrofa

<400> 768

Met Leu Asn Leu Thr Ser Gln Val Pro Glu Pro Ala Leu Asn Gly Thr
1 5 10 15

Leu Pro Gln Ser Ser Ser Cys Phe His Ser Asp Trp Trp Asn Trp Leu
20 25 30

Asn Thr Ile Gln Ala Pro Phe Leu Trp Val Leu Phe Leu Leu Ala Ala
35 40 45

Leu Glu Asn Ile Phe Val Leu Ser Val Phe Cys Leu His Lys Asn Ser
50 55 60

Cys Thr Val Ala Glu Ile Tyr Leu Gly Asn Leu Ala Met Ala Asp Leu
65 70 75 80

Ile Leu Ala Leu Gly Leu Pro Phe Trp Ala Ile Thr Ile Ala Asn His
85 90 95

Phe Asp Trp Leu Phe Gly Glu Val Leu Cys Arg Val Val Asn Thr Met
100 105 110

Ile Tyr Met Asn Leu Tyr Ser Ser Ile Cys Phe Leu Met Leu Val Ser
115 120 125

Ile Asp Arg Tyr Leu Ala Leu Val Lys Thr Met Ser Met Gly Arg Met
130 135 140

Arg Gly Val Arg Trp Ala Lys Leu Tyr Ser Leu Val Ile Trp Gly Cys

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Met Gln Val Met Arg Thr Phe Asn Gln Pro Pro Thr Ser Ser His Pro
1 5 10 15

Thr Pro Thr Leu Asn Asp Ser Asp Thr Cys Ile Thr Leu Tyr Asn His
20 25 30

Arg Gly Tyr Ala Arg Val Leu Met Pro Leu Phe Tyr Cys Ile Val Phe
35 40 45

Phe Val Gly Leu Leu Gly Asn Ala Leu Ala Phe His Ile Ile Arg Pro
50 55 60

Asn Val Lys Lys Ile Asn Ser Thr Thr Leu Tyr Ser Ala Asn Leu Val
65 70 75 80

Ile Ser Asp Ile Leu Phe Thr Leu Ser Leu Pro Leu Arg Ile Ile Tyr
85 90 95

Tyr Ala Leu Gly Phe His Trp Pro Leu Gly Glu Thr Leu Cys Lys Ile
100 105 110

Val Gly Leu Ile Phe Tyr Ile Asn Thr Tyr Ala Gly Val Asn Phe Met
115 120 125

Thr Cys Leu Ser Val Asp Arg Phe Ile Ala Val Val Leu Pro Leu Arg
130 135 140

Phe Ala Arg Phe Arg Lys Val Ser Asn Val Arg Tyr Ile Cys Val Gly
145 150 155 160

Val Trp Leu Leu Val Leu Met Gln Thr Leu Pro Leu Leu Ser Met Pro
165 170 175

Met Thr Asn Glu Glu Pro Asp Gly Phe Ile Thr Cys Met Glu Tyr Pro
180 185 190

Asn Phe Glu Pro Val Pro Asn Ile Ser Tyr Ile Leu Ile Gly Ala Val
195 200 205

Phe Leu Gly Tyr Gly Val Pro Val Val Thr Ile Leu Val Cys Tyr Ser
210 215 220

Ile Leu
225

<210> 771
<211> 276
<212> PRT
<213> Solanum tuberosum

<400> 771
Val Thr Leu Cys Ala Val Leu Leu Phe Ala Gly Ala Val Ala Lys Ser
1 5 10 15

Ala Gln Phe Pro Leu His Val Trp Leu Pro Asp Ala Met Glu Gly Pro
Page 472

20

25

30

Thr Pro Ile Ser Ala Leu Ile His Ala Ala Thr Met Val Ala Ala Gly
 35 40 45
 Ile Phe Leu Val Ala Arg Leu Leu Pro Leu Phe Arg Val Ile Pro Tyr
 50 55 60
 Ile Met Tyr Leu Ile Ser Val Ile Gly Ile Ile Thr Val Leu Leu Gly
 65 70 75 80
 Ala Thr Leu Ala Leu Ala Gln Lys Asp Ile Lys Arg Gly Leu Ala Tyr
 85 90 95
 Ser Thr Met Ser Gln Leu Gly Tyr Met Met Leu Ala Leu Gly Met Gly
 100 105 110
 Ser Tyr Arg Ser Ala Leu Phe His Leu Ile Thr His Ala Tyr Ser Lys
 115 120 125
 Ala Leu Leu Phe Leu Gly Ser Gly Ser Ile Ile His Ser Met Glu Thr
 130 135 140
 Ile Val Gly Tyr Ser Pro Ala Lys Ser Gln Asn Met Gly Leu Met Gly
 145 150 155 160
 Gly Leu Arg Lys His Val Pro Ile Thr Lys Ile Thr Phe Leu Leu Gly
 165 170 175
 Thr Leu Ser Leu Cys Gly Ile Pro Pro Leu Ala Cys Phe Trp Ser Lys
 180 185 190
 Asp Glu Ile Leu Asn Asp Ser Trp Leu Tyr Ser Pro Ile Phe Ala Ile
 195 200 205
 Ile Ala Trp Ala Thr Ala Gly Leu Thr Ala Phe Tyr Met Phe Arg Ile
 210 215 220
 Tyr Leu Leu Thr Phe Glu Gly His Leu Asn Val His Phe Gln Asn Tyr
 225 230 235 240
 Asp Gly Lys His Lys Thr Pro Phe Tyr Ser Ile Ser Leu Trp Gly Lys
 245 250 255
 Asn Gly Val Lys Lys Asn Ser Cys Leu Leu Thr Met Asn Asn Asn Glu
 260 265 270
 Ser Thr Tyr Phe
 275

<210> 772
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 <212> PRT
 <213> Sus scrofa

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<400> 772

Asp Pro Ser Gly Arg Leu Cys Thr Phe Phe Gly Leu Thr Met Thr Ala
1 5 10 15

Phe Gly Leu Ser Ser Leu Phe Ile Ala Ser Ala Met Ala Val Glu Arg
20 25 30

Ala Leu Ala Ile Arg Ala Pro His Trp Tyr Ser Ser His Met Lys Thr
35 40 45

Ser Ala Thr Arg Ala Val Leu Leu Gly Val Trp Leu Ala Val Leu Ala
50 55 60

Phe Ala Leu Leu Pro Val Leu Gly Val Gly Gln Tyr Thr Ile Gln Trp
65 70 75 80

Pro Gly Thr Trp Cys Phe Ile Ser Thr Arg Thr Gly Gly Asn Glu Thr
85 90 95

Ser Ser Glu Asn Asn Trp Gly Asn Ile Phe Phe Ala Ser Ala Phe Ser
100 105 110

Phe Leu Gly Leu Ser Ala Leu Val Val Thr Phe Ala Cys Asn Leu Ala
115 120 125

Thr Ile Lys Ala Leu Val Ser Arg Cys Arg Ala Lys Ala Thr Ala Ser
130 135 140

Gln Ser Ser Ala Gln Trp Gly Arg Ile Thr Thr Glu Thr Ala Ile Gln
145 150 155 160

Leu Met Gly Ile Met Cys Val Leu Ser Val Cys Trp Ser Pro Leu Leu
165 170 175

Ile Met Met Leu Lys Thr Ile Phe Asn Gln Thr Ser Val Glu Tyr Cys
180 185 190

Lys Val Tyr Thr Glu Lys Gln Asn Glu Cys Asn Phe Phe Leu Ile Ala
195 200 205

Val Arg Leu Ala Ser Leu Asn Gln Ile Leu Asp Pro Trp Val Tyr Leu
210 215 220

Leu Leu
225

<210> 773

<211> 176

<212> PRT

<213> Sus scrofa

<400> 773

Val Asn Leu Met Ile Arg Gly Val Val Leu Phe Phe Ile Gly Val Phe
1 5 10 15

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Leu Ala Leu Val Leu Asn Leu Leu Gln Ile Gln Arg Asn Val Thr Leu
 20 25 30
 Phe Pro Pro Asp Val Ile Ala Ser Ile Phe Ser Ser Ala Trp Trp Val
 35 40 45
 Pro Pro Cys Cys Gly Thr Ala Ser Ala Val Ile Gly Leu Leu Tyr Pro
 50 55 60
 Cys Ile Asp Arg His Leu Gly Glu Pro His Lys Phe Lys Arg Glu Trp
 65 70 75 80
 Ser Ser Val Met Arg Cys Val Ala Val Phe Val Gly Ile Asn His Ala
 85 90 95
 Ser Ala Lys Val Asp Phe Asp Asn Asn Ile Gln Leu Ser Leu Thr Leu
 100 105 110
 Ala Ala Leu Ser Ile Gly Leu Trp Trp Thr Phe Asp Arg Ser Arg Ser
 115 120 125
 Gly Phe Gly Leu Gly Val Gly Ile Ala Phe Leu Ala Thr Leu Val Thr
 130 135 140
 Gln Leu Leu Val Tyr Asn Gly Val Tyr Gln Tyr Thr Ser Pro Asp Phe
 145 150 155 160
 Leu Tyr Val Arg Ser Trp Leu Pro Cys Ile Phe Phe Ala Gly Gly Ile
 165 170 175
 <210> 774
 <211> 176
 <212> PRT
 <213> Salmo salar
 <400> 774
 Trp Glu Ile Gln Gln Met Phe Ala Ser Ser Lys Glu Leu Asp Leu Thr
 1 5 10 15
 Leu Pro Leu Met Gly Leu Ile Leu Ala Ala Thr Gly Lys Ser Ala Gln
 20 25 30
 Phe Gly Leu His Pro Trp Leu Pro Ser Ala Met Glu Gly Pro Thr Pro
 35 40 45
 Val Ser Ala Leu Leu His Ser Ser Thr Met Val Val Ala Gly Ile Phe
 50 55 60
 Leu Leu Ile Arg Leu His Pro Leu Met Glu Asn Asn Gln Thr Ala Leu
 65 70 75 80
 Thr Thr Cys Leu Cys Leu Gly Ala Leu Thr Thr Leu Phe Thr Ala Thr
 85 90 95

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Cys Ala Leu Thr Gln Asn Asp Ile Lys Lys Ile Val Ala Phe Ser Thr
 100 105 110

Ser Ser Gln Leu Gly Leu Met Met Val Thr Ile Gly Leu Asn Gln Pro
 115 120 125

Gln Leu Ala Phe Leu His Ile Cys Thr His Ala Phe Phe Lys Ala Met
 130 135 140

Leu Phe Leu Cys Ser Gly Ser Ile Ile His Ser Leu Asn Asp Glu Gln
 145 150 155 160

Asp Ile Arg Lys Met Gly Gly Met His Asn Leu Thr Pro Phe Thr Ser
 165 170 175

<210> 775

<211> 76

<212> PRT

<213> Sus scrofa

<400> 775

Tyr Val Ala Cys Thr Ala Leu Ala Leu Gln Leu Val Met Arg Tyr Trp
 1 5 10 15

Glu Pro Val Pro Arg Gly Pro Val Leu Trp Glu Ala Gln Ala Glu Pro
 20 25 30

Trp Ala Thr Trp Val Pro Leu Leu Cys Phe Val Leu His Val Ile Ser
 35 40 45

Trp Leu Leu Ile Phe Ser Ile Leu Leu Val Phe Asp Tyr Ala Glu Leu
 50 55 60

Met Gly Leu Lys Gln Val Tyr Tyr His Val Leu Gly
 65 70 75

<210> 776

<211> 126

<212> PRT

<213> Salmo salar

<400> 776

Gln Asn Asp Ile Lys Lys Ile Val Ala Phe Ser Thr Ser Ser Gln Leu
 1 5 10 15

Gly Leu Met Met Val Thr Ile Gly Leu Asn Gln Pro Gln Leu Ala Phe
 20 25 30

Leu His Ile Cys Thr His Ala Phe Phe Lys Ala Met Leu Phe Leu Cys
 35 40 45

Ser Gly Ser Ile Ile His Ser Leu Asn Asp Glu Gln Asp Ile Arg Lys
 50 55 60

Met Gly Gly Met His Asn Leu Thr Pro Phe Thr Ser Ser Cys Leu Thr
 65 70 75 80

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Ile Gly Ser Leu Ala Leu Thr Gly Thr Pro Phe Leu Ala Gly Phe Phe
85 90 95

Ser Lys Asp Ala Ile Ile Glu Ala Leu Asn Thr Ser His Leu Asn Ala
100 105 110

Trp Ala Leu Thr Leu Thr Leu Leu Ala Thr Ser Phe Thr Ala
115 120 125

<210> 777
<211> 226
<212> PRT
<213> Sus scrofa

<400> 777
Leu Ser Phe Ala Asp Phe Cys Met Gly Leu Tyr Leu Leu Leu Ile Ala
1 5 10 15

Ser Val Asp Ala Gln Thr Lys Gly Gln Tyr Tyr Asn His Ala Ile Asp
20 25 30

Trp Gln Thr Gly Asn Gly Cys Ser Val Ala Gly Phe Phe Thr Val Phe
35 40 45

Ala Ser Glu Leu Ser Val Tyr Thr Leu Thr Val Ile Thr Leu Glu Arg
50 55 60

Trp His Thr Ile Thr Tyr Ala Ile Gln Leu Asp Gln Lys Leu Arg Leu
65 70 75 80

Arg His Ala Ile Pro Ile Met Leu Gly Gly Trp Leu Phe Ser Thr Leu
85 90 95

Ile Ala Met Leu Pro Leu Val Gly Val Ser Ser Tyr Met Lys Val Ser
100 105 110

Ile Cys Leu Pro Met Asp Val Glu Thr Thr Leu Ser Gln Val Tyr Ile
115 120 125

Leu Thr Ile Leu Ile Leu Asn Val Val Ala Phe Ile Ile Ile Cys Ala
130 135 140

Cys Tyr Ile Lys Ile Tyr Phe Ala Val Gln Asn Pro Glu Leu Met Ala
145 150 155 160

Thr Asn Lys Asp Thr Lys Ile Ala Lys Lys Met Ala Val Leu Ile Phe
165 170 175

Thr Asp Phe Thr Cys Met Ala Pro Ile Ser Phe Phe Ala Ile Ser Ala
180 185 190

Ala Leu Lys Val Pro Leu Ile Thr Val Thr Asn Ser Lys Val Leu Leu
195 200 205

Val Leu Phe Tyr Pro Val Asn Ser Cys Ala Asn Pro Phe Leu Tyr Ala
 210 215 220

Ile Phe
 225

<210> 778
 <211> 276
 <212> PRT
 <213> Sus scrofa

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 Ser Val Gln Glu Thr Trp Leu Ala Ala Leu Ile Leu Leu Ala Val Leu
 1 5 10 15

Glu Gly Ile Leu Leu Leu Met Leu Ile Phe Leu Arg Gln Arg Ile Arg
 20 25 30

Ile Ala Ile Ala Leu Leu Glu Glu Ala Ser Arg Ala Val Gly Gln Met
 35 40 45

Met Ser Thr Leu Phe Tyr Pro Leu Val Thr Phe Val Leu Leu Leu Val
 50 55 60

Cys Ile Ala Tyr Trp Ala Met Thr Ala Leu Tyr Leu Ala Thr Ser Gly
 65 70 75 80

Gln Pro Gln Tyr Val Leu Trp Ala Pro Asn Val Ser Leu Ala Gly Cys
 85 90 95

Glu Lys Val Met Met Asn Thr Ser Cys Asp Pro Met Asn Gln Pro Val
 100 105 110

Asn Ser Thr Cys Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Leu Ser
 115 120 125

Thr Gly Leu Val Gln Arg Ser Leu Phe Asn Leu Gln Ile Tyr Gly Val
 130 135 140

Leu Gly Leu Phe Trp Thr Ile Asn Trp Val Leu Ala Leu Gly Gln Cys
 145 150 155 160

Val Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro
 165 170 175

Arg Asp Ile Pro Thr Phe Pro Leu Ser Ser Ala Phe Ile Arg Thr Leu
 180 185 190

Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu Thr Leu
 195 200 205

Val Gln Ile Ala Arg Ala Ile Leu Glu Tyr Ile Asp His Lys Leu Arg
 210 215 220

Gly Ala Gln Asn Pro Val Ala Arg Cys Ile Met Cys Cys Phe Lys Cys
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Leu Pro Pro Pro Asn Ala Thr Leu Cys Asp Gly Ala Gln Glu Ala Trp
20 25 30

His Leu Leu His Lys Val Leu Pro Thr Cys Val Val Ala Ile Cys Ser
35 40 45

Gly Gly Leu Leu Gly Asn Leu Phe Val Leu Ser Val Phe Leu Val Pro
50 55 60

Arg Arg Arg Leu Asn Ala Ala Glu Ile Tyr Leu Ala His Leu Ala Ala
65 70 75 80

Ser Asp Leu Val Phe Ala Leu Gly Leu Pro Phe Trp Ala Glu Thr Ile
85 90 95

Arg Asn Gly Phe His
100

<210> 781
<211> 126
<212> PRT
<213> Salmo salar

<400> 781
Val Thr Trp Ser Ile Leu Glu Phe Ala Ser Trp Tyr Met His Ala Asp
1 5 10 15

Pro Asn Met Asn Arg Phe Phe Lys Tyr Leu Leu Leu Phe Leu Ile Ala
20 25 30

Met Ile Ile Leu Val Thr Ala Asn Asn Met Phe Gln Leu Phe Ile Gly
35 40 45

Trp Glu Gly Val Gly Ile Met Ser Phe Leu Leu Ile Gly Trp Trp Tyr
50 55 60

Gly Arg Ala Asp Ala Asn Thr Ala Ala Met Gln Ala Val Ile Tyr Asn
65 70 75 80

Arg Val Gly Asp Ile Gly Leu Ile Leu Ser Met Ala Trp Phe Ala Thr
85 90 95

Asn Leu Asn Ser Trp Glu Ile Gln Gln Met Phe Ala Ser Ser Lys Glu
100 105 110

Leu Asp Leu Thr Leu Pro Leu Met Gly Leu Ile Leu Ala Ala
115 120 125

<210> 782
<211> 151
<212> PRT
<213> Sus scrofa

<400> 782
Asn Ile Ala Tyr Pro Lys Leu Val Met Glu Leu Met Pro Thr Gly Leu
1 5 10 15

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Arg Gly Leu Met Val Ala Val Met Met Ala Ala Leu Met Ser Ser Leu
20 25 30

Thr Ser Ile Phe Asn Ser Ser Ser Thr Leu Phe Thr Met Asp Val Trp
35 40 45

Arg Arg Leu Arg Pro Arg Ala Gly Glu Arg Glu Leu Leu Leu Val Gly
50 55 60

Arg Leu Val Ile Val Val Leu Ile Gly Val Ser Val Ala Trp Ile Pro
65 70 75 80

Val Leu Gln Gly Ser Asn Ser Gly Gln Leu Phe Ile Tyr Met Gln Ser
85 90 95

Val Thr Ser Ser Leu Ala Pro Pro Val Thr Ala Val Phe Val Leu Gly
100 105 110

Ile Phe Trp Arg Arg Ala Asn Glu Gln Gly Ala Phe Trp Gly Leu Met
115 120 125

Val Gly Leu Ala Val Gly Ala Trp Arg Leu Val Leu Glu Phe Leu His
130 135 140

Pro Ala Pro Pro Cys Gly His
145 150

<210> 783
<211> 151
<212> PRT
<213> Sus scrofa

<400> 783
Trp Asn Ile Thr Val Gln Trp Tyr Ala Gly Glu Phe Leu Cys Lys Val
1 5 10 15

Leu Ser Tyr Leu Lys Leu Phe Ser Met Tyr Ala Pro Ala Phe Met Met
20 25 30

Val Val Ile Ser Leu Asp Arg Ser Leu Ala Ile Thr Arg Pro Leu Ala
35 40 45

Val Lys Ser Asn Ser Arg Leu Gly Arg Phe Met Ile Gly Leu Ala Trp
50 55 60

Leu Leu Ser Ser Ile Phe Ala Gly Pro Gln Leu Tyr Ile Phe Arg Met
65 70 75 80

Ile His Leu Ala Asp Ser Ser Gly Gln Thr Glu Gly Phe Ser Gln Cys
85 90 95

Val Thr His Gly Ser Phe Pro Gln Trp Trp His Gln Ala Phe Tyr Asn
100 105 110

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Phe Phe Thr Phe Ser Cys Leu Phe Ile Ile Pro Leu Leu Ile Met Leu
 115 120 125

Ile Cys Asn Ala Lys Ile Met Phe Thr Leu Thr Arg Val Leu Gln Gln
 130 135 140

Asp Pro His Asn Leu Gln Leu
 145 150

<210> 784
 <211> 126
 <212> PRT
 <213> Sus scrofa

<400> 784
 Gly Ile Ser Gly Leu Leu Asp Ser Leu Asn Ala Arg Asp Ile Ser Val
 1 5 10 15

Lys Ile Phe Glu Asp Phe Ala Gln Ser Trp Tyr Trp Ile Leu Ala Ala
 20 25 30

Leu Gly Val Ala Leu Val Leu Ser Leu Leu Phe Val Leu Leu Leu Arg
 35 40 45

Leu Val Ala Gly Pro Leu Val Phe Val Leu Ile Ile Gly Val Leu Gly
 50 55 60

Val Leu Ala Tyr Gly Ile Tyr His Cys Trp Asn Glu Tyr Arg Leu Leu
 65 70 75 80

Arg Asp Lys Gly Ala Ser Ile Ser Gln Leu Gly Phe Thr Thr Asn Leu
 85 90 95

Ser Ala Tyr Ser Ser Val Gln Glu Thr Trp Leu Ala Ala Leu Ile Leu
 100 105 110

Leu Ala Val Leu Glu Gly Ile Leu Leu Leu Met Leu Ile Phe
 115 120 125

<210> 785
 <211> 101
 <212> PRT
 <213> Solanum tuberosum

<400> 785
 Leu Asn Ser Ser Gln Leu Ile Asn Gly Tyr Asn Pro Phe Gly Met Asn
 1 5 10 15

Ser Leu Ser Val Trp Ala Trp Met Phe Leu Phe Gly His Leu Val Trp
 20 25 30

Ala Thr Gly Phe Met Phe Leu Ile Ser Trp Arg Gly Tyr Trp Gln Glu
 35 40 45

Leu Ile Glu Thr Leu Ala Trp Ala His Glu Arg Thr Pro Leu Ala Asn
 50 55 60

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Leu Ile Arg Trp Arg Asp Lys Pro Val Ala Leu Ser Ile Val Gln Ala
65 70 75 80

Arg Leu Val Gly Leu Ala His Phe Ser Val Gly Tyr Ile Phe Thr Tyr
85 90 95

Ala Ala Phe Leu Ile
100

<210> 786
<211> 276
<212> PRT
<213> Sus scrofa

<400> 786
Thr Pro Phe Glu Ile Ser Leu Trp Ile Leu Leu Ala Cys Leu Met Lys
1 5 10 15

Ile Gly Phe His Val Ile Pro Thr Ile Ser Ser Ile Val Pro Glu Ser
20 25 30

Cys Leu Leu Ile Val Val Gly Leu Leu Val Gly Gly Leu Ile Lys Ala
35 40 45

Val Gly Glu Thr Pro Pro Phe Leu Gln Ser Glu Val Phe Phe Leu Phe
50 55 60

Leu Leu Pro Pro Ile Ile Leu Asp Ala Gly Tyr Phe Leu Pro Leu Arg
65 70 75 80

Gln Phe Thr Glu Asn Leu Gly Thr Ile Leu Ile Phe Ala Val Val Gly
85 90 95

Thr Leu Trp Asn Ala Phe Phe Leu Gly Gly Leu Met Tyr Ala Val Cys
100 105 110

Leu Val Gly Gly Glu Gln Ile Asn Asn Ile Gly Leu Leu Asp Asn Leu
115 120 125

Leu Phe Gly Ser Ile Ile Ser Ala Val Asp Pro Val Ala Val Leu Ala
130 135 140

Val Phe Glu Glu Ile His Ile Asn Glu Leu Leu His Ile Leu Val Phe
145 150 155 160

Gly Glu Ser Leu Leu Asn Asp Ala Val Thr Val Val Leu Tyr His Leu
165 170 175

Phe Glu Glu Phe Ala Asn Tyr Asp Arg Val Gly Ile Val Asp Ile Val
180 185 190

Leu Gly Phe Leu Ser Phe Phe Val Val Ser Leu Gly Gly Val Phe Val
195 200 205

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Gly Val Val Tyr Gly Val Ile Ala Ala Phe Thr Ser Arg Phe Thr Ser
210 215 220

His Ile Arg Val Ile Glu Pro Leu Phe Val Phe Leu Tyr Ser Tyr Met
225 230 235 240

Ala Tyr Leu Ser Ala Glu Leu Phe His Leu Ser Gly Ile Met Ala Leu
245 250 255

Ile Ala Ser Gly Val Val Met Arg Pro Tyr Val Glu Ala Asn Ile Ser
260 265 270

His Lys Ser His
275

<210> 787
<211> 101
<212> PRT
<213> Sus scrofa

<400> 787
Met Glu Ser Pro Ala Gly Arg Thr Pro Ala Pro Gly Ala Leu Pro Tyr
1 5 10 15

Tyr Val Ala Phe Ser Gln Leu Leu Gly Leu Thr Val Val Ala Val Thr
20 25 30

Gly Ala Trp Leu Gly Ala Tyr Arg Gly Gly Ile Ala Trp Glu Ser Ala
35 40 45

Leu Gln Phe Asn Val His Pro Leu Cys Met Ile Ile Gly Leu Val Phe
50 55 60

Leu Gln Gly Asp Ala Leu Leu Val Tyr Arg Val Phe Arg Asn Glu Ala
65 70 75 80

Lys Arg Thr Thr Lys Ile Leu His Gly Leu Leu His Val Leu Ala Phe
85 90 95

Val Ile Ala Leu Val
100

<210> 788
<211> 176
<212> PRT
<213> Sus scrofa

<400> 788
Tyr Pro Gln Tyr Tyr Leu Ala Glu Pro Trp Gln Phe Ser Met Leu Ala
1 5 10 15

Ala Tyr Met Phe Met Leu Ile Val Leu Gly Phe Pro Ile Asn Phe Leu
20 25 30

Thr Leu Tyr Val Thr Val Gln His Lys Lys Leu Arg Thr Pro Leu Asn
35 40 45

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Tyr Ile Leu Leu Asn Leu Ala Val Ala Asp Leu Phe Met Val Phe Gly
 50 55 60
 Gly Phe Thr Thr Thr Leu Tyr Thr Ser Leu His Gly Tyr Phe Val Phe
 65 70 75 80
 Gly Pro Thr Gly Cys Asn Leu Glu Gly Phe Phe Ala Thr Leu Gly Gly
 85 90 95
 Glu Ile Ala Leu Trp Ser Leu Val Val Leu Ala Ile Glu Arg Tyr Val
 100 105 110
 Val Val Cys Lys Pro Met Ser Asn Phe Arg Phe Gly Glu Asn His Ala
 115 120 125
 Ile Met Gly Leu Ala Leu Thr Trp Val Met Ala Leu Ala Cys Ala Ala
 130 135 140
 Pro Pro Leu Val Gly Trp Ser Arg Tyr Ile Pro Glu Gly Leu Gln Cys
 145 150 155 160
 Ser Cys Gly Ile Asp Tyr Tyr Thr Leu Lys Pro Glu Val Asn Asn Glu
 165 170 175
 <210> 789
 <211> 151
 <212> PRT
 <213> Sus scrofa
 <400> 789
 Val Leu Glu Asn Leu Ala Val Leu Val Val Leu Gly Arg His Pro Arg
 1 5 10 15
 Phe His Ala Pro Met Phe Leu Leu Leu Gly Ser Leu Thr Leu Ser Asp
 20 25 30
 Leu Leu Ala Gly Ala Ala Tyr Ala Ala Asn Ile Leu Leu Ser Gly Pro
 35 40 45
 Leu Thr Leu Arg Leu Ser Pro Ala Leu Trp Phe Ala Arg Glu Gly Gly
 50 55 60
 Val Phe Val Ala Leu Ala Ala Ser Val Leu Ser Leu Leu Ala Ile Ala
 65 70 75 80
 Leu Glu Arg Leu Leu Thr Met Glu Arg Arg Gly Pro Ala Pro Ala Ala
 85 90 95
 Arg Arg Gly Arg Thr Leu Ala Leu Ala Ala Gly Ala Trp Gly Val Ser
 100 105 110
 Leu Leu Leu Gly Leu Leu Pro Ala Leu Gly Trp Asn Cys Leu Gly Arg
 115 120 125

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Leu Glu Ala Cys Ser Thr Val Leu Pro Leu Tyr Ala Lys Ala Tyr Val
 130 135 140

Leu Phe Cys Val Leu Ala Phe
 145 150

<210> 790

<211> 176

<212> PRT

<213> Meleagris gallopavo

<400> 790

Leu His Glu Ser Gly Ser Asn Asn Pro Leu Gly Ile Ser Ser Asn Ala
 1 5 10 15

Asp Lys Ile Pro Phe His Pro Tyr Tyr Ser Ile Lys Asp Ile Leu Gly
 20 25 30

Leu Thr Ile Met Leu Thr Pro Leu Leu Thr Leu Thr Leu Phe Ser Pro
 35 40 45

Asn Leu Leu Gly Asp Pro Glu Asn Phe Thr Pro Ala Asn Pro Leu Val
 50 55 60

Thr Pro Pro His Ile Lys Pro Glu Trp Tyr Phe Leu Phe Ala Tyr Ala
 65 70 75 80

Ile Leu Arg Ser Ile Pro Asn Lys Leu Gly Gly Val Leu Ala Leu Ala
 85 90 95

Ala Ser Val Leu Ile Leu Leu Leu Ile Pro Phe Leu His Lys Ser Lys
 100 105 110

Gln Arg Ala Met Thr Phe Arg Pro Leu Ser Gln Thr Leu Phe Trp Leu
 115 120 125

Leu Val Ala Asn Leu Leu Ile Leu Thr Trp Val Gly Ser Gln Pro Val
 130 135 140

Glu His Pro Phe Ile Ile Ile Gly Gln Met Ala Ser Leu Ser Tyr Phe
 145 150 155 160

Thr Ile Leu Leu Ile Leu Phe Pro Leu Ile Gly Ala Leu Glu Asn Lys
 165 170 175

<210> 791

<211> 176

<212> PRT

<213> Sus scrofa

<400> 791

Ile Gln Trp Ala Leu Leu Met Gln Gly Trp Leu His Ser Phe His Ser
 1 5 10 15

Gly Tyr Ile Val Leu Gly Val Glu Asn Leu Ile Asn Ala Asp Phe Cys
 20 25 30

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Val Gly Ser Val Cys Val Ala Phe Gly Ala Val Leu Gly Lys Val Ser
35 40 45

Pro Val Gln Leu Leu Ile Met Thr Leu Phe Gln Val Thr Leu Phe Ser
50 55 60

Val Asn Glu Phe Ile Leu Leu Asn Leu Leu Glu Val Lys Asp Ala Gly
65 70 75 80

Gly Ser Met Thr Ile His Thr Phe Gly Ala Tyr Phe Gly Leu Thr Val
85 90 95

Thr Trp Ile Leu Tyr Arg Pro Asn Leu Tyr Gln Ser Lys Glu Arg Gln
100 105 110

Ser Ser Val Tyr His Ser Asp Leu Phe Ala Met Ile Gly Thr Leu Phe
115 120 125

Leu Trp Met Tyr Trp Pro Ser Phe Asn Ser Ala Val Ser His His Gly
130 135 140

Asp Ala Gln His Arg Ala Ala Ile Asn Thr Tyr Cys Ser Leu Ala Ala
145 150 155 160

Cys Val Leu Thr Ser Val Ala Leu Ser Ser Ala Leu His Lys Lys Gly
165 170 175

<210> 792
<211> 151
<212> PRT
<213> Sus scrofa

<400> 792
Thr Ser Val Arg His Leu Asp Asn Val Phe Asp Ser Met Ile Cys Ile
1 5 10 15

Ser Leu Val Ala Ser Met Cys Ser Leu Leu Ala Val Ala Val Asp Arg
20 25 30

Tyr Val Thr Ile Phe Tyr Ala Leu Arg Tyr Gln His Leu Met Thr Gly
35 40 45

Arg Arg Cys Gly Ala Ile Ile Ala Gly Ile Trp Ala Leu Cys Thr Gly
50 55 60

Cys Gly Pro Val Phe Ile Val Tyr Tyr Glu Ser Thr Tyr Val Val Val
65 70 75 80

Cys Leu Val Ala Met Phe Leu Thr Met Leu Leu Leu Met Ala Ser Leu
85 90 95

Tyr Ala His Met Phe Leu Gln Ala Arg Ala His Val Arg Arg Ile Ala
100 105 110

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Ala Leu Pro Gly Tyr Arg Ser Ala Arg Gln Arg Thr Ser Met Lys Gly
115 120 125

Ala Val Thr Leu Ala Met Leu Leu Gly Val Phe Ile Val Cys Trp Ala
130 135 140

Pro Phe Phe Leu His Leu Ile
145 150

<210> 793
<211> 276
<212> PRT
<213> Sus scrofa

<400> 793
Cys Leu Leu Asp Phe Gln Arg Ala Leu Ala Leu Phe Val Leu Phe Cys
1 5 10 15

Val Val Leu Phe Phe Leu Ala His Ser Leu Leu Lys Arg Leu Leu Gly
20 25 30

Pro Lys Leu Leu Arg Cys Val Lys Pro Leu Arg His Pro Cys Leu Asn
35 40 45

Leu Trp Phe Lys Arg Gly Leu Ala Leu Ala Ala Phe Leu Gly Leu Val
50 55 60

Leu Trp Leu Val Leu Asp Thr Ala Gln Arg Pro Glu Gln Leu Val Ser
65 70 75 80

Phe Gly Gly Ile Cys Val Phe Ile Leu Leu Leu Phe Ala Gly Ser Lys
85 90 95

His His Arg Ala Val Ser Trp Arg Ala Val Ser Trp Gly Leu Gly Leu
100 105 110

Gln Phe Ala Leu Gly Leu Phe Val Ile Arg Thr Glu Pro Gly Phe Ile
115 120 125

Ala Phe Gln Trp Leu Gly Asp Gln Ile Gln Ile Phe Leu Ser Tyr Thr
130 135 140

Glu Ala Gly Ser Ser Phe Val Phe Gly Glu Ala Leu Val Lys Asp Val
145 150 155 160

Phe Ala Phe Gln Val Leu Pro Ile Ile Val Phe Phe Ser Cys Ala Met
165 170 175

Ser Val Leu Tyr Tyr Val Gly Leu Met Gln Trp Val Ile Leu Lys Ile
180 185 190

Ser Trp Leu Met Gln Ala Thr Met Gly Thr Thr Ala Thr Glu Thr Leu
195 200 205

Ser Val Ala Gly Asn Ile Phe Val Ser Gln Thr Glu Ala Pro Leu Leu

210

215

220

Ile Arg Pro Tyr Leu Ala Asp Met Thr Leu Ser Glu Ile His Val Val
225 230 235 240

Met Thr Gly Gly Tyr Ala Thr Ile Ala Gly Ser Leu Leu Gly Ala Tyr
245 250 255

Ile Ser Phe Gly Ile Asp Ala Ala Ser Leu Ile Ala Ala Ser Val Met
260 265 270

Ala Ala Pro Cys
275

<210> 794

<211> 226

<212> PRT

<213> Solanum tuberosum

<400> 794

Gly Pro Ser Ile Ala Val Ile Ser Ile Phe Leu Ser Tyr Ser Val Ile
1 5 10 15

Pro Phe Gly Asp His Leu Val Leu Ala Asp Leu Ser Ile Gly Val Phe
20 25 30

Phe Trp Ile Ala Ile Ser Ser Ile Ala Pro Val Gly Leu Leu Met Ser
35 40 45

Gly Tyr Gly Ser Asn Asn Lys Tyr Ser Phe Leu Gly Gly Leu Arg Ala
50 55 60

Ala Ala Gln Ser Ile Ser Tyr Glu Ile Pro Leu Ala Leu Cys Val Leu
65 70 75 80

Ser Ile Ser Leu Leu Ser Asn Ser Ser Ser Thr Val Asp Ile Val Glu
85 90 95

Ala Gln Ser Lys Tyr Gly Phe Trp Gly Trp Asn Leu Trp Arg Gln Pro
100 105 110

Ile Gly Phe Ile Val Phe Leu Ile Ser Ser Leu Ala Glu Cys Glu Arg
115 120 125

Leu Pro Phe Asp Leu Pro Glu Ala Glu Glu Glu Leu Val Ala Gly Tyr
130 135 140

Gln Thr Glu Tyr Ser Gly Ile Lys Phe Gly Leu Phe Tyr Ile Ala Ser
145 150 155 160

Tyr Leu Asn Leu Leu Val Ser Ser Leu Phe Val Thr Val Leu Tyr Leu
165 170 175

Gly Gly Trp Asn Leu Ser Ile Pro Tyr Ile Phe Val Pro Glu Leu Phe
180 185 190

Gly Ile Asn Lys Gly Gly Lys Val Phe Gly Thr Leu Ile Gly Ile Phe
195 200 205

Ile Thr Leu Ala Lys Thr Tyr Leu Phe Leu Phe Ile Pro Ile Ala Thr
210 215 220

Arg Trp
225

<210> 795
<211> 176
<212> PRT
<213> Meleagris gallopavo

<400> 795
Met Gly Asp Gly Trp Leu Pro Pro Asp Cys Gly Pro His Asn Arg Ser
1 5 10 15

Gly Gly Gly Gly Ala Thr Ala Ala Pro Thr Gly Ser Arg Gln Val Ser
20 25 30

Ala Glu Leu Leu Ser Gln Gln Trp Glu Ala Gly Met Ser Leu Leu Met
35 40 45

Ala Leu Val Val Leu Leu Ile Val Ala Gly Asn Val Leu Val Ile Ala
50 55 60

Ala Ile Gly Arg Thr Gln Arg Leu Gln Thr Leu Thr Asn Leu Phe Ile
65 70 75 80

Thr Ser Leu Ala Cys Ala Asp Leu Val Met Gly Leu Leu Val Val Pro
85 90 95

Phe Gly Ala Thr Leu Val Val Arg Gly Thr Trp Leu Trp Gly Ser Phe
100 105 110

Leu Cys Glu Cys Trp Thr Ser Leu Asp Val Leu Cys Val Thr Ala Ser
115 120 125

Ile Glu Thr Leu Cys Val Ile Ala Ile Asp Arg Tyr Leu Ala Ile Thr
130 135 140

Ser Pro Phe Arg Tyr Gln Ser Leu Met Thr Arg Ala Arg Ala Lys Val
145 150 155 160

Ile Ile Cys Thr Val Trp Ala Ile Ser Ala Leu Val Ser Phe Leu Pro
165 170 175

<210> 796
<211> 176
<212> PRT
<213> Sus scrofa

<400> 796
Val Thr Glu Arg Leu Ser Pro Ser Phe Leu Asp Leu Phe Arg Thr Gln
Page 490

1 5 10 15
 Asn Leu Arg Lys Tyr Thr Phe Ile Leu Met Tyr Leu Trp Phe Thr Ser
 20 25 30
 Ser Val Leu Tyr Gln Gly Leu Ile Met His Val Gly Ala Thr Gly Gly
 35 40 45
 Ser Leu Tyr Leu Asp Phe Leu Tyr Ser Ala Leu Val Glu Phe Pro Ala
 50 55 60
 Ala Phe Val Ile Leu Leu Ile Ile Asp Arg Phe Gly Arg Leu Tyr Leu
 65 70 75 80
 Leu Ala Gly Ser Asn Leu Leu Ala Gly Ala Ala Cys Phe Phe Met Ile
 85 90 95
 Phe Ile Ser His Asp Leu His Trp Leu Ser Ile Val Ala Ala Cys Ile
 100 105 110
 Gly Arg Met Gly Ile Thr Ile Val Phe Gln Met Val Cys Leu Val Ser
 115 120 125
 Ala Glu Leu Tyr Pro Thr Phe Ile Arg Asn Leu Gly Val Met Val Cys
 130 135 140
 Ser Ser Leu Cys Asp Leu Gly Gly Val Val Ala Pro Phe Leu Val Phe
 145 150 155 160
 Arg Leu Thr Glu Val Trp Arg Gly Leu Pro Leu Val Leu Phe Ala Ala
 165 170 175
 <210> 797
 <211> 176
 <212> PRT
 <213> Sus scrofa
 <400> 797
 Met Ala Gly Ser Ser Arg Arg Ala Gly Gly Arg Arg Leu Gln Leu Pro
 1 5 10 15
 Leu Leu Cys Leu Leu Leu Gln Gly Ala Thr Ala Ile Leu Phe Ala Val
 20 25 30
 Phe Val Arg Tyr Asn His Glu Thr Asp Ala Ala Leu Trp His Trp Gly
 35 40 45
 Asn His Ser Asn Pro Asp Asn Glu Phe Tyr Phe Arg Tyr Pro Ser Phe
 50 55 60
 Gln Asp Val His Thr Met Ile Phe Val Gly Phe Gly Phe Leu Met Ala
 65 70 75 80
 Phe Leu Gln Arg Tyr Gly Phe Ser Ser Val Gly Phe Thr Phe Leu Leu
 85 90 95

Ala Ala Phe Ala Leu Gln Trp Ser Thr Leu Val Gln Gly Phe Leu His
100 105 110

Thr Phe His Gly Gly His Ile His Ile Gly Val Glu Ser Met Ile Asn
115 120 125

Ala Asp Phe Cys Ala Gly Ala Val Leu Ile Ser Phe Gly Ala Ile Leu
130 135 140

Gly Lys Thr Gly Pro Ala Gln Leu Leu Leu Met Ala Leu Leu Glu Val
145 150 155 160

Val Leu Phe Gly Leu Asn Glu Phe Val Leu Leu Ser Leu Leu Gly Val
165 170 175

<210> 798
<211> 176
<212> PRT
<213> Solanum tuberosum

<400> 798
Ile Leu Ala Ile Leu Ser Met Ile Leu Gly Asn Leu Ile Ala Ile Thr
1 5 10 15

Gln Thr Ser Met Lys Arg Met Leu Ala Tyr Ser Ser Ile Gly Gln Ile
20 25 30

Gly Tyr Val Ile Ile Gly Ile Ile Val Gly Asp Ser Asn Asp Gly Tyr
35 40 45

Ala Ser Met Ile Thr Tyr Met Leu Phe Tyr Ile Ser Met Asn Leu Gly
50 55 60

Thr Phe Ala Cys Ile Val Leu Phe Gly Leu Arg Thr Gly Thr Asp Asn
65 70 75 80

Ile Arg Asp Tyr Ala Gly Leu Tyr Thr Lys Asp Pro Phe Leu Ala Leu
85 90 95

Ser Leu Ala Leu Cys Leu Leu Ser Leu Gly Gly Leu Pro Pro Leu Ala
100 105 110

Gly Phe Phe Gly Lys Leu Tyr Leu Phe Trp Cys Gly Trp Gln Ala Gly
115 120 125

Leu Tyr Phe Leu Val Leu Ile Gly Leu Leu Thr Ser Val Val Ser Ile
130 135 140

Tyr Tyr Tyr Leu Lys Ile Ile Lys Leu Leu Met Thr Gly Arg Asn Gln
145 150 155 160

Glu Ile Thr Pro His Val Arg Asn Tyr Arg Arg Ser Pro Leu Arg Ser
165 170 175

<210> 799
 <211> 176
 <212> PRT
 <213> Solanum tuberosum

<400> 799
 Ile Leu Ala Ile Leu Ser Met Ile Leu Gly Asn Leu Ile Ala Ile Thr
 1 5 10 15
 Gln Thr Ser Met Lys Arg Met Leu Ala Tyr Ser Ser Ile Gly Gln Ile
 20 25 30
 Gly Tyr Val Ile Ile Gly Ile Ile Val Gly Asp Ser Asn Asp Gly Tyr
 35 40 45
 Ala Ser Met Ile Thr Tyr Met Leu Phe Tyr Ile Ser Met Asn Leu Gly
 50 55 60
 Thr Phe Ala Cys Ile Val Leu Phe Gly Leu Arg Thr Gly Thr Asp Asn
 65 70 75 80
 Ile Arg Asp Tyr Ala Gly Leu Tyr Thr Lys Asp Pro Phe Leu Ala Leu
 85 90 95
 Ser Leu Ala Leu Cys Leu Leu Ser Leu Gly Gly Leu Pro Pro Leu Ala
 100 105 110
 Gly Phe Phe Gly Lys Leu Tyr Leu Phe Trp Cys Gly Trp Gln Ala Gly
 115 120 125
 Leu Tyr Phe Leu Val Leu Ile Gly Leu Leu Thr Ser Val Val Ser Ile
 130 135 140
 Tyr Tyr Tyr Leu Lys Ile Ile Lys Leu Leu Met Thr Gly Arg Asn Gln
 145 150 155 160
 Glu Ile Thr Pro His Val Arg Asn Tyr Arg Arg Ser Pro Leu Arg Ser
 165 170 175

<210> 800
 <211> 126
 <212> PRT
 <213> Sus scrofa

<400> 800
 Met Glu Phe Ser Met Trp Tyr Met His Ser Asp Pro Phe Ile Asn Arg
 1 5 10 15
 Phe Phe Lys Tyr Leu Val Leu Phe Leu Ile Thr Met Met Ile Leu Val
 20 25 30
 Thr Ala Asn Asn Leu Phe Gln Leu Phe Ile Gly Trp Glu Gly Val Gly
 35 40 45
 Ile Met Ser Phe Leu Leu Ile Gly Trp Trp His Gly Arg Thr Asp Ala
 50 55 60

Asn Thr Ala Ala Leu Gln Ala Ile Leu Tyr Asn Arg Ile Gly Asp Ile
65 70 75 80

Gly Phe Val Leu Ser Met Ala Trp Phe Leu Thr His Ser Asn Ala Trp
85 90 95

Asp Leu Gln Gln Ile Phe Met Leu Asn Asn Glu Cys Pro Asn Met Pro
100 105 110

Leu Ile Gly Leu Leu Leu Ala Ala Ala Gly Lys Ser Ala Gln
115 120 125

<210> 801
<211> 76
<212> PRT
<213> Sus scrofa

<400> 801
Val Gln Ala Ala Val Pro Gly Leu Pro Ser Arg Val Lys Cys Gly Ser
1 5 10 15

Pro Gly Gln Leu Gln Gly His Ser Ile Phe Ala Gln Asp Leu Arg Leu
20 25 30

Cys Leu Asp Glu Thr Leu Ser Trp Asn Cys Phe Gly Ile Ser Leu Leu
35 40 45

Ala Met Ala Leu Gly Leu Val Val Pro Met Leu His His Leu Cys Gly
50 55 60

Trp Asp Leu Trp Tyr Cys Phe His Leu Cys Leu Ala
65 70 75

<210> 802
<211> 76
<212> PRT
<213> Sus scrofa

<400> 802
Met Trp Val Pro Ser Arg Arg His Leu Cys Leu Thr Phe Leu Leu Val
1 5 10 15

Cys Val Leu Ala Ala Ile Phe Phe Leu Asn Val Tyr Gln Asp Leu Phe
20 25 30

Tyr Ser Gly Leu Asp Leu Leu Ala Leu Cys Pro Asp His Asn Val Val
35 40 45

Ser Ser Pro Val Ala Ile Phe Cys Leu Ala Gly Thr Pro Val His Pro
50 55 60

Asn Ala Ser Asp Ser Cys Pro Lys His Pro Ala Ser
65 70 75

<210> 803

<211> 126

<212> PRT

<213> *Salmo salar*

<400> 803

Met Gln Val Met Arg Thr Phe Asn Gln Pro Pro Thr Ser Ser His Pro
 1 5 10 15

Thr Pro Thr Leu Asn Asp Ser Asp Thr Cys Ile Thr Leu Tyr Asn His
 20 25 30

Arg Gly Tyr Ala Arg Val Leu Met Pro Leu Phe Tyr Cys Ile Val Phe
 35 40 45

Phe Val Gly Leu Leu Gly Asn Ala Leu Ala Phe His Ile Ile Arg Pro
 50 55 60

Asn Val Lys Lys Ile Asn Ser Thr Thr Leu Tyr Ser Ala Asn Leu Val
 65 70 75 80

Ile Ser Asp Ile Leu Phe Thr Leu Ser Leu Pro Leu Arg Ile Ile Tyr
 85 90 95

Tyr Ala Leu Gly Phe His Trp Pro Leu Gly Glu Thr Leu Cys Lys Ile
 100 105 110

Val Gly Leu Ile Phe Tyr Ile Asn Thr Tyr Ala Gly Val Asn
 115 120 125

<210> 804

<211> 76

<212> PRT

<213> *Solanum tuberosum*

<400> 804

Val Asn Gln Ser Tyr Pro Val Val Leu Glu Ile Ile Phe Tyr Ile Gly
 1 5 10 15

Phe Phe Ile Ala Phe Ala Val Lys Ser Pro Ile Ile Pro Leu His Thr
 20 25 30

Trp Leu Pro Asp Thr His Gly Glu Ala His Tyr Ser Thr Cys Met Leu
 35 40 45

Leu Ala Gly Ile Leu Leu Lys Met Gly Ala Tyr Gly Leu Ile Arg Ile
 50 55 60

Asn Met Glu Leu Leu Pro His Ala His Ser Ile Phe
 65 70 75

<210> 805

<211> 126

<212> PRT

<213> *Solanum tuberosum*

<400> 805

Met Ile Phe Gln Ser Phe Leu Leu Gly Asn Leu Val Ser Leu Cys Met
 1 5 10 15

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Lys Ile Ile Asn Ser Val Val Val Val Gly Leu Tyr Tyr Gly Phe Leu
20 25 30

Thr Thr Phe Ser Ile Gly Pro Ser Tyr Leu Phe Leu Leu Arg Ala Leu
35 40 45

Val Met Glu Glu Gly Thr Glu Lys Lys Val Ser Ala Thr Thr Gly Phe
50 55 60

Ile Thr Gly Gln Leu Met Met Phe Ile Ser Ile Tyr Tyr Ala Pro Leu
65 70 75 80

His Leu Ala Leu Gly Arg Pro His Thr Ile Thr Val Leu Ala Leu Pro
85 90 95

Tyr Leu Leu Phe His Phe Phe Trp Asn Asn His Lys His Phe Phe Asp
100 105 110

Tyr Gly Ser Thr Thr Arg Asn Ser Met Arg Asn Leu Ser Ile
115 120 125

<210> 806

<211> 126

<212> PRT

<213> Capra hircus

<400> 806

Leu Glu Ala Gly Val Leu Ala Thr Arg Ala Ala Val Val Gln Gln Leu
1 5 10 15

Asp Asn Val Ile Asp Val Leu Ile Cys Ser Ser Met Val Ser Ser Leu
20 25 30

Cys Phe Leu Gly Ala Ile Ala Val Asp Arg Tyr Ile Ser Ile Phe Tyr
35 40 45

Ala Leu Arg Tyr His Ser Val Val Thr Leu Pro Arg Ala Trp Arg Ile
50 55 60

Ile Ala Ala Ile Trp Val Ala Ser Ile Leu Thr Ser Val Leu Ser Ile
65 70 75 80

Thr Tyr Tyr Asn His Thr Val Val Leu Leu Cys Leu Val Gly Phe Phe
85 90 95

Ile Ala Met Leu Ala Leu Met Ala Val Leu Tyr Val His Met Leu Ala
100 105 110

Arg Ala Cys Gln His Ala Arg Gly Ile Ala Arg Leu Gln Lys
115 120 125

<210> 807

<211> 126

<212> PRT

<213> Sus scrofa

<400> 807

Lys Lys Val Glu Val Leu Phe Ala Gly Leu Val Ile Asn Thr Ala Gly
 1 5 10 15

Glu Met Ala Gly Ala Phe Val Ala Val Phe Leu Leu Ala Met Phe Tyr
 20 25 30

Glu Gly Leu Lys Ile Ala Arg Glu Gly Leu Leu Arg Lys Ser Gln Val
 35 40 45

Ser Ile Arg Tyr Asn Ser Met Pro Val Pro Gly Pro Asn Gly Thr Ile
 50 55 60

Leu Met Glu Thr His Lys Thr Val Gly Gln Gln Met Leu Ser Phe Pro
 65 70 75 80

His Leu Leu Gln Thr Val Leu His Ile Ile Gln Val Val Ile Ser Tyr
 85 90 95

Phe Leu Met Leu Ile Phe Met Thr Tyr Asn Gly Tyr Leu Cys Ile Ala
 100 105 110

Val Ala Ala Gly Ala Gly Thr Gly Tyr Phe Leu Phe Ser Trp
 115 120 125

<210> 808

<211> 226

<212> PRT

<213> Solanum tuberosum

<400> 808

Met Asn Val Leu Ser Cys Ser Ile Asn Thr Leu Lys Gly Leu Tyr Asp
 1 5 10 15

Ile Ser Gly Val Glu Val Gly Gln His Phe Tyr Trp Gln Ile Gly Gly
 20 25 30

Phe Gln Val His Gly Gln Val Leu Ile Thr Ser Trp Val Val Ile Ala
 35 40 45

Ile Leu Leu Gly Ser Ala Thr Ile Ala Val Arg Asn Pro Gln Thr Ile
 50 55 60

Pro Thr Gly Gly Gln Asn Phe Phe Glu Tyr Val Leu Glu Phe Ile Arg
 65 70 75 80

Asp Val Ser Lys Thr Gln Ile Gly Glu Glu Tyr Gly Pro Trp Val Pro
 85 90 95

Phe Ile Gly Thr Met Phe Leu Phe Ile Phe Val Ser Asn Trp Ser Gly
 100 105 110

Ala Leu Leu Pro Trp Lys Ile Ile Gln Leu Pro His Gly Glu Leu Ala
 115 120 125

Ala Pro Thr Asn Asp Ile Asn Thr Thr Val Ala Leu Ala Leu Leu Thr
130 135 140

Ser Val Ala Tyr Phe Tyr Ala Gly Leu Thr Lys Lys Gly Leu Gly Tyr
145 150 155 160

Phe Gly Lys Tyr Ile Gln Pro Thr Pro Ile Leu Leu Pro Ile Asn Ile
165 170 175

Leu Glu Asp Phe Thr Lys Pro Leu Ser Leu Ser Phe Arg Leu Phe Gly
180 185 190

Asn Ile Leu Ala Asp Glu Leu Val Val Val Val Leu Val Ser Leu Val
195 200 205

Pro Leu Val Val Pro Ile Pro Val Met Leu Leu Gly Leu Phe Thr Ser
210 215 220

Gly Ile
225

<210> 809
<211> 76
<212> PRT
<213> Salmo salar

<400> 809
Phe Tyr His Ser Ser Leu Ser Pro Thr Pro Glu Leu Gly Gly Cys Trp
1 5 10 15

Pro Pro Thr Gly Ile Ile Thr Leu Asp Pro Phe Glu Val Pro Leu Leu
20 25 30

Asn Thr Ala Val Leu Leu Ala Ser Gly Val Thr Val Thr Trp Ala His
35 40 45

His Ser Ile Met Glu Gly Glu Arg Lys Gln Thr Ile Gln Ala Leu Thr
50 55 60

Leu Thr Ile Leu Leu Gly Phe Tyr Phe Thr Phe Leu
65 70 75

<210> 810
<211> 226
<212> PRT
<213> Salmo salar

<400> 810
Gln Asn Asp Ile Lys Lys Ile Val Ala Phe Ser Thr Ser Ser Gln Leu
1 5 10 15

Gly Leu Met Met Val Thr Ile Gly Leu Asn Gln Pro Gln Leu Ala Phe
20 25 30

Leu His Ile Cys Thr His Ala Phe Phe Lys Ala Met Leu Phe Leu Cys
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35

40

45

Ser Gly Ser Ile Ile His Ser Leu Asn Asp Glu Gln Asp Ile Arg Lys
50 55 60

Met Gly Gly Met His Asn Leu Thr Pro Phe Thr Ser Ser Cys Leu Thr
65 70 75 80

Ile Gly Ser Leu Ala Leu Thr Gly Thr Pro Phe Leu Ala Gly Phe Phe
85 90 95

Ser Lys Asp Ala Ile Ile Glu Ala Leu Asn Thr Ser His Leu Asn Ala
100 105 110

Trp Ala Leu Thr Leu Thr Leu Leu Ala Thr Ser Phe Thr Ala Val Tyr
115 120 125

Ser Leu Arg Val Val Phe Phe Val Ser Met Gly His Pro Arg Phe Thr
130 135 140

Ala Thr Ala Pro Ile Asn Glu Asn Asn Pro Ser Val Ile Asn Pro Ile
145 150 155 160

Lys Arg Leu Ala Trp Gly Ser Ile Ile Ala Gly Leu Leu Ile Thr Ser
165 170 175

Asn Phe Leu Pro Ser Lys Thr Pro Ile Met Thr Met Pro Leu Pro Leu
180 185 190

Lys Leu Ala Ala Leu Leu Val Thr Ile Ser Gly Leu Leu Ile Ala Leu
195 200 205

Glu Leu Ala Ser Leu Thr Asn Lys Gln Phe Lys Thr Thr Pro Asn Leu
210 215 220

Ile Thr
225

<210> 811
<211> 276
<212> PRT
<213> Sus scrofa

<400> 811
Trp Pro Gly Met Ile Phe Gly Met Thr Val Val Ala Ala Trp Tyr Trp
1 5 10 15

Cys Thr Asp Gln Val Ile Val Gln Arg Cys Leu Ser Gly Lys Asp Met
20 25 30

Ser His Val Lys Ala Ala Cys Ile Met Cys Gly Tyr Leu Lys Leu Leu
35 40 45

Pro Met Phe Leu Met Val Met Pro Gly Met Ile Ser Arg Ile Leu Tyr
50 55 60

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Thr Glu Lys Val Ala Cys Val Val Pro Ser Glu Cys Val Lys His Cys
65 70 75 80

Gly Thr Glu Val Gly Cys Ser Asn Tyr Ala Tyr Pro Leu Leu Val Met
85 90 95

Glu Leu Met Pro Ser Gly Leu Arg Gly Leu Met Leu Ser Val Met Leu
100 105 110

Ala Ser Leu Met Ser Ser Leu Thr Ser Ile Phe Asn Ser Ala Ser Thr
115 120 125

Leu Phe Thr Met Asp Leu Tyr Thr Lys Ile Arg Lys Gln Ala Ser Glu
130 135 140

Lys Glu Leu Leu Ile Ala Gly Arg Leu Phe Ile Ile Leu Leu Ile Val
145 150 155 160

Ile Ser Ile Val Trp Val Pro Leu Val Gln Val Ala Gln Asn Gly Gln
165 170 175

Leu Phe His Tyr Ile Glu Ser Ile Ser Ser Tyr Leu Gly Pro Pro Ile
180 185 190

Ala Ala Val Phe Leu Leu Ala Ile Phe Cys Lys Arg Val Asn Glu Gln
195 200 205

Gly Ala Phe Trp Gly Leu Ile Ile Gly Phe Val Met Gly Leu Ile Arg
210 215 220

Met Ile Ala Glu Phe Val Tyr Gly Thr Gly Ser Cys Leu Ala Ala Ser
225 230 235 240

Asn Cys Pro Gln Ile Ile Cys Gly Val His Tyr Leu Tyr Phe Ala Leu
245 250 255

Ile Leu Phe Phe Val Ser Ile Leu Val Val Leu Ala Ile Ser Leu Leu
260 265 270

Thr Lys Pro Ile
275

<210> 812
<211> 126
<212> PRT
<213> Sus scrofa

<400> 812
Asn Asn Gln Ala Leu Val Ala Thr Asn Pro Val Ser Cys Lys Val Phe
1 5 10 15

Gln Phe Ile His Leu Tyr Leu Met Gly Cys Asn Tyr Phe Trp Met Leu
20 25 30

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Cys Glu Gly Ile Tyr Leu His Thr Leu Ile Val Val Ala Val Phe Ala
35 40 45

Glu Lys Gln His Leu Met Trp Tyr Tyr Phe Leu Gly Trp Gly Phe Pro
50 55 60

Leu Ile Pro Ala Cys Ile His Ala Val Ala Arg Arg Leu Tyr Tyr Asn
65 70 75 80

Asp Asn Cys Trp Ile Ser Ser Asp Thr His Leu Leu Tyr Ile Ile His
85 90 95

Gly Pro Ile Cys Ala Ala Leu Leu Val Asn Leu Phe Phe Leu Leu Asn
100 105 110

Ile Val Arg Val Leu Ile Thr Lys Leu Lys Val Thr His Gln
115 120 125

<210> 813
<211> 76
<212> PRT
<213> Sus scrofa

<400> 813
Asn Leu Leu Ser Ile Phe Ile Ser Thr Trp Leu Thr Ala Ala Gly Phe
1 5 10 15

Ile His Leu Val Glu Asn Ser Gly Asp Pro Trp Glu Asn Phe Gln Asn
20 25 30

Asn Gln Ala Leu Thr Tyr Trp Glu Cys Val Tyr Leu Leu Met Val Thr
35 40 45

Met Ser Thr Val Gly Tyr Gly Asp Val Tyr Ala Lys Thr Thr Leu Gly
50 55 60

Arg Leu Phe Met Val Phe Phe Ile Leu Gly Gly Leu
65 70 75

<210> 814
<211> 76
<212> PRT
<213> Sus scrofa

<400> 814
Phe Leu Phe Ile Leu Gly Met Gly Ile Asn Ile His Ser Asp Tyr Ile
1 5 10 15

Leu Arg Gln Leu Arg Lys Pro Gly Glu Val Ile Tyr Lys Ile Pro Gln
20 25 30

Gly Gly Leu Phe Thr Tyr Val Ser Gly Ala Asn Phe Leu Gly Glu Ile
35 40 45

Ile Glu Trp Ile Gly Tyr Ala Leu Ala Thr Trp Ser Leu Pro Ala Leu
50 55 60

Ala Phe Ala Phe Phe Ser Leu Cys Phe Leu Gly Leu
65 70 75

<210> 815
<211> 126
<212> PRT
<213> Sus scrofa

<400> 815
Gly Cys Val Asp Pro Leu Ala Gly Leu Ala Ala Asn Ser Ser His Leu
1 5 10 15

Pro Leu Gly Pro Cys Arg Tyr Gly Trp Val Tyr Asp Thr Pro Gly Ser
20 25 30

Ser Ile Val Thr Glu Phe Asp Leu Val Cys Ala Asn Ser Trp Leu Leu
35 40 45

Asp Leu Phe Gln Ser Ala Val Asn Val Gly Phe Phe Ile Gly Ser Val
50 55 60

Gly Ile Gly Tyr Ile Ala Asp Arg Phe Gly Arg Lys Leu Cys Leu Leu
65 70 75 80

Leu Thr Ile Leu Ile Asn Ala Val Ser Gly Val Leu Met Ala Ile Ser
85 90 95

Pro Thr Tyr Thr Trp Met Leu Val Phe Arg Leu Ile Gln Gly Leu Val
100 105 110

Ser Lys Ala Gly Trp Met Ile Gly Tyr Ile Leu Ile Thr Glu
115 120 125

<210> 816
<211> 76
<212> PRT
<213> Sus scrofa

<400> 816
Phe Val Gly Leu Gly Tyr Arg Lys Thr Val Ala Ile Leu Tyr Gln Thr
1 5 10 15

Ala Phe Ser Val Gly Leu Val Leu Leu Ser Gly Leu Ala Tyr Ala Val
20 25 30

Pro His Trp Arg Ser Leu Gln Leu Ala Val Ser Leu Pro Ile Phe Leu
35 40 45

Leu Leu Leu Cys Tyr Trp Phe Val Pro Glu Ser Pro Arg Trp Leu Leu
50 55 60

Ser Gln Lys Arg Asn Thr Gln Ala Ile Lys Ile Met
65 70 75

<210> 817

<211> 126

<212> PRT

<213> Solanum tuberosum

<400> 817

Ala Asn Phe Gly Trp Leu Ile Arg Ser Val His Arg Trp Ser Ala Ser
 1 5 10 15

Met Met Val Leu Met Met Ile Leu His Val Phe Arg Val Tyr Leu Thr
 20 25 30

Gly Gly Phe Lys Lys Pro Arg Glu Leu Thr Trp Val Thr Gly Val Val
 35 40 45

Leu Ala Val Leu Thr Ala Ser Phe Gly Val Thr Gly Tyr Ser Leu Pro
 50 55 60

Trp Asp Gln Ile Gly Tyr Trp Ala Val Lys Ile Val Thr Gly Val Pro
 65 70 75 80

Asp Ala Ile Pro Val Ile Gly Ser Pro Leu Val Glu Leu Leu Arg Gly
 85 90 95

Ser Ala Ser Val Gly Gln Ser Thr Leu Thr Arg Phe Tyr Ser Leu His
 100 105 110

Thr Phe Val Leu Pro Leu Leu Thr Ala Val Phe Met Leu Met
 115 120 125

<210> 818

<211> 76

<212> PRT

<213> Sus scrofa

<400> 818

Phe Val Val Cys Ile Ile Gly Leu Cys Gly Asn Thr Leu Val Ile Tyr
 1 5 10 15

Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ile Thr Asn Ile Tyr Ile
 20 25 30

Leu Asn Leu Ala Ile Ala Asp Glu Leu Phe Met Leu Gly Leu Pro Phe
 35 40 45

Leu Ala Met Gln Val Ala Leu Val His Trp Pro Phe Gly Lys Ala Ile
 50 55 60

Cys Arg Val Val Met Thr Val Asp Gly Ile Asn Gln
 65 70 75

<210> 819

<211> 126

<212> PRT

<213> Sus scrofa

<400> 819

Met Asn Thr Ser Cys Asp Pro Met Asn Gln Pro Val Asn Ser Thr Cys
 1 5 10 15

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Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Leu Ser Thr Gly Leu Val
20 25 30
Gln Arg Ser Leu Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly Leu Phe
35 40 45
Trp Thr Ile Asn Trp Val Leu Ala Leu Gly Gln Cys Val Leu Ala Gly
50 55 60
Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro Arg Asp Ile Pro
65 70 75 80
Thr Phe Pro Leu Ser Ser Ala Phe Ile Arg Thr Leu Arg Tyr His Thr
85 90 95
Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu Thr Leu Val Gln Ile Ala
100 105 110
Arg Ala Ile Leu Glu Tyr Ile Asp His Lys Leu Arg Gly Ala
115 120 125

<210> 820
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 820
Ile Pro Leu Ala Leu Trp Leu Ser Leu Ala Pro Val Val Leu Gly Val
1 5 10 15
Ser Met Ala Ser Leu Thr Glu Leu Ser Phe Asn Trp Leu Gly Phe Thr
20 25 30
Ser Ala Met Ile Ser Asn Ile Ser Phe Thr Tyr Arg Ser Ile Tyr Ser
35 40 45
Lys Lys Ala Met Thr Asp Met Asp Ser Thr Asn Val Tyr Ala Tyr Ile
50 55 60
Ser Ile Ile Ala Leu Ile Phe Cys Leu Pro Pro Ala Ile Phe Ile Glu
65 70 75 80
Gly Pro Gln Leu Leu Gln His Gly Phe Asn Asp Ala Ile Ala Lys Val
85 90 95
Gly Leu Thr Lys Phe
100

<210> 821
<211> 226
<212> PRT
<213> Sus scrofa

<400> 821
Gly Ile Ser Gly Leu Leu Asp Ser Leu Asn Ala Arg Asp Ile Ser Val

1 5 10 15
 Lys Ile Phe Glu Asp Phe Ala Gln Ser Trp Tyr Trp Ile Leu Ala Ala
 20 25 30
 Leu Gly Val Ala Leu Val Leu Ser Leu Leu Phe Val Leu Leu Leu Arg
 35 40 45
 Leu Val Ala Gly Pro Leu Val Phe Val Leu Ile Ile Gly Val Leu Gly
 50 55 60
 Val Leu Ala Tyr Gly Ile Tyr His Cys Trp Asn Glu Tyr Arg Leu Leu
 65 70 75 80
 Arg Asp Lys Gly Ala Ser Ile Ser Gln Leu Gly Phe Thr Thr Asn Leu
 85 90 95
 Ser Ala Tyr Ser Ser Val Gln Glu Thr Trp Leu Ala Ala Leu Ile Leu
 100 105 110
 Leu Ala Val Leu Glu Gly Ile Leu Leu Leu Met Leu Ile Phe Leu Arg
 115 120 125
 Gln Arg Ile Arg Ile Ala Ile Ala Leu Leu Glu Glu Ala Ser Arg Ala
 130 135 140
 Val Gly Gln Met Met Ser Thr Leu Phe Tyr Pro Leu Val Thr Phe Val
 145 150 155 160
 Leu Leu Leu Val Cys Ile Ala Tyr Trp Ala Met Thr Ala Leu Tyr Leu
 165 170 175
 Ala Thr Ser Gly Gln Pro Gln Tyr Val Leu Trp Ala Pro Asn Val Ser
 180 185 190
 Leu Ala Gly Cys Glu Lys Val Met Met Asn Thr Ser Cys Asp Pro Met
 195 200 205
 Asn Gln Pro Val Asn Ser Thr Cys Pro Gly Leu Met Cys Val Phe Gln
 210 215 220
 Gly Tyr
 225
 <210> 822
 <211> 176
 <212> PRT
 <213> Sus scrofa
 <400> 822
 Met Ser Tyr Thr Asn Ala Trp Ala Leu Leu Met Thr Leu Ile Ala Thr
 1 5 10 15
 Ser Leu Thr Ala Ala Tyr Ser Thr Arg Ile Ile Phe Phe Ala Phe Leu
 20 25 30

Gly Lys Pro Arg Phe Pro Pro Leu Val Leu Ile Asn Glu Asn Asn Pro
35 40 45

Leu Leu Ile Asn Ser Ile Lys Arg Leu Leu Ile Gly Ser Ile Phe Ala
50 55 60

Gly Phe Ile Ile Ser Asn Asn Ile Pro Pro Met Thr Val Pro Asn Thr
65 70 75 80

Thr Met Pro Leu Tyr Met Lys Met Thr Ala Leu Ile Val Thr Ile Met
85 90 95

Gly Phe Met Leu Ala Leu Glu Leu Asn Asn Thr Thr Tyr Tyr Leu Lys
100 105 110

Phe Lys Tyr Pro Ser Gln Thr Tyr Lys Phe Ser Asn Met Leu Gly Tyr
115 120 125

Tyr Pro Ser Ile Met His Arg Leu Pro Thr Tyr His Asn Leu Ser Met
130 135 140

Ser Gln Lys Ser Ala Ser Ser Leu Leu Asp Leu Ile Trp Leu Glu Thr
145 150 155 160

Ile Leu Pro Lys Thr Thr Ser Phe Ile Gln Met Lys Met Ser Ile Met
165 170 175

<210> 823
<211> 176
<212> PRT
<213> Salmo salar

<400> 823
Ile Ile Glu Ala Leu Asn Thr Ser His Leu Asn Ala Trp Ala Leu Thr
1 5 10 15

Leu Thr Leu Leu Ala Thr Ser Phe Thr Ala Val Tyr Ser Leu Arg Val
20 25 30

Val Phe Phe Val Ser Met Gly His Pro Arg Phe Thr Ala Thr Ala Pro
35 40 45

Ile Asn Glu Asn Asn Pro Ser Val Ile Asn Pro Ile Lys Arg Leu Ala
50 55 60

Trp Gly Ser Ile Ile Ala Gly Leu Leu Ile Thr Ser Asn Phe Leu Pro
65 70 75 80

Ser Lys Thr Pro Ile Met Thr Met Pro Leu Pro Leu Lys Leu Ala Ala
85 90 95

Leu Leu Val Thr Ile Ser Gly Leu Leu Ile Ala Leu Glu Leu Ala Ser
100 105 110

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Leu Thr Asn Lys Gln Phe Lys Thr Thr Pro Asn Leu Ile Thr His Asn
115 120 125

Phe Ser Asn Met Leu Gly Phe Phe Pro Ala Ile Ile His Arg Leu Ala
130 135 140

Pro Lys Leu Asn Leu Thr Leu Gly Gln Thr Ile Ala Ser Gln Met Val
145 150 155 160

Asp Gln Thr Trp Phe Glu Lys Ile Gly Pro Lys Gly Val Val Ser Thr
165 170 175

<210> 824

<211> 276

<212> PRT

<213> Salmo salar

<400> 824

Met His Pro Thr Thr Leu Ile Leu Ser Ser Thr Leu Leu Met Ile Phe
1 5 10 15

Ala Leu Leu Leu Tyr Pro Leu Ile Thr Thr Leu Asn Pro Thr Pro Gln
20 25 30

Gln Glu Asn Trp Ala Leu Thr His Val Lys Thr Ala Ile Lys Met Ala
35 40 45

Phe Leu Val Ser Leu Leu Pro Leu Phe Ile Phe Leu Asp Gln Gly Thr
50 55 60

Glu Thr Ile Val Thr Asn Trp Gln Trp Met Asn Thr Thr Thr Phe Asp
65 70 75 80

Ile Asn Leu Ser Phe Lys Phe Asp His Tyr Ser Ile Ile Phe Thr Pro
85 90 95

Ile Ala Leu Tyr Val Thr Trp Ser Ile Leu Glu Phe Ala Ser Trp Tyr
100 105 110

Met His Ala Asp Pro Asn Met Asn Arg Phe Phe Lys Tyr Leu Leu Leu
115 120 125

Phe Leu Ile Ala Met Ile Ile Leu Val Thr Ala Asn Asn Met Phe Gln
130 135 140

Leu Phe Ile Gly Trp Glu Gly Val Gly Ile Met Ser Phe Leu Leu Ile
145 150 155 160

Gly Trp Trp Tyr Gly Arg Ala Asp Ala Asn Thr Ala Ala Met Gln Ala
165 170 175

Val Ile Tyr Asn Arg Val Gly Asp Ile Gly Leu Ile Leu Ser Met Ala
180 185 190

Trp Phe Ala Thr Asn Leu Asn Ser Trp Glu Ile Gln Gln Met Phe Ala
 195 200 205

Ser Ser Lys Glu Leu Asp Leu Thr Leu Pro Leu Met Gly Leu Ile Leu
 210 215 220

Ala Ala Thr Gly Lys Ser Ala Gln Phe Gly Leu His Pro Trp Leu Pro
 225 230 235 240

Ser Ala Met Glu Gly Pro Thr Pro Val Ser Ala Leu Leu His Ser Ser
 245 250 255

Thr Met Val Val Ala Gly Ile Phe Leu Leu Ile Arg Leu His Pro Leu
 260 265 270

Met Glu Asn Asn
 275

<210> 825
 <211> 176
 <212> PRT
 <213> Salmo salar

<400> 825
 Met Ala His Gln Ala His Ala Tyr His Met Val Asp Pro Ser Pro Trp
 1 5 10 15

Pro Leu Thr Gly Ala Ile Ala Ala Leu Leu Leu Thr Ser Gly Thr Ala
 20 25 30

Val Trp Phe His Phe His Ser Leu Thr Leu Leu Thr Met Gly Asn Ile
 35 40 45

Leu Leu Leu Leu Thr Met Tyr Gln Trp Trp Arg Asp Ile Ile Arg Glu
 50 55 60

Gly Thr Phe Gln Gly His His Thr Pro Pro Val Gln Lys Gly Leu Arg
 65 70 75 80

Tyr Gly Met Ile Leu Phe Ile Thr Ser Glu Val Phe Phe Phe Leu Gly
 85 90 95

Phe Phe Trp Ala Phe Tyr His Ser Ser Leu Ser Pro Thr Pro Glu Leu
 100 105 110

Gly Gly Cys Trp Pro Pro Thr Gly Ile Ile Thr Leu Asp Pro Phe Glu
 115 120 125

Val Pro Leu Leu Asn Thr Ala Val Leu Leu Ala Ser Gly Val Thr Val
 130 135 140

Thr Trp Ala His His Ser Ile Met Glu Gly Glu Arg Lys Gln Thr Ile
 145 150 155 160

Gln Ala Leu Thr Leu Thr Ile Leu Leu Gly Phe Tyr Phe Thr Phe Leu
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<210> 826
 <211> 226
 <212> PRT
 <213> Solanum tuberosum

<400> 826
 Leu Tyr Gly Ser Ser Gly Gly Glu Ile Glu Leu Gln Glu Ile Val Asn
 1 5 10 15

Gly Leu Ile Asn Thr Gln Met Tyr Asn Ser Pro Gly Ile Ser Ile Ala
 20 25 30

Leu Ile Phe Ile Thr Val Gly Ile Gly Phe Lys Leu Ser Pro Ala Pro
 35 40 45

Ser His Gln Trp Thr Pro Asp Val Tyr Glu Gly Ser Pro Thr Pro Val
 50 55 60

Val Ala Phe Leu Ser Val Thr Ser Lys Val Ala Ala Ser Ala Ser Ala
 65 70 75 80

Thr Arg Ile Phe Asp Ile Pro Phe Tyr Phe Ser Ser Asn Glu Trp His
 85 90 95

Leu Leu Leu Glu Ile Leu Ala Ile Leu Ser Met Ile Leu Gly Asn Leu
 100 105 110

Ile Ala Ile Thr Gln Thr Ser Met Lys Arg Met Leu Ala Tyr Ser Ser
 115 120 125

Ile Gly Gln Ile Gly Tyr Val Ile Ile Gly Ile Ile Val Gly Asp Ser
 130 135 140

Asn Asp Gly Tyr Ala Ser Met Ile Thr Tyr Met Leu Phe Tyr Ile Ser
 145 150 155 160

Met Asn Leu Gly Thr Phe Ala Cys Ile Val Leu Phe Gly Leu Arg Thr
 165 170 175

Gly Thr Asp Asn Ile Arg Asp Tyr Ala Gly Leu Tyr Thr Lys Asp Pro
 180 185 190

Phe Leu Ala Leu Ser Leu Ala Leu Cys Leu Leu Ser Leu Gly Gly Leu
 195 200 205

Pro Pro Leu Ala Gly Phe Phe Gly Lys Leu Tyr Leu Phe Trp Cys Gly
 210 215 220

Trp Gln
 225

<210> 827
 <211> 226

<212> PRT

<213> Solanum tuberosum

<400> 827

Leu Tyr Gly Ser Ser Gly Gly Glu Ile Glu Leu Gln Glu Ile Val Asn
 1 5 10 15

Gly Leu Ile Asn Thr Gln Met Tyr Asn Ser Pro Gly Ile Ser Ile Ala
 20 25 30

Leu Ile Phe Ile Thr Val Gly Ile Gly Phe Lys Leu Ser Pro Ala Pro
 35 40 45

Ser His Gln Trp Thr Pro Asp Val Tyr Glu Gly Ser Pro Thr Pro Val
 50 55 60

Val Ala Phe Leu Ser Val Thr Ser Lys Val Ala Ala Ser Ala Ser Ala
 65 70 75 80

Thr Arg Ile Phe Asp Ile Pro Phe Tyr Phe Ser Ser Asn Glu Trp His
 85 90 95

Leu Leu Leu Glu Ile Leu Ala Ile Leu Ser Met Ile Leu Gly Asn Leu
 100 105 110

Ile Ala Ile Thr Gln Thr Ser Met Lys Arg Met Leu Ala Tyr Ser Ser
 115 120 125

Ile Gly Gln Ile Gly Tyr Val Ile Ile Gly Ile Ile Val Gly Asp Ser
 130 135 140

Asn Asp Gly Tyr Ala Ser Met Ile Thr Tyr Met Leu Phe Tyr Ile Ser
 145 150 155 160

Met Asn Leu Gly Thr Phe Ala Cys Ile Val Leu Phe Gly Leu Arg Thr
 165 170 175

Gly Thr Asp Asn Ile Arg Asp Tyr Ala Gly Leu Tyr Thr Lys Asp Pro
 180 185 190

Phe Leu Ala Leu Ser Leu Ala Leu Cys Leu Leu Ser Leu Gly Gly Leu
 195 200 205

Pro Pro Leu Ala Gly Phe Phe Gly Lys Leu Tyr Leu Phe Trp Cys Gly
 210 215 220

Trp Gln
 225

<210> 828

<211> 276

<212> PRT

<213> Salmo salar

<400> 828

Trp Glu Ile Gln Gln Met Phe Ala Ser Ser Lys Glu Leu Asp Leu Thr
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1		5						10					15		
Leu	Pro	Leu	Met	Gly	Leu	Ile	Leu	Ala	Ala	Thr	Gly	Lys	Ser	Ala	Gln
		20						25					30		
Phe	Gly	Leu	His	Pro	Trp	Leu	Pro	Ser	Ala	Met	Glu	Gly	Pro	Thr	Pro
		35					40					45			
Val	Ser	Ala	Leu	Leu	His	Ser	Ser	Thr	Met	Val	Val	Ala	Gly	Ile	Phe
	50					55					60				
Leu	Leu	Ile	Arg	Leu	His	Pro	Leu	Met	Glu	Asn	Asn	Gln	Thr	Ala	Leu
65					70					75					80
Thr	Thr	Cys	Leu	Cys	Leu	Gly	Ala	Leu	Thr	Thr	Leu	Phe	Thr	Ala	Thr
				85					90					95	
Cys	Ala	Leu	Thr	Gln	Asn	Asp	Ile	Lys	Lys	Ile	Val	Ala	Phe	Ser	Thr
			100					105					110		
Ser	Ser	Gln	Leu	Gly	Leu	Met	Met	Val	Thr	Ile	Gly	Leu	Asn	Gln	Pro
		115					120					125			
Gln	Leu	Ala	Phe	Leu	His	Ile	Cys	Thr	His	Ala	Phe	Phe	Lys	Ala	Met
	130					135					140				
Leu	Phe	Leu	Cys	Ser	Gly	Ser	Ile	Ile	His	Ser	Leu	Asn	Asp	Glu	Gln
145					150					155					160
Asp	Ile	Arg	Lys	Met	Gly	Gly	Met	His	Asn	Leu	Thr	Pro	Phe	Thr	Ser
				165					170					175	
Ser	Cys	Leu	Thr	Ile	Gly	Ser	Leu	Ala	Leu	Thr	Gly	Thr	Pro	Phe	Leu
			180					185					190		
Ala	Gly	Phe	Phe	Ser	Lys	Asp	Ala	Ile	Ile	Glu	Ala	Leu	Asn	Thr	Ser
		195					200					205			
His	Leu	Asn	Ala	Trp	Ala	Leu	Thr	Leu	Thr	Leu	Leu	Ala	Thr	Ser	Phe
	210					215					220				
Thr	Ala	Val	Tyr	Ser	Leu	Arg	Val	Val	Phe	Phe	Val	Ser	Met	Gly	His
225					230					235					240
Pro	Arg	Phe	Thr	Ala	Thr	Ala	Pro	Ile	Asn	Glu	Asn	Asn	Pro	Ser	Val
				245					250					255	
Ile	Asn	Pro	Ile	Lys	Arg	Leu	Ala	Trp	Gly	Ser	Ile	Ile	Ala	Gly	Leu
			260					265					270		
Leu	Ile	Thr	Ser												
		275													

<210> 829
 <211> 276
 <212> PRT
 <213> Sus scrofa

<400> 829

Val Ala Gln Asn Gly Leu Asp Cys Pro Thr Pro Gln Val Cys Val Ser
 1 5 10 15

Ser Cys Pro Ala Val Ser Trp Thr Val Ala Thr Asn Gln Leu Ser Gln
 20 25 30

Thr Val Gly Gln Val Phe Tyr Ala Ala Asn Arg Ser Phe Cys Leu Pro
 35 40 45

Gly Val Pro Gly Asp Met Pro Val His Gln Ser Leu Ser Gln Glu Leu
 50 55 60

Cys Pro Ser Phe Leu Leu Pro Ser Ser Pro Ala Leu Gly Arg Cys Phe
 65 70 75 80

Pro Trp Pro Asn Ser Thr Val Pro Glu Val Pro Glu Ile Ser Asn Thr
 85 90 95

Ser Ile Ser Gln Gly Ile Ser Gly Leu Leu Asp Ser Leu Asn Ala Arg
 100 105 110

Asp Ile Ser Val Lys Ile Phe Glu Asp Phe Ala Gln Ser Trp Tyr Trp
 115 120 125

Ile Leu Ala Ala Leu Gly Val Ala Leu Val Leu Ser Leu Leu Phe Val
 130 135 140

Leu Leu Leu Arg Leu Val Ala Gly Pro Leu Val Phe Val Leu Ile Ile
 145 150 155 160

Gly Val Leu Gly Val Leu Ala Tyr Gly Ile Tyr His Cys Trp Asn Glu
 165 170 175

Tyr Arg Leu Leu Arg Asp Lys Gly Ala Ser Ile Ser Gln Leu Gly Phe
 180 185 190

Thr Thr Asn Leu Ser Ala Tyr Ser Ser Val Gln Glu Thr Trp Leu Ala
 195 200 205

Ala Leu Ile Leu Leu Ala Val Leu Glu Gly Ile Leu Leu Leu Met Leu
 210 215 220

Ile Phe Leu Arg Gln Arg Ile Arg Ile Ala Ile Ala Leu Leu Glu Glu
 225 230 235 240

Ala Ser Arg Ala Val Gly Gln Met Met Ser Thr Leu Phe Tyr Pro Leu
 245 250 255

Val Thr Phe Val Leu Leu Leu Val Cys Ile Ala Tyr Trp Ala Met Thr
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Ala Leu Tyr Leu
275

<210> 830
<211> 276
<212> PRT
<213> Salmo salar

<400> 830
Asn Gly Thr Leu Gly Val Asn Ser Thr Val Gly Ala Ser Gly Glu Leu
1 5 10 15

Gln Ala Gln Tyr Gln Pro Ala Asn Phe Ser Ala Gln Val Phe Phe Leu
20 25 30

Phe Leu Ser Ala Met Met Val Val Cys Leu Ala Ala Phe Leu Leu Leu
35 40 45

Asn His His Pro Ala Val Ala Arg Glu Lys Lys Cys Glu Gln Tyr Phe
50 55 60

Asn Gly Gly Leu Ala Glu Glu Lys Ser Asp Gln Ala Leu Ser Leu Ser
65 70 75 80

His Arg Pro Gln Glu Glu Lys Pro Met Ile Ser Ser Pro Asp Ser His
85 90 95

Arg Arg Ala Arg Gln Ser Ser Phe Gly Thr Gly Phe Tyr Ser Gly Pro
100 105 110

Glu Leu Ala Phe Ile Phe Val Val Leu Ala Trp Val Asn Ala Leu Thr
115 120 125

Asn Ala Val Leu Pro Ser Val Gln Ser Tyr Ser Cys Leu Pro Tyr Gly
130 135 140

Asn Gln Ala Tyr His Leu Ala Ala Thr Met Ala Ala Val Ala Asn Pro
145 150 155 160

Val Ala Cys Phe Ile Ala Met Phe Leu Pro Leu Arg Ser Leu Val Leu
165 170 175

Ile Gly Leu Leu Thr Ile Val Gly Thr Gly Phe Gly Thr Tyr Ile Met
180 185 190

Ala Met Ala Thr Leu Ser Pro Cys Pro Leu Leu Val His Ser Ala Ser
195 200 205

Gly Thr Thr Leu Ile Val Ile Ala Trp Val Leu Phe Val Leu Thr Leu
210 215 220

Ser Tyr Val Lys Val Ile Ile Gly Val Ile Leu Arg Asp Glu Gly His
225 230 235 240

Ser Ala Leu Val Trp Cys Gly Ala Val Val Gln Leu Gly Ser Met Leu
245 250 255

Gly Ala Leu Ser Met Phe Pro Leu Val Ser Val Tyr Gly Leu Phe Lys
260 265 270

Ser Gly Asp Pro
275

<210> 831
<211> 201
<212> PRT
<213> Sus scrofa

<400> 831
Thr Glu Cys Ser Glu Glu Thr Pro Thr Thr Thr Ser His Ser Gln Ala
1 5 10 15

Phe Asn Phe Trp Asp Leu Ile Arg Leu Leu Cys Ser Val Gln Tyr Gly
20 25 30

Ser Val Leu Phe Val Ala Trp Phe Met Gly Phe Gly Tyr Gly Phe Val
35 40 45

Phe Thr Phe Leu Tyr Trp His Leu Glu Asp Leu Asn Gly Thr Thr Thr
50 55 60

Leu Phe Gly Val Cys Ser Val Leu Ser His Val Ser Glu Leu Thr Ala
65 70 75 80

Tyr Phe Phe Ser His Lys Leu Ile Glu Leu Ile Gly His Ile Arg Val
85 90 95

Leu Tyr Ile Gly Leu Ala Cys Asn Thr Ala Arg Tyr Ile Tyr Ile Ser
100 105 110

Tyr Leu Glu Asn Ala Trp Thr Val Leu Pro Met Glu Val Leu Gln Gly
115 120 125

Val Thr His Ala Ala Ile Trp Ala Ala Cys Ile Ser Tyr Leu Ser Ala
130 135 140

Ala Val Pro Pro Glu Leu Arg Thr Ser Ala Gln Gly Ile Leu Gln Gly
145 150 155 160

Leu His Leu Gly Leu Gly Arg Gly Cys Gly Ala Met Ile Gly Gly Val
165 170 175

Leu Val Asn Tyr Phe Gly Ala Ala Ala Thr Phe Arg Gly Ile Gly Met
180 185 190

Ala Cys Leu Val Ile Leu Leu Leu Phe
195 200

<210> 832
 <211> 201
 <212> PRT
 <213> Sus scrofa

<400> 832
 Gly Leu Tyr Tyr Gly Ser Tyr Met Phe Leu Glu Thr Trp Asn Ile Gly
 1 5 10 15
 Val Val Leu Leu Phe Thr Val Met Ala Thr Ala Phe Met Gly Tyr Val
 20 25 30
 Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala Thr Val Ile Thr Asn
 35 40 45
 Leu Leu Ser Ala Ile Pro Tyr Ile Gly Thr Asp Leu Val Glu Trp Ile
 50 55 60
 Trp Gly Gly Phe Ser Val Asp Lys Ala Thr Leu Thr Arg Phe Phe Ala
 65 70 75 80
 Phe His Phe Ile Leu Pro Phe Ile Ile Thr Ala Leu Ala Ala Val His
 85 90 95
 Leu Leu Phe Leu His Glu Thr Gly Ser Asn Asn Pro Thr Gly Ile Ser
 100 105 110
 Ser Asp Met Asp Lys Ile Pro Phe His Pro Tyr Tyr Thr Ile Lys Asp
 115 120 125
 Ile Leu Gly Ala Leu Phe Met Met Leu Ile Leu Leu Ile Leu Val Leu
 130 135 140
 Phe Ser Pro Asp Leu Leu Gly Asp Pro Asp Asn Tyr Thr Pro Ala Asn
 145 150 155 160
 Pro Leu Asn Thr Pro Pro His Ile Lys Pro Glu Trp Tyr Phe Leu Phe
 165 170 175
 Ala Tyr Ala Ile Leu Arg Ser Ile Pro Asn Lys Leu Gly Gly Val Leu
 180 185 190
 Ala Leu Val Ala Ser Ile Leu Ile Leu
 195 200

<210> 833
 <211> 151
 <212> PRT
 <213> Sus scrofa

<400> 833
 Leu Leu Leu Leu Glu Ala Gly Ala Leu Ala Ala Gln Ala Ala Val Val
 1 5 10 15
 Gln Gln Leu Asp Asn Val Met Asp Val Leu Ile Cys Gly Ser Met Val
 20 25 30

Ser Ser Leu Cys Phe Leu Gly Ala Ile Ala Val Asp Arg Tyr Val Ser
35 40 45

Ile Phe Tyr Ala Leu Arg Tyr His Ser Ile Val Thr Leu Pro Arg Ala
50 55 60

Gly Arg Ala Ile Ala Ala Ile Trp Ala Gly Ser Val Leu Ser Ser Thr
65 70 75 80

Leu Phe Ile Ala Tyr Tyr His His Thr Ala Val Leu Leu Gly Leu Val
85 90 95

Ser Phe Phe Val Ala Met Leu Ala Leu Met Ala Val Leu Tyr Val His
100 105 110

Met Leu Ala Arg Ala Cys Gln His Gly Arg His Ile Ala Arg Leu His
115 120 125

Lys Thr Gln His Pro Thr Arg Gln Gly Cys Gly Leu Lys Gly Ala Ala
130 135 140

Thr Leu Thr Ile Leu Leu Gly
145 150

<210> 834
<211> 176
<212> PRT
<213> Sus scrofa

<400> 834
Gly Val Leu Phe Met Leu Ala Met Ser Ser Leu Ala Val Tyr Ser Ile
1 5 10 15

Leu Trp Ser Gly Trp Ala Ser Asn Ser Lys Tyr Ala Leu Ile Gly Ala
20 25 30

Leu Arg Ala Val Ala Gln Thr Ile Ser Tyr Glu Val Thr Leu Ala Ile
35 40 45

Ile Leu Leu Ser Val Leu Leu Met Asn Gly Ser Tyr Thr Leu Ser Thr
50 55 60

Leu Ile Thr Thr Gln Glu His Ile Trp Met Ile Phe Thr Ser Trp Pro
65 70 75 80

Leu Ala Met Met Trp Phe Ile Ser Thr Leu Ala Glu Thr Asn Arg Ala
85 90 95

Pro Phe Asp Leu Thr Glu Gly Glu Ser Glu Leu Val Ser Gly Phe Asn
100 105 110

Val Glu Tyr Ala Ala Gly Pro Phe Ala Met Phe Phe Met Ala Glu Tyr
115 120 125

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Ala Asn Ile Ile Met Met Asn Ala Phe Thr Ala Ile Leu Phe Leu Gly
130 135 140

Ala Ser His Asp Pro His Thr Pro Glu Leu Tyr Thr Ile Asn Phe Val
145 150 155 160

Leu Lys Thr Leu Ala Leu Thr Ile Thr Phe Leu Trp Ile Arg Ala Ser
165 170 175

<210> 835
<211> 76
<212> PRT
<213> Sus scrofa

<400> 835
Thr Pro Ser Tyr Thr Val Ser Cys Lys Leu His Ser Phe Leu Phe Glu
1 5 10 15

Thr Cys Ser Tyr Ala Thr Leu Leu His Val Leu Thr Leu Ser Phe Glu
20 25 30

Arg Tyr Ile Ala Ile Cys His Pro Phe Arg Tyr Lys Ala Met Ser Gly
35 40 45

Pro Cys Gln Val Lys Leu Leu Ile Gly Phe Val Trp Val Thr Ser Thr
50 55 60

Leu Val Ala Leu Pro Leu Leu Phe Ala Met Gly Val
65 70 75

<210> 836
<211> 176
<212> PRT
<213> Sus scrofa

<400> 836
Thr Pro Phe Glu Ile Ser Leu Trp Ile Leu Leu Ala Cys Leu Met Lys
1 5 10 15

Ile Gly Phe His Val Ile Pro Thr Ile Ser Ser Ile Val Pro Glu Ser
20 25 30

Cys Leu Leu Ile Val Val Gly Leu Leu Val Gly Gly Leu Ile Lys Ala
35 40 45

Val Gly Glu Thr Pro Pro Phe Leu Gln Ser Glu Val Phe Phe Leu Phe
50 55 60

Leu Leu Pro Pro Ile Ile Leu Asp Ala Gly Tyr Phe Leu Pro Leu Arg
65 70 75 80

Gln Phe Thr Glu Asn Leu Gly Thr Ile Leu Ile Phe Ala Val Val Gly
85 90 95

Thr Leu Trp Asn Ala Phe Phe Leu Gly Gly Leu Met Tyr Ala Val Cys
100 105 110

Leu Val Gly Gly Glu Gln Ile Asn Asn Ile Gly Leu Leu Asp Asn Leu
115 120 125

Leu Phe Gly Ser Ile Ile Ser Ala Val Asp Pro Val Ala Val Leu Ala
130 135 140

Val Phe Glu Glu Ile His Ile Asn Glu Leu Leu His Ile Leu Val Phe
145 150 155 160

Gly Glu Ser Leu Leu Asn Asp Ala Val Thr Val Val Leu Tyr His Leu
165 170 175

<210> 837
<211> 176
<212> PRT
<213> Sus scrofa

<400> 837
Ile Phe Met Leu Asn Asn Glu Cys Pro Asn Met Pro Leu Ile Gly Leu
1 5 10 15

Leu Leu Ala Ala Ala Gly Lys Ser Ala Gln Phe Gly Leu His Pro Trp
20 25 30

Leu Pro Ser Ala Met Glu Gly Pro Thr Pro Val Ser Ala Leu Leu His
35 40 45

Ser Ser Thr Met Val Val Ala Gly Val Phe Leu Leu Ile Arg Phe Tyr
50 55 60

Pro Leu Met Glu Thr Asn Lys Leu Val Gln Thr Met Thr Leu Cys Leu
65 70 75 80

Gly Ala Ile Thr Thr Leu Phe Thr Ala Leu Cys Ala Ile Thr Gln Asn
85 90 95

Asp Ile Lys Lys Ile Val Ala Phe Ser Thr Ser Ser Gln Leu Gly Leu
100 105 110

Met Met Val Thr Ile Gly Ile Asn Gln Pro His Leu Ala Phe Leu His
115 120 125

Ile Cys Met His Ala Phe Phe Lys Ala Met Leu Phe Met Cys Ser Gly
130 135 140

Ser Ile Ile His Ser Leu Asn Asp Glu Gln Asp Ile Arg Lys Met Gly
145 150 155 160

Gly Leu Tyr Lys Ala Met Pro Phe Thr Thr Thr Ala Leu Ile Ile Gly
165 170 175

<210> 838
<211> 101
<212> PRT

<213> Sus scrofa

<400> 838

Ser Gly Leu Arg Gly Leu Met Leu Ser Val Met Leu Ala Ser Leu Met
 1 5 10 15

Ser Ser Leu Thr Ser Ile Phe Asn Ser Ala Ser Thr Leu Phe Thr Met
 20 25 30

Asp Leu Tyr Thr Lys Ile Arg Lys Gln Ala Ser Glu Lys Glu Leu Leu
 35 40 45

Ile Ala Gly Arg Leu Phe Ile Ile Leu Leu Ile Val Ile Ser Ile Val
 50 55 60

Trp Val Pro Leu Val Gln Val Ala Gln Asn Gly Gln Leu Phe His Tyr
 65 70 75 80

Ile Glu Ser Ile Ser Ser Tyr Leu Gly Pro Pro Ile Ala Ala Val Phe
 85 90 95

Leu Leu Ala Ile Phe
 100

<210> 839

<211> 76

<212> PRT

<213> Capra hircus

<400> 839

Ala Leu Met Ala Val Leu Tyr Val His Met Leu Ala Arg Ala Cys Gln
 1 5 10 15

His Ala Arg Gly Ile Ala Arg Leu Gln Lys Arg Gln Arg Pro Ile His
 20 25 30

Gln Gly Phe Gly Leu Lys Gly Ala Ala Thr Leu Thr Ile Leu Leu Gly
 35 40 45

Val Phe Phe Leu Cys Trp Gly Pro Phe Phe Leu His Leu Ser Leu Ile
 50 55 60

Val Leu Cys Pro Gln His Pro Thr Cys Gly Cys Ile
 65 70 75

<210> 840

<211> 276

<212> PRT

<213> Salmo salar

<400> 840

Met Ala Asn Leu Arg Lys Thr His Pro Leu Leu Lys Ile Ala Asn Asp
 1 5 10 15

Ala Leu Val Asp Leu Pro Ala Pro Ser Asn Ile Ser Val Trp Trp Asn
 20 25 30

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Phe Gly Ser Leu Leu Gly Leu Cys Leu Ala Thr Gln Ile Leu Thr Gly
35 40 45

Leu Phe Leu Ala Met His Tyr Thr Ser Asp Ile Ser Thr Ala Phe Ser
50 55 60

Ser Val Cys His Ile Cys Arg Asp Val Ser Tyr Gly Trp Leu Ile Arg
65 70 75 80

Asn Ile His Ala Asn Gly Ala Ser Phe Phe Phe Ile Cys Ile Tyr Met
85 90 95

His Ile Ala Arg Gly Leu Tyr Tyr Gly Ser Tyr Leu Tyr Lys Glu Thr
100 105 110

Trp Asn Ile Gly Val Val Leu Leu Leu Leu Thr Met Met Thr Ala Phe
115 120 125

Val Gly Tyr Val Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala Thr
130 135 140

Val Ile Thr Asn Leu Leu Ser Ala Val Pro Tyr Val Gly Gly Ala Leu
145 150 155 160

Val Gln Trp Ile Trp Gly Gly Phe Ser Val Asp Asn Ala Thr Leu Thr
165 170 175

Arg Phe Phe Ala Phe His Phe Leu Phe Pro Phe Val Ile Ala Ala Ala
180 185 190

Thr Val Leu His Leu Leu Phe Leu His Glu Thr Gly Ser Asn Asn Pro
195 200 205

Ala Gly Ile Asn Ser Asp Ala Asp Lys Ile Ser Phe His Pro Tyr Phe
210 215 220

Ser Tyr Lys Asp Leu Leu Gly Phe Val Ala Met Leu Leu Gly Leu Thr
225 230 235 240

Ser Leu Ala Leu Phe Ala Pro Asn Leu Leu Gly Asp Pro Asp Asn Phe
245 250 255

Thr Pro Ala Asn Pro Leu Val Thr Pro Pro His Ile Lys Pro Glu Trp
260 265 270

Tyr Phe Leu Phe
275

<210> 841

<211> 226

<212> PRT

<213> Solanum tuberosum

<400> 841

Met Thr Ile Arg Asn Gln Arg Leu Ser Leu Leu Lys Gln Pro Ile Ser

1 5 10 15
 Ser Ile Leu Asn Gln His Leu Ile Asp Tyr Pro Thr Pro Ser Asn Leu
 20 25 30
 Ser Tyr Trp Trp Gly Phe Gly Ser Leu Ala Gly Ile Cys Leu Val Ile
 35 40 45
 Gln Ile Val Thr Gly Val Phe Leu Ala Met His Tyr Thr Pro His Val
 50 55 60
 Asp Leu Ala Phe Asn Ser Val Glu His Ile Met Arg Asp Val Glu Gly
 65 70 75 80
 Gly Trp Leu Leu Arg Tyr Met His Ala Asn Gly Ala Ser Met Phe Phe
 85 90 95
 Ile Val Val Tyr Leu His Ile Phe Arg Gly Leu Tyr Tyr Ala Ser Tyr
 100 105 110
 Ser Ser Pro Arg Glu Phe Val Trp Cys Leu Gly Val Val Ile Phe Leu
 115 120 125
 Leu Met Ile Val Thr Ala Phe Ile Gly Tyr Val Leu Pro Trp Gly Gln
 130 135 140
 Met Ser Phe Trp Gly Ala Thr Val Ile Thr Ser Leu Ala Ser Ala Ile
 145 150 155 160
 Pro Val Val Gly Asp Thr Ile Val Thr Trp Leu Trp Gly Gly Phe Ser
 165 170 175
 Val Asp Asn Ala Thr Leu Asn Arg Phe Phe Ser Leu His Tyr Leu Leu
 180 185 190
 Pro Phe Ile Leu Val Gly Ala Ser Leu Leu His Leu Ala Ala Leu His
 195 200 205
 Gln Tyr Gly Ser Asn Asn Pro Leu Gly Val His Ser Glu Met Asp Lys
 210 215 220
 Ile Ala
 225
 <210> 842
 <211> 251
 <212> PRT
 <213> Sus scrofa
 <400> 842
 Met Thr Asn Ile Arg Lys Ser His Pro Leu Met Lys Ile Ile Asn Asn
 1 5 10 15
 Ala Phe Ile Asp Leu Pro Ala Pro Ser Asn Ile Ser Ser Trp Trp Asn
 20 25 30

Phe Gly Ser Leu Leu Gly Ile Cys Leu Ile Leu Gln Ile Leu Thr Gly
 35 40 45
 Leu Phe Leu Ala Met His Tyr Thr Ser Asp Thr Thr Thr Ala Phe Ser
 50 55 60
 Ser Val Thr His Ile Cys Arg Asp Val Asn Tyr Gly Trp Val Ile Arg
 65 70 75 80
 Tyr Leu His Ala Asn Gly Ala Ser Met Phe Phe Ile Cys Leu Phe Ile
 85 90 95
 His Val Gly Arg Gly Leu Tyr Tyr Gly Ser Tyr Met Phe Leu Glu Thr
 100 105 110
 Trp Asn Ile Gly Val Val Leu Leu Phe Thr Val Met Ala Thr Ala Phe
 115 120 125
 Met Gly Tyr Val Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala Thr
 130 135 140
 Val Ile Thr Asn Leu Leu Ser Ala Ile Pro Tyr Ile Gly Thr Asp Leu
 145 150 155 160
 Val Glu Trp Ile Trp Gly Gly Phe Ser Val Asp Lys Ala Thr Leu Thr
 165 170 175
 Arg Phe Phe Ala Phe His Phe Ile Leu Pro Phe Ile Ile Thr Ala Leu
 180 185 190
 Ala Ala Val His Leu Leu Phe Leu His Glu Thr Gly Ser Asn Asn Pro
 195 200 205
 Thr Gly Ile Ser Ser Asp Met Asp Lys Ile Pro Phe His Pro Tyr Tyr
 210 215 220
 Thr Ile Lys Asp Ile Leu Gly Ala Leu Phe Met Met Leu Ile Leu Leu
 225 230 235 240
 Ile Leu Val Leu Phe Ser Pro Asp Leu Leu Gly
 245 250

 <210> 843
 <211> 226
 <212> PRT
 <213> Sus scrofa

 <400> 843
 Ile Val Ala Phe Ser Thr Ser Ser Gln Leu Gly Leu Met Met Val Thr
 1 5 10 15
 Ile Gly Ile Asn Gln Pro His Leu Ala Phe Leu His Ile Cys Met His
 20 25 30

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Ala Phe Phe Lys Ala Met Leu Phe Met Cys Ser Gly Ser Ile Ile His
35 40 45

Ser Leu Asn Asp Glu Gln Asp Ile Arg Lys Met Gly Gly Leu Tyr Lys
50 55 60

Ala Met Pro Phe Thr Thr Thr Ala Leu Ile Ile Gly Ser Leu Ala Leu
65 70 75 80

Thr Gly Met Pro Tyr Leu Thr Gly Phe Tyr Ser Lys Asp Leu Ile Ile
85 90 95

Glu Ala Val Asn Met Ser Tyr Thr Asn Ala Trp Ala Leu Leu Met Thr
100 105 110

Leu Ile Ala Thr Ser Leu Thr Ala Ala Tyr Ser Thr Arg Ile Ile Phe
115 120 125

Phe Ala Phe Leu Gly Lys Pro Arg Phe Pro Pro Leu Val Leu Ile Asn
130 135 140

Glu Asn Asn Pro Leu Leu Ile Asn Ser Ile Lys Arg Leu Leu Ile Gly
145 150 155 160

Ser Ile Phe Ala Gly Phe Ile Ile Ser Asn Asn Ile Pro Pro Met Thr
165 170 175

Val Pro Asn Thr Thr Met Pro Leu Tyr Met Lys Met Thr Ala Leu Ile
180 185 190

Val Thr Ile Met Gly Phe Met Leu Ala Leu Glu Leu Asn Asn Thr Thr
195 200 205

Tyr Tyr Leu Lys Phe Lys Tyr Pro Ser Gln Thr Tyr Lys Phe Ser Asn
210 215 220

Met Leu
225

<210> 844
<211> 101
<212> PRT
<213> Sus scrofa

<400> 844
Glu Phe Tyr Asn Gln Thr Trp Leu His Arg Tyr Gly Glu Ser Ile Ser
1 5 10 15

Pro Ala Thr Leu Thr Thr Leu Trp Ser Leu Ser Val Ala Ile Phe Ser
20 25 30

Val Gly Gly Met Ile Gly Ser Phe Ser Val Gly Leu Phe Val Asn Arg
35 40 45

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Phe Gly Arg Arg Asn Ser Met Leu Met Met Asn Leu Leu Ala Phe Ile
50 55 60

Ser Ala Val Leu Met Gly Phe Ser Lys Leu Gly Lys Ser Phe Glu Met
65 70 75 80

Leu Ile Leu Gly Arg Phe Ile Ile Gly Val Tyr Cys Gly Leu Thr Thr
85 90 95

Gly Phe Val Pro Met
100

<210> 845
<211> 201
<212> PRT
<213> Sus scrofa

<400> 845
Met Ala Ser Thr Leu Ser Pro Ser Thr Val Thr Lys Thr Pro Gly Pro
1 5 10 15

Pro Glu Ile Ser Glu Arg Ile Gln Asn Ala Ala Asp Ile Ser Val Ile
20 25 30

Val Ile Tyr Phe Val Val Val Met Ala Val Gly Leu Trp Ala Met Leu
35 40 45

Arg Thr Asn Arg Gly Thr Val Gly Gly Phe Phe Leu Ala Gly Arg Asp
50 55 60

Val Thr Trp Trp Pro Met Gly Ala Ser Leu Phe Ala Ser Asn Ile Gly
65 70 75 80

Ser Gly His Phe Val Gly Leu Ala Gly Thr Gly Ala Ala Ser Gly Ile
85 90 95

Ala Ile Ala Ala Phe Glu Trp Asn Ala Leu Leu Leu Leu Leu Val Leu
100 105 110

Gly Trp Phe Phe Val Pro Ile Tyr Ile Lys Ala Gly Val Met Thr Met
115 120 125

Pro Glu Tyr Leu Arg Lys Arg Phe Gly Gly Lys Arg Leu Gln Ile Tyr
130 135 140

Leu Ser Ile Leu Ser Leu Phe Ile Cys Val Ala Leu Arg Ile Ser Ser
145 150 155 160

Asp Ile Phe Ser Gly Ala Ile Phe Ile Lys Leu Ala Leu Gly Leu Asp
165 170 175

Leu Tyr Leu Ala Ile Phe Ser Leu Leu Ala Ile Thr Ala Ile Tyr Thr
180 185 190

Ile Thr Gly Gly Leu Ala Ser Val Ile

195

200

<210> 846

<211> 176

<212> PRT

<213> Salmo salar

<400> 846

Met His Pro Thr Thr Leu Ile Leu Ser Ser Thr Leu Leu Met Ile Phe
1 5 10 15Ala Leu Leu Leu Tyr Pro Leu Ile Thr Thr Leu Asn Pro Thr Pro Gln
20 25 30Gln Glu Asn Trp Ala Leu Thr His Val Lys Thr Ala Ile Lys Met Ala
35 40 45Phe Leu Val Ser Leu Leu Pro Leu Phe Ile Phe Leu Asp Gln Gly Thr
50 55 60Glu Thr Ile Val Thr Asn Trp Gln Trp Met Asn Thr Thr Thr Phe Asp
65 70 75 80Ile Asn Leu Ser Phe Lys Phe Asp His Tyr Ser Ile Ile Phe Thr Pro
85 90 95Ile Ala Leu Tyr Val Thr Trp Ser Ile Leu Glu Phe Ala Ser Trp Tyr
100 105 110Met His Ala Asp Pro Asn Met Asn Arg Phe Phe Lys Tyr Leu Leu Leu
115 120 125Phe Leu Ile Ala Met Ile Ile Leu Val Thr Ala Asn Asn Met Phe Gln
130 135 140Leu Phe Ile Gly Trp Glu Gly Val Gly Ile Met Ser Phe Leu Leu Ile
145 150 155 160Gly Trp Trp Tyr Gly Arg Ala Asp Ala Asn Thr Ala Ala Met Gln Ala
165 170 175

<210> 847

<211> 76

<212> PRT

<213> Sus scrofa

<400> 847

Phe Tyr His Ser Ser Leu Ala Pro Thr Pro Glu Leu Gly Gly Cys Trp
1 5 10 15Pro Pro Thr Gly Ile His Pro Leu Asn Pro Leu Glu Val Pro Leu Leu
20 25 30Asn Thr Ser Ile Leu Leu Ala Ser Gly Val Ser Ile Thr Trp Ala His
35 40 45

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His Ser Leu Met Glu Gly Asp Arg Lys His Met Ile Gln Ala Leu Ser
 50 55 60

Ile Thr Ile Ala Leu Gly Val Tyr Phe Thr Leu Leu
 65 70 75

<210> 848
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 848
 Met Phe Val Asn Arg Trp Leu Tyr Ser Thr Asn His Lys Asp Ile Gly
 1 5 10 15

Thr Leu Tyr Leu Leu Phe Gly Ala Trp Ala Gly Met Val Gly Thr Ala
 20 25 30

Leu Ser Leu Leu Ile Arg Ala Glu Leu Gly Gln Pro Gly Thr Leu Leu
 35 40 45

Gly Asp Asp Gln Ile Tyr Asn Val Ile Val Thr Ala His Ala Phe Val
 50 55 60

Met Ile Phe Phe Met Val Met Pro Ile Met Ile Gly
 65 70 75

<210> 849
 <211> 151
 <212> PRT
 <213> Solanum tuberosum

<400> 849
 Gly Gln Leu Ser Ile Ile Phe Leu Trp Leu Ser Gly Met Tyr Phe His
 1 5 10 15

Gly Ala Arg Phe Ser Asn Tyr Glu Ala Trp Leu Ser Asp Pro Thr His
 20 25 30

Ile Gly Pro Ser Ala Gln Val Val Trp Pro Ile Val Gly Gln Glu Ile
 35 40 45

Leu Asn Gly Asp Val Gly Gly Gly Phe Arg Gly Ile Gln Ile Thr Ser
 50 55 60

Gly Phe Phe Gln Leu Trp Arg Ala Ser Gly Ile Thr Ser Glu Leu Gln
 65 70 75 80

Leu Tyr Cys Thr Ala Ile Gly Ala Leu Val Phe Ala Ala Leu Met Leu
 85 90 95

Phe Ala Gly Trp Phe His Tyr His Lys Ala Ala Pro Lys Leu Ala Trp
 100 105 110

Phe Gln Asp Val Glu Ser Met Leu Asn His His Leu Ala Gly Leu Leu
 115 120 125

Gly Leu Gly Ser Leu Ser Trp Ala Gly His Gln Val His Val Ser Leu
 130 135 140

Pro Ile Asn Gln Phe Leu Asn
 145 150

<210> 850
 <211> 126
 <212> PRT
 <213> Sus scrofa

<400> 850
 Ile Val Ala Phe Ser Thr Ser Ser Gln Leu Gly Leu Met Met Val Thr
 1 5 10 15

Ile Gly Ile Asn Gln Pro His Leu Ala Phe Leu His Ile Cys Met His
 20 25 30

Ala Phe Phe Lys Ala Met Leu Phe Met Cys Ser Gly Ser Ile Ile His
 35 40 45

Ser Leu Asn Asp Glu Gln Asp Ile Arg Lys Met Gly Gly Leu Tyr Lys
 50 55 60

Ala Met Pro Phe Thr Thr Thr Ala Leu Ile Ile Gly Ser Leu Ala Leu
 65 70 75 80

Thr Gly Met Pro Tyr Leu Thr Gly Phe Tyr Ser Lys Asp Leu Ile Ile
 85 90 95

Glu Ala Val Asn Met Ser Tyr Thr Asn Ala Trp Ala Leu Leu Met Thr
 100 105 110

Leu Ile Ala Thr Ser Leu Thr Ala Ala Tyr Ser Thr Arg Ile
 115 120 125

<210> 851
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 851
 Met Ala Ala Pro Thr Leu Ala Arg Leu Val Leu Thr His Leu Leu Val
 1 5 10 15

Ala Leu Phe Gly Met Gly Ser Trp Ala Ala Ile Asn Gly Ile Trp Val
 20 25 30

Glu Leu Pro Val Val Val Lys Asp Leu Pro Glu Gly Trp Ser Leu Pro
 35 40 45

Ser Tyr Leu Ser Val Leu Val Ala Leu Gly Asn Leu Gly Leu Leu Val
 50 55 60

Val Thr Leu Trp Arg Arg Leu Ala Pro Gly Lys Gly
 65 70 75

<210> 852
 <211> 276
 <212> PRT
 <213> Sus scrofa

<400> 852

Met Pro Val Leu Gly Pro Glu Arg Arg Leu Leu Ala Ser Leu Ser Ser
 1 5 10 15

Ala Pro Pro Ala Ala Pro Arg Leu Gly Leu Ala Ala Asn Gln Thr Asn
 20 25 30

Gln Thr Gly Pro Gln Cys Leu Glu Val Ser Ile Pro Asp Gly Leu Phe
 35 40 45

Leu Ser Leu Gly Leu Val Ser Leu Val Glu Asn Val Leu Val Val Ala
 50 55 60

Ala Ile Ala Lys Asn Arg Asn Leu His Ser Pro Met Tyr Tyr Phe Val
 65 70 75 80

Cys Cys Leu Ala Val Ser Asp Leu Leu Val Ser Val Ser Asn Val Leu
 85 90 95

Glu Thr Ala Val Leu Leu Leu Leu Glu Ala Gly Ala Leu Ala Ala Gln
 100 105 110

Ala Ala Val Val Gln Gln Leu Asp Asn Val Met Asp Val Leu Ile Cys
 115 120 125

Gly Ser Met Val Ser Ser Leu Cys Phe Leu Gly Ala Ile Ala Val Asp
 130 135 140

Arg Tyr Val Ser Ile Phe Tyr Ala Leu Arg Tyr His Ser Ile Val Thr
 145 150 155 160

Leu Pro Arg Ala Gly Arg Ala Ile Ala Ala Ile Trp Ala Gly Ser Val
 165 170 175

Leu Ser Ser Thr Leu Phe Ile Ala Tyr Tyr His His Thr Ala Val Leu
 180 185 190

Leu Gly Leu Val Ser Phe Phe Val Ala Met Leu Ala Leu Met Ala Val
 195 200 205

Leu Tyr Val His Met Leu Ala Arg Ala Cys Gln His Gly Arg His Ile
 210 215 220

Ala Arg Leu His Lys Thr Gln His Pro Thr Arg Gln Gly Cys Gly Leu
 225 230 235 240

Lys Gly Ala Ala Thr Leu Thr Ile Leu Leu Gly Val Phe Leu Leu Cys
 245 250 255

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Trp Ala Pro Phe Phe Leu His Leu Ser Leu Val Val Leu Cys Pro Gln
260 265 270

His Pro Thr Cys
275

<210> 853
<211> 176
<212> PRT
<213> Sus scrofa

<400> 853
Met Glu Ser Leu Phe Pro Ala Pro Phe Trp Glu Val Leu Tyr Gly Ser
1 5 10 15

Pro Leu Gln Gly Asn Leu Ser Leu Leu Ser Pro Asn His Ser Leu Leu
20 25 30

Pro Pro His Leu Leu Leu Asn Ala Ser His Gly Ala Phe Leu Pro Leu
35 40 45

Gly Leu Lys Val Thr Ile Val Gly Leu Tyr Leu Ala Val Cys Val Gly
50 55 60

Gly Leu Leu Gly Asn Cys Leu Val Met Tyr Val Ile Leu Arg His Thr
65 70 75 80

Lys Met Lys Thr Ala Thr Asn Ile Tyr Ile Phe Asn Leu Ala Leu Ala
85 90 95

Asp Thr Ala Val Leu Leu Thr Leu Pro Phe Gln Gly Thr Asp Val Leu
100 105 110

Leu Gly Phe Trp Pro Phe Gly Asn Ala Leu Cys Lys Ala Val Ile Ala
115 120 125

Ile Asp Tyr Tyr Asn Met Phe Thr Ser Ala Phe Thr Leu Thr Ala Met
130 135 140

Ser Val Asp Arg Tyr Val Ala Ile Cys His Pro Ile Arg Ala Leu Asp
145 150 155 160

Val Arg Thr Ser Ser Lys Ala Gln Ala Val Asn Val Ala Ile Trp Ala
165 170 175

<210> 854
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 854
Ile Thr Gly Pro Ser Ala Ile Leu Thr Gln Gly Phe Ala Thr Ser Gly
1 5 10 15

Ile Leu Thr Glu Ile His Gln Ser Gly Ile Leu Val Pro Ala Leu Gln
20 25 30

Ser Glu Trp Leu Ile Met His Val Ser Met Met Ile Leu Gly Tyr Ala
35 40 45

Ala Leu Leu Cys Gly Ser Leu Leu Ser Val Ala Leu Leu Val Ile Thr
50 55 60

Phe Arg Lys Asn Arg Lys Leu Phe Tyr Lys Ser Asn
65 70 75

<210> 855
<211> 226
<212> PRT
<213> Sus scrofa

<400> 855
Thr Met Thr Ile Lys Ser Leu Leu Arg Ala Leu Met Ser Met Pro Ala
1 5 10 15

His Tyr Arg Cys Leu Cys Ile Ser His Leu Ile Gly Trp Thr Ala Phe
20 25 30

Leu Ser Asn Met Leu Phe Phe Thr Asp Phe Met Gly Gln Ile Val Tyr
35 40 45

His Gly Asp Pro Tyr Ser Ala His Asn Ser Thr Glu Phe Leu Ile Tyr
50 55 60

Gln Arg Gly Val Glu Val Gly Cys Trp Gly Leu Cys Ile Asn Ser Val
65 70 75 80

Phe Ser Ser Leu Tyr Ser Tyr Phe Gln Lys Ala Leu Val Pro Tyr Val
85 90 95

Gly Leu Lys Gly Leu Tyr Phe Met Gly Tyr Leu Leu Phe Gly Leu Gly
100 105 110

Thr Gly Phe Ile Gly Leu Phe Pro Asn Val Tyr Ser Thr Leu Val Met
115 120 125

Cys Thr Ser Phe Gly Val Met Ser Ser Thr Leu Tyr Thr Val Pro Phe
130 135 140

Asn Leu Ile Ala Met Tyr His Arg Glu Glu Gln Glu Glu Gln Arg Gln
145 150 155 160

Gln Ala Gln Gly Gly Gly Leu Asp Ser Ser Arg Arg Gly Gln Gly Leu
165 170 175

Asp Cys Ala Ala Leu Thr Cys Met Val Gln Leu Ala Gln Ile Leu Val
180 185 190

Gly Gly Gly Leu Gly Phe Leu Val Asn Val Val Gly Ser Val Val Val
195 200 205

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Val Val Ile Thr Ala Ser Ala Ala Ala Leu Ile Gly Cys Cys Phe Val
210 215 220

Ala Leu
225

<210> 856
<211> 226
<212> PRT
<213> Salmo salar

<400> 856
Val Thr Trp Ser Ile Leu Glu Phe Ala Ser Trp Tyr Met His Ala Asp
1 5 10 15

Pro Asn Met Asn Arg Phe Phe Lys Tyr Leu Leu Leu Phe Leu Ile Ala
20 25 30

Met Ile Ile Leu Val Thr Ala Asn Asn Met Phe Gln Leu Phe Ile Gly
35 40 45

Trp Glu Gly Val Gly Ile Met Ser Phe Leu Leu Ile Gly Trp Trp Tyr
50 55 60

Gly Arg Ala Asp Ala Asn Thr Ala Ala Met Gln Ala Val Ile Tyr Asn
65 70 75 80

Arg Val Gly Asp Ile Gly Leu Ile Leu Ser Met Ala Trp Phe Ala Thr
85 90 95

Asn Leu Asn Ser Trp Glu Ile Gln Gln Met Phe Ala Ser Ser Lys Glu
100 105 110

Leu Asp Leu Thr Leu Pro Leu Met Gly Leu Ile Leu Ala Ala Thr Gly
115 120 125

Lys Ser Ala Gln Phe Gly Leu His Pro Trp Leu Pro Ser Ala Met Glu
130 135 140

Gly Pro Thr Pro Val Ser Ala Leu Leu His Ser Ser Thr Met Val Val
145 150 155 160

Ala Gly Ile Phe Leu Leu Ile Arg Leu His Pro Leu Met Glu Asn Asn
165 170 175

Gln Thr Ala Leu Thr Thr Cys Leu Cys Leu Gly Ala Leu Thr Thr Leu
180 185 190

Phe Thr Ala Thr Cys Ala Leu Thr Gln Asn Asp Ile Lys Lys Ile Val
195 200 205

Ala Phe Ser Thr Ser Ser Gln Leu Gly Leu Met Met Val Thr Ile Gly
210 215 220

Leu Asn
225

<210> 857
<211> 76
<212> PRT
<213> Salmo salar

<400> 857
Leu Leu Ala Phe Leu Val Lys Met Pro Val Tyr Gly Val His Leu Trp
1 5 10 15

Leu Pro Lys Ala His Val Glu Ala Pro Ile Ala Gly Ser Met Ile Leu
20 25 30

Ala Ala Val Leu Leu Lys Leu Gly Gly Tyr Gly Met Met Arg Met Met
35 40 45

Val Met Leu Asp Pro Leu Thr Lys Glu Leu Ala Tyr Pro Phe Ile Val
50 55 60

Leu Ala Leu Trp Gly Ile Ile Met Thr Gly Ser Ile
65 70 75

<210> 858
<211> 226
<212> PRT
<213> Solanum tuberosum

<400> 858
Leu Ile Leu Phe Pro Thr Ala Thr Lys Ser Phe Arg Arg Met Trp Ala
1 5 10 15

Phe Gln Ser Val Leu Leu Leu Ser Ile Val Met Ile Phe Ser Ile Tyr
20 25 30

Leu Ser Ile Gln Gln Ile Asn Ser Ser Ser Val Tyr Gln Tyr Val Trp
35 40 45

Ser Trp Ile Ile Asn Asn Asp Phe Ser Leu Asp Phe Gly Tyr Leu Ile
50 55 60

Asp Pro Leu Thr Ser Ile Met Ser Ile Leu Ile Thr Thr Val Gly Ile
65 70 75 80

Met Val Leu Ile Tyr Ser Asp Asn Tyr Met Ala His Asp Gln Gly Tyr
85 90 95

Leu Arg Phe Phe Ala Tyr Met Ser Phe Phe Ser Thr Ser Met Leu Gly
100 105 110

Leu Val Thr Ser Ser Asn Leu Ile Gln Ile Tyr Ile Phe Trp Glu Leu
115 120 125

Val Gly Leu Cys Ser Tyr Leu Leu Ile Gly Phe Trp Phe Thr Arg Pro
130 135 140

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Val Ala Ala Asn Ala Cys Gln Lys Ala Phe Val Thr Asn Arg Val Gly
145 150 155 160

Asp Phe Gly Leu Leu Leu Gly Ile Leu Gly Phe Tyr Trp Ile Thr Gly
165 170 175

Ser Phe Glu Phe Arg Asp Leu Phe Glu Ile Phe Asn Asn Leu Ile Tyr
180 185 190

Asn Asn Glu Val Asn Phe Leu Phe Val Thr Leu Cys Ala Val Leu Leu
195 200 205

Phe Ala Gly Ala Val Ala Lys Ser Ala Gln Phe Pro Leu His Val Trp
210 215 220

Leu Pro
225

<210> 859
<211> 151
<212> PRT
<213> Salmo salar

<400> 859
Met Ala Arg Gly Cys Leu Cys Cys Val Lys Tyr Met Leu Phe Leu Phe
1 5 10 15

Asn Leu Leu Phe Trp Leu Gly Gly Cys Gly Leu Leu Gly Val Gly Val
20 25 30

Trp Leu Ser Val Ser Gln Gly Ser Phe Ala Thr Leu Ser Pro Ser Phe
35 40 45

Pro Ser Ile Ser Ala Ala Asn Leu Ile Ile Thr Leu Gly Ala Val Ile
50 55 60

Met Val Thr Gly Phe Leu Gly Cys Leu Gly Ala Ile Lys Glu Asn Lys
65 70 75 80

Cys Leu Leu Leu Ser Phe Phe Ile Thr Leu Leu Val Ile Leu Leu Ala
85 90 95

Glu Leu Ile Leu Leu Ile Leu Phe Phe Val Tyr Thr Asp Asn Val Ser
100 105 110

Glu Asn Ala Arg Gln Asp Leu Lys Glu Gly Leu Ala Leu Tyr Ser Thr
115 120 125

Asn Asn Asn Ala Gly Leu Arg Asn Ala Trp Asn Thr Ile Gln Thr Glu
130 135 140

Trp His Cys Cys Gly Val Asn
145 150

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<210> 860

<211> 201

<212> PRT

<213> Capra hircus

<400> 860

Met Pro Ala Leu Gly Ser Pro Arg Arg Leu Leu Gly Ser Leu Asn Cys
 1 5 10 15

Thr Pro Pro Ala Thr Leu Pro Leu Thr Leu Ala Pro Asn Arg Thr Gly
 20 25 30

Pro Gln Cys Leu Glu Val Ser Ile Pro Asp Gly Leu Phe Leu Ser Leu
 35 40 45

Gly Leu Val Ser Leu Val Glu Asn Val Leu Val Val Ala Ala Ile Ala
 50 55 60

Lys Asn Arg Asn Leu His Ser Pro Met Tyr Tyr Phe Ile Cys Cys Leu
 65 70 75 80

Ala Met Ser Asp Leu Leu Val Ser Val Ser Asn Val Leu Glu Thr Ala
 85 90 95

Val Met Leu Leu Leu Glu Ala Gly Val Leu Ala Thr Arg Ala Ala Val
 100 105 110

Val Gln Gln Leu Asp Asn Val Ile Asp Val Leu Ile Cys Ser Ser Met
 115 120 125

Val Ser Ser Leu Cys Phe Leu Gly Ala Ile Ala Val Asp Arg Tyr Ile
 130 135 140

Ser Ile Phe Tyr Ala Leu Arg Tyr His Ser Val Val Thr Leu Pro Arg
 145 150 155 160

Ala Trp Arg Ile Ile Ala Ala Ile Trp Val Ala Ser Ile Leu Thr Ser
 165 170 175

Val Leu Ser Ile Thr Tyr Tyr Asn His Thr Val Val Leu Leu Cys Leu
 180 185 190

Val Gly Phe Phe Ile Ala Met Leu Ala
 195 200

<210> 861

<211> 276

<212> PRT

<213> Sus scrofa

<400> 861

Met Phe Met Ile Asn Ile Leu Ser Leu Ile Ile Pro Ile Leu Leu Ala
 1 5 10 15

Val Ala Phe Leu Thr Leu Val Glu Arg Lys Val Leu Gly Tyr Met Gln
 20 25 30

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Leu Arg Lys Gly Pro Asn Val Val Gly Pro Tyr Gly Leu Leu Gln Pro
35 40 45

Ile Ala Asp Ala Leu Lys Leu Phe Thr Lys Glu Pro Leu Arg Pro Ala
50 55 60

Thr Ser Ser Ile Ser Met Phe Ile Ile Ala Pro Ile Leu Ala Leu Ser
65 70 75 80

Leu Ala Leu Thr Met Trp Val Pro Leu Pro Met Pro Tyr Pro Leu Ile
85 90 95

Asn Met Asn Leu Gly Val Leu Phe Met Leu Ala Met Ser Ser Leu Ala
100 105 110

Val Tyr Ser Ile Leu Trp Ser Gly Trp Ala Ser Asn Ser Lys Tyr Ala
115 120 125

Leu Ile Gly Ala Leu Arg Ala Val Ala Gln Thr Ile Ser Tyr Glu Val
130 135 140

Thr Leu Ala Ile Ile Leu Leu Ser Val Leu Leu Met Asn Gly Ser Tyr
145 150 155 160

Thr Leu Ser Thr Leu Ile Thr Thr Gln Glu His Ile Trp Met Ile Phe
165 170 175

Thr Ser Trp Pro Leu Ala Met Met Trp Phe Ile Ser Thr Leu Ala Glu
180 185 190

Thr Asn Arg Ala Pro Phe Asp Leu Thr Glu Gly Glu Ser Glu Leu Val
195 200 205

Ser Gly Phe Asn Val Glu Tyr Ala Ala Gly Pro Phe Ala Met Phe Phe
210 215 220

Met Ala Glu Tyr Ala Asn Ile Ile Met Met Asn Ala Phe Thr Ala Ile
225 230 235 240

Leu Phe Leu Gly Ala Ser His Asp Pro His Thr Pro Glu Leu Tyr Thr
245 250 255

Ile Asn Phe Val Leu Lys Thr Leu Ala Leu Thr Ile Thr Phe Leu Trp
260 265 270

Ile Arg Ala Ser
275

<210> 862
<211> 76
<212> PRT
<213> Sus scrofa

<400> 862

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Val Met Thr Ile Phe Leu Val Val Leu Tyr Lys Tyr Arg Cys Tyr Lys
1 5 10 15

Phe Ile His Gly Trp Leu Ile Thr Ser Ser Leu Met Leu Leu Phe Leu
20 25 30

Phe Thr Tyr Ile Tyr Leu Gly Glu Val Leu Lys Thr Tyr Asn Val Ala
35 40 45

Met Asp Tyr Pro Thr Leu Phe Leu Thr Val Trp Asn Phe Gly Ala Val
50 55 60

Gly Met Val Cys Ile His Trp Lys Gly Pro Leu Val
65 70 75

<210> 863
<211> 76
<212> PRT
<213> Sus scrofa

<400> 863
Phe Leu Gln Ala Arg Ala His Val Arg Arg Ile Ala Ala Leu Pro Gly
1 5 10 15

Tyr Arg Ser Ala Arg Gln Arg Thr Ser Met Lys Gly Ala Val Thr Leu
20 25 30

Ala Met Leu Leu Gly Val Phe Ile Val Cys Trp Ala Pro Phe Phe Leu
35 40 45

His Leu Ile Leu Met Ile Ser Cys Pro Gln Asn Leu Tyr Cys Ser Cys
50 55 60

Phe Met Ser His Phe Asn Met Tyr Leu Ile Leu Ile
65 70 75

<210> 864
<211> 151
<212> PRT
<213> Sus scrofa

<400> 864
Ala Val Phe Gly Gln Ala Phe Tyr Gln Gln Thr Asn Gln Ala Ala Phe
1 5 10 15

Asn Ile Cys Ala Asn Ser Ser Leu His Asp Tyr Ala Lys Ile Phe Pro
20 25 30

Arg Asn Asn Leu Thr Val Ala Val Asp Phe Tyr Gln Gly Gly Val Ile
35 40 45

Leu Gly Cys Leu Phe Gly Pro Ala Ala Leu Tyr Ile Trp Ala Val Gly
50 55 60

Leu Leu Ala Ala Gly Gln Ser Ser Thr Met Thr Gly Thr Tyr Ala Gly
65 70 75 80

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Gln Phe Val Met Glu Gly Phe Leu Lys Leu Arg Trp Ser Arg Phe Ala
85 90 95

Arg Leu Leu Leu Thr Arg Ser Cys Ala Ile Leu Pro Ala Leu Leu Val
100 105 110

Ala Val Phe Lys Glu Leu Gln Asp Leu Ser Ser Leu Asn Asp Leu Leu
115 120 125

Asn Val Leu Gln Ser Leu Leu Leu Pro Phe Ala Val Leu Pro Ile Leu
130 135 140

Thr Phe Thr Ser Met Pro Ala
145 150

<210> 865

<211> 201

<212> PRT

<213> Capra hircus

<400> 865

Gly Leu Tyr Tyr Gly Ser Tyr Thr Phe Leu Glu Thr Trp Asn Ile Gly
1 5 10 15

Val Ile Leu Leu Leu Ala Thr Met Ala Thr Ala Phe Met Gly Tyr Val
20 25 30

Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala Thr Val Ile Thr Asn
35 40 45

Leu Leu Ser Ala Ile Pro Tyr Ile Gly Thr Asn Leu Val Glu Trp Ile
50 55 60

Trp Gly Gly Phe Ser Val Asp Lys Ala Thr Leu Thr Arg Phe Phe Ala
65 70 75 80

Phe His Phe Ile Leu Pro Phe Ile Ile Thr Ala Leu Ala Met Val His
85 90 95

Leu Leu Phe Leu His Glu Thr Gly Ser Asn Asn Pro Thr Gly Ile Pro
100 105 110

Ser Asp Thr Asp Lys Ile Pro Phe His Pro Tyr Tyr Thr Ile Lys Asp
115 120 125

Ile Leu Gly Ala Met Leu Leu Ile Leu Val Leu Met Leu Leu Val Leu
130 135 140

Phe Thr Pro Asp Leu Leu Gly Asp Pro Asp Asn Tyr Thr Pro Ala Asn
145 150 155 160

Pro Leu Asn Thr Pro Pro His Ile Lys Pro Glu Trp Tyr Phe Leu Phe
165 170 175

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Ala Tyr Ala Ile Leu Arg Ser Ile Pro Asn Lys Leu Gly Gly Val Leu
180 185 190

Ala Leu Val Leu Ser Ile Leu Ile Leu
195 200

<210> 866
<211> 76
<212> PRT
<213> Sus scrofa

<400> 866
Asp Ala Ala Val Asp Phe His Arg Leu Ile Ala Ser Thr Ala Ile Ile
1 5 10 15

Leu Thr Val Leu His Ser Ala Gly His Val Val Asn Val Tyr Leu Phe
20 25 30

Ser Ile Ser Pro Leu Ser Val Leu Ser Cys Leu Phe Pro Gly Leu Phe
35 40 45

His Asp Asn Gly Ser Glu Phe Pro Gln Lys Tyr Tyr Trp Trp Phe Phe
50 55 60

Gln Thr Val Pro Gly Leu Thr Gly Val Met Leu Leu
65 70 75

<210> 867
<211> 276
<212> PRT
<213> Sus scrofa

<400> 867
Ile Phe Met Leu Asn Asn Glu Cys Pro Asn Met Pro Leu Ile Gly Leu
1 5 10 15

Leu Leu Ala Ala Ala Gly Lys Ser Ala Gln Phe Gly Leu His Pro Trp
20 25 30

Leu Pro Ser Ala Met Glu Gly Pro Thr Pro Val Ser Ala Leu Leu His
35 40 45

Ser Ser Thr Met Val Val Ala Gly Val Phe Leu Leu Ile Arg Phe Tyr
50 55 60

Pro Leu Met Glu Thr Asn Lys Leu Val Gln Thr Met Thr Leu Cys Leu
65 70 75 80

Gly Ala Ile Thr Thr Leu Phe Thr Ala Leu Cys Ala Ile Thr Gln Asn
85 90 95

Asp Ile Lys Lys Ile Val Ala Phe Ser Thr Ser Ser Gln Leu Gly Leu
100 105 110

Met Met Val Thr Ile Gly Ile Asn Gln Pro His Leu Ala Phe Leu His
115 120 125

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Ile Cys Met His Ala Phe Phe Lys Ala Met Leu Phe Met Cys Ser Gly
130 135 140

Ser Ile Ile His Ser Leu Asn Asp Glu Gln Asp Ile Arg Lys Met Gly
145 150 155 160

Gly Leu Tyr Lys Ala Met Pro Phe Thr Thr Thr Ala Leu Ile Ile Gly
165 170 175

Ser Leu Ala Leu Thr Gly Met Pro Tyr Leu Thr Gly Phe Tyr Ser Lys
180 185 190

Asp Leu Ile Ile Glu Ala Val Asn Met Ser Tyr Thr Asn Ala Trp Ala
195 200 205

Leu Leu Met Thr Leu Ile Ala Thr Ser Leu Thr Ala Ala Tyr Ser Thr
210 215 220

Arg Ile Ile Phe Phe Ala Phe Leu Gly Lys Pro Arg Phe Pro Pro Leu
225 230 235 240

Val Leu Ile Asn Glu Asn Asn Pro Leu Leu Ile Asn Ser Ile Lys Arg
245 250 255

Leu Leu Ile Gly Ser Ile Phe Ala Gly Phe Ile Ile Ser Asn Asn Ile
260 265 270

Pro Pro Met Thr
275

<210> 868
<211> 76
<212> PRT
<213> Sus scrofa

<400> 868
Leu Ser Thr Leu Leu Gly Val Pro Leu Ala Leu Leu Trp Gly Phe Leu
1 5 10 15

Phe Ala Cys Ile Ser Phe Cys His Ile Trp Ala Val Val Pro Cys Ile
20 25 30

Lys Ser Tyr Leu Ile Glu Ile Gln Cys Ile Ser His Ile Tyr Ser Leu
35 40 45

Cys Ile Arg Thr Phe Cys Asn Pro Val Phe Ala Ala Leu Gly Gln Val
50 55 60

Cys Ser Asn Ile Lys Val Met Leu Arg Lys Glu Val
65 70 75

<210> 869
<211> 251
<212> PRT
<213> Capra hircus

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<400> 869

Met Thr Asn Ile Arg Lys Thr His Pro Leu Met Lys Ile Val Asn Asn
1 5 10 15

Ala Phe Ile Asp Leu Pro Thr Pro Ser Asn Ile Ser Ser Trp Trp Asn
20 25 30

Phe Gly Ser Leu Leu Gly Ile Cys Leu Ile Leu Gln Ile Leu Thr Gly
35 40 45

Leu Phe Leu Ala Met His Tyr Thr Ser Asp Thr Met Thr Ala Phe Ser
50 55 60

Ser Val Thr His Ile Cys Arg Asp Val Asn Tyr Gly Trp Ile Ile Arg
65 70 75 80

Tyr Met His Ala Asn Gly Ala Ser Met Phe Phe Ile Cys Leu Phe Met
85 90 95

His Ile Gly Arg Gly Leu Tyr Tyr Gly Ser Tyr Thr Phe Leu Glu Thr
100 105 110

Trp Asn Ile Gly Val Ile Leu Leu Leu Ala Thr Met Ala Thr Ala Phe
115 120 125

Met Gly Tyr Val Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala Thr
130 135 140

Val Ile Thr Asn Leu Leu Ser Ala Ile Pro Tyr Ile Gly Thr Asn Leu
145 150 155 160

Val Glu Trp Ile Trp Gly Gly Phe Ser Val Asp Lys Ala Thr Leu Thr
165 170 175

Arg Phe Phe Ala Phe His Phe Ile Leu Pro Phe Ile Ile Thr Ala Leu
180 185 190

Ala Met Val His Leu Leu Phe Leu His Glu Thr Gly Ser Asn Asn Pro
195 200 205

Thr Gly Ile Pro Ser Asp Thr Asp Lys Ile Pro Phe His Pro Tyr Tyr
210 215 220

Thr Ile Lys Asp Ile Leu Gly Ala Met Leu Leu Ile Leu Val Leu Met
225 230 235 240

Leu Leu Val Leu Phe Thr Pro Asp Leu Leu Gly
245 250

<210> 870

<211> 176

<212> PRT

<213> Sus scrofa

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<400> 870

Met Thr His Gln Thr His Ala Tyr His Met Val Asn Pro Ser Pro Trp
1 5 10 15

Pro Leu Thr Gly Ala Leu Ser Ala Leu Leu Met Thr Ser Gly Leu Thr
20 25 30

Met Trp Phe His Phe Asn Ser Met Leu Leu Leu Ser Leu Gly Leu Leu
35 40 45

Thr Asn Thr Leu Thr Met Tyr Gln Trp Trp Arg Asp Ile Ile Arg Glu
50 55 60

Ser Thr Phe Gln Gly His His Thr Ser Val Val Gln Lys Gly Leu Arg
65 70 75 80

Tyr Gly Met Ile Leu Phe Ile Ile Ser Glu Val Leu Phe Phe Thr Gly
85 90 95

Phe Phe Trp Ala Phe Tyr His Ser Ser Leu Ala Pro Thr Pro Glu Leu
100 105 110

Gly Gly Cys Trp Pro Pro Thr Gly Ile His Pro Leu Asn Pro Leu Glu
115 120 125

Val Pro Leu Leu Asn Thr Ser Ile Leu Leu Ala Ser Gly Val Ser Ile
130 135 140

Thr Trp Ala His His Ser Leu Met Glu Gly Asp Arg Lys His Met Ile
145 150 155 160

Gln Ala Leu Ser Ile Thr Ile Ala Leu Gly Val Tyr Phe Thr Leu Leu
165 170 175

<210> 871

<211> 76

<212> PRT

<213> Sus scrofa

<400> 871

Ala Met Leu Ala Leu Met Ala Val Leu Tyr Val His Met Leu Ala Arg
1 5 10 15

Ala Cys Gln His Gly Arg His Ile Ala Arg Leu His Lys Thr Gln His
20 25 30

Pro Thr Arg Gln Gly Cys Gly Leu Lys Gly Ala Ala Thr Leu Thr Ile
35 40 45

Leu Leu Gly Val Phe Leu Leu Cys Trp Ala Pro Phe Phe Leu His Leu
50 55 60

Ser Leu Val Val Leu Cys Pro Gln His Pro Thr Cys
65 70 75

<210> 872

<211> 76

<212> PRT

<213> Meleagris gallopavo

<400> 872

Met Ala Pro Asn Ile Arg Lys Trp His Pro Leu Leu Lys Thr Ile Asn
1 5 10 15

Asn Ser Leu Ile Asp Leu Pro Thr Pro Ser Asn Ile Ser Ala Trp Trp
20 25 30

Asn Phe Gly Ser Leu Leu Ala Val Cys Leu Ile Thr Gln Ile Leu Thr
35 40 45

Gly Leu Leu Leu Ala Met His Tyr Thr Ala Asp Thr Thr Leu Ala Phe
50 55 60

Ser Ser Val Ala Tyr Thr Cys Arg Asn Val Gln Tyr
65 70 75

<210> 873

<211> 76

<212> PRT

<213> Sus scrofa

<400> 873

Val Ser Pro Leu Ser Leu Leu Ala Cys Val Phe Pro Ser Val Phe Val
1 5 10 15

Asn Asp Gly Ser Lys Leu Pro Gln Lys Phe Tyr Trp Trp Phe Phe Gln
20 25 30

Thr Ile Pro Gly Met Thr Gly Val Leu Leu Leu Val Val Leu Ala Ile
35 40 45

Met Tyr Val Phe Ala Ser Pro Tyr Phe Arg Arg Arg Ser Phe Arg Gly
50 55 60

Phe Trp Leu Thr His His Phe Tyr Ile Leu Leu Tyr
65 70 75

<210> 874

<211> 176

<212> PRT

<213> Sus scrofa

<400> 874

Met Asn Ile Phe Asp Arg Lys Ile Asn Phe Asp Ala Leu Leu Lys Phe
1 5 10 15

Ser His Ile Thr Pro Ser Thr Gln Gln His Leu Lys Lys Val Tyr Ala
20 25 30

Ser Phe Ala Leu Cys Met Phe Val Ala Ala Ala Gly Ala Tyr Val His
35 40 45

Val Val Thr Arg Phe Ile Gln Ala Gly Leu Leu Ser Ala Leu Gly Ser
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 50 55 60
 Leu Gly Leu Met Ile Trp Leu Met Ala Thr Pro His Ser His Glu Thr
 65 70 75 80
 Glu Gln Lys Arg Leu Gly Leu Leu Ala Gly Phe Ala Phe Leu Thr Gly
 85 90 95
 Val Gly Leu Gly Pro Ala Leu Asp Leu Cys Ile Ala Ile Asn Pro Ser
 100 105 110
 Ile Leu Pro Thr Ala Phe Met Gly Thr Ala Met Ile Phe Thr Cys Phe
 115 120 125
 Thr Leu Ser Ala Leu Tyr Ala Arg Arg Arg Ser Tyr Leu Phe Leu Gly
 130 135 140
 Gly Ile Leu Met Ser Ala Met Ser Leu Met Val Leu Ser Ser Leu Gly
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 Asn Leu Phe Phe Gly Ser Ile Trp Leu Phe Gln Ala Asn Leu Tyr Val
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 Gln Lys Arg Tyr Gly Gly Gln Arg Ile Arg Met Tyr Leu Ser Val Leu
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 Ser Leu Leu Leu Ser Ile Phe Thr Lys Ile Ser Ile Asp Leu Tyr Ala
 20 25 30
 Gly Ala Leu Phe Val His Ile Cys Leu Gly Trp Asn Phe Tyr Leu Ser
 35 40 45
 Thr Cys Leu Met Leu Val Ile Thr Ala Leu Tyr Thr Ile Ala Gly Gly
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 Leu Ala Ala Val Ile Tyr Thr Asp Ala Leu Gln Thr
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 <213> Meleagris gallopavo
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 1 5 10 15
 Thr Phe Arg Pro Leu Ser Gln Thr Leu Phe Trp Leu Leu Val Ala Asn
 20 25 30

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Leu Leu Ile Leu Thr Trp Val Gly Ser Gln Pro Val Glu His Pro Phe
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Ile Ile Ile Gly Gln Met Ala Ser Leu Ser Tyr Phe Thr Ile Leu Leu
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Ile Leu Phe Pro Leu Ile Gly Ala Leu Glu Asn Lys
65 70 75

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<213> Sus scrofa

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Phe Phe Lys Tyr Leu Val Leu Phe Leu Ile Thr Met Met Ile Leu Val
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Thr Ala Asn Asn Leu Phe Gln Leu Phe Ile Gly Trp Glu Gly Val Gly
35 40 45

Ile Met Ser Phe Leu Leu Ile Gly Trp Trp His Gly Arg Thr Asp Ala
50 55 60

Asn Thr Ala Ala Leu Gln Ala Ile Leu Tyr Asn Arg Ile Gly Asp Ile
65 70 75 80

Gly Phe Val Leu Ser Met Ala Trp Phe Leu Thr His Ser Asn Ala Trp
85 90 95

Asp Leu Gln Gln Ile Phe Met Leu Asn Asn Glu Cys Pro Asn Met Pro
100 105 110

Leu Ile Gly Leu Leu Leu Ala Ala Ala Gly Lys Ser Ala Gln Phe Gly
115 120 125

Leu His Pro Trp Leu Pro Ser Ala Met Glu Gly Pro Thr Pro Val Ser
130 135 140

Ala Leu Leu His Ser Ser Thr Met Val Val Ala Gly Val Phe Leu Leu
145 150 155 160

Ile Arg Phe Tyr Pro Leu Met Glu Thr Asn Lys Leu Val Gln Thr Met
165 170 175

Thr Leu Cys Leu Gly Ala Ile Thr Thr Leu Phe Thr Ala Leu Cys Ala
180 185 190

Ile Thr Gln Asn Asp Ile Lys Lys Ile Val Ala Phe Ser Thr Ser Ser
195 200 205

Gln Leu Gly Leu Met Met Val Thr Ile Gly Ile Asn Gln Pro His Leu
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 Ala Phe
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 Val Asn Leu Met Ile Arg Gly Val Val Leu Phe Phe Ile Gly Val Phe
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 20 25 30
 Phe Pro Pro Asp Val Ile Ala Ser Ile Phe Ser Ser Ala Trp Trp Val
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 Pro Pro Cys Cys Gly Thr Ala Ser Ala Val Ile Gly Leu Leu Tyr Pro
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 Cys Ile Asp Arg His Leu Gly Glu Pro His Lys Phe
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 Val Lys Val Phe Ala Pro Tyr Ala Cys Gly Ser Gly Ile Pro Glu Ile
 35 40 45
 Lys Thr Ile Leu Ser Gly Phe Ile Ile Arg Gly Tyr Leu Gly Lys Trp
 50 55 60
 Thr Leu Ile Ile Lys Thr Ile Thr Leu Val Leu Ala Val Ser Ser Gly
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 Gly Asn Ile Leu Cys
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Thr Ala Leu Ala Ala Ala Leu Ala Gln Gly Arg Leu Pro Ala Phe Leu
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Pro Cys Glu Leu Gln Pro His Gly Leu Val Asn Cys Asn Trp Leu Phe
35 40 45

Leu Lys Ser Val Pro His Phe Ser Ala Ala Ala Pro Arg Ala Asn Val
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Thr Ser Leu Ser Leu Leu Ser Asn Arg Ile His His
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20 25 30

Val Leu Tyr Phe Leu Phe Val Leu Ala Val Gly Leu Trp Ser Thr Val
35 40 45

Lys Thr Arg Arg Asp Thr Val Lys Gly Tyr Phe Leu Ala Gly Gly Asp
50 55 60

Met Val Trp Trp Pro Val Gly Ala Ser Leu Phe Ala Ser Asn Val Gly
65 70 75 80

Ser Gly His Phe Val Gly Leu Ala Gly Ser Gly Ala Ala Ala Gly Leu
85 90 95

Ser Val Thr Ala Tyr Glu Phe Asn Gly Ile Phe Ser Val Leu Met Leu
100 105 110

Ala Trp Ile Phe Leu Pro Ile Tyr Ile Ala Gly Gln Val Thr Thr Met
115 120 125

Pro Glu Tyr Leu Arg Lys Arg Phe Gly Gly Ser Arg Ile Pro Ile Thr
130 135 140

Leu Ala Val Leu Tyr Leu Phe Ile Tyr Ile Phe Thr Lys Ile Ser Val
145 150 155 160

Asp Met Tyr Ala Gly Ala Ile Phe Ile Gln Gln Ser Leu His Leu Asn
165 170 175

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Leu Tyr Leu Ala Ile Val Gly Leu Leu Ala Ile Thr Ala Leu Tyr Thr
180 185 190

Ile Ala Gly Gly Leu Ala Ala Val Ile
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<211> 76
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<213> Salmo salar

<400> 882
Leu Met Val Val Pro Ile Leu His Thr Ser Lys Gln Arg Gly Leu Thr
1 5 10 15

Phe Arg Pro Leu Thr Gln Phe Leu Phe Trp Thr Leu Val Ala Asp Met
20 25 30

Leu Ile Leu Thr Trp Ile Gly Gly Met Pro Val Glu His Pro Phe Ile
35 40 45

Ile Ile Gly Gln Ile Ala Ser Val Ile Tyr Phe Thr Ile Phe Leu Val
50 55 60

Leu Ala Pro Leu Ala Gly Trp Ala Glu Asn Lys Ala
65 70 75

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<213> Sus scrofa

<400> 883
Met Asn Pro Phe Ala Ser Leu Thr Leu Thr Thr Leu Ile Ile Leu Thr
1 5 10 15

Ile Pro Ile Met Met Ser Asn Ser Asn Ile Tyr Lys Thr Asn Leu Tyr
20 25 30

Pro Asn Tyr Val Lys Thr Thr Val Ser Tyr Ala Phe Thr Leu Ser Leu
35 40 45

Val Pro Leu Leu Met Phe Met His Thr Gly Gln Glu Met Ile Ile Ser
50 55 60

Asn Trp His Trp Met Thr Leu Gln Thr Val Glu Leu Ser Leu Ser Phe
65 70 75 80

Lys Met Asp Tyr Phe Ser Val Met Phe Ile Pro Val Ala Leu Phe Val
85 90 95

Thr Trp Ser Ile Met Glu Phe Ser Met Trp Tyr Met His Ser Asp Pro
100 105 110

Phe Ile Asn Arg Phe Phe Lys Tyr Leu Val Leu Phe Leu Ile Thr Met
115 120 125

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Met Ile Leu Val Thr Ala Asn Asn Leu Phe Gln Leu Phe Ile Gly Trp
130 135 140

Glu Gly Val Gly Ile Met Ser Phe Leu Leu Ile Gly Trp Trp His Gly
145 150 155 160

Arg Thr Asp Ala Asn Thr Ala Ala Leu Gln Ala Ile Leu Tyr Asn Arg
165 170 175

Ile Gly Asp Ile Gly Phe Val Leu Ser Met Ala Trp Phe Leu Thr His
180 185 190

Ser Asn Ala Trp Asp Leu Gln Gln Ile Phe Met Leu Asn Asn Glu Cys
195 200 205

Pro Asn Met Pro Leu Ile Gly Leu Leu Leu Ala Ala Gly Lys Ser
210 215 220

Ala Gln
225

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Ala Tyr Met Ser Phe Phe Ser Thr Ser Met Leu Gly Leu Val Thr Ser
1 5 10 15

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20 25 30

Ser Tyr Leu Leu Ile Gly Phe Trp Phe Thr Arg Pro Val Ala Ala Asn
35 40 45

Ala Cys Gln Lys Ala Phe Val Thr Asn Arg Val Gly Asp Phe Gly Leu
50 55 60

Leu Leu Gly Ile Leu Gly Phe Tyr Trp Ile Thr Gly Ser Phe Glu Phe
65 70 75 80

Arg Asp Leu Phe Glu Ile Phe Asn Asn Leu Ile Tyr Asn Asn Glu Val
85 90 95

Asn Phe Leu Phe Val Thr Leu Cys Ala Val Leu Leu Phe Ala Gly Ala
100 105 110

Val Ala Lys Ser Ala Gln Phe Pro Leu His Val Trp Leu Pro
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<212> PRT

<213> Salmo salar

<400> 885

Met Thr Thr Thr Leu Ile Thr His Ile Ile Asn Pro Leu Ala Tyr Ile
1 5 10 15Val Pro Val Leu Leu Ala Val Ala Phe Leu Thr Leu Leu Glu Arg Lys
20 25 30Val Leu Gly Tyr Met Gln Leu Arg Lys Gly Pro Asn Ile Val Gly Pro
35 40 45Tyr Gly Leu Leu Gln Pro Ile Ala Asp Gly Leu Lys Leu Phe Ile Lys
50 55 60Glu Pro Val Arg Pro Ser Thr Ser Ser Pro Phe Leu Phe Leu Ala Thr
65 70 75 80Pro Met Leu Ala Leu Thr Leu Ala Leu Thr Leu Trp Ala Pro Met Pro
85 90 95Ile Pro Tyr Pro Ile
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<212> PRT

<213> Meleagris gallopavo

<400> 886

Arg Gly Leu Tyr Tyr Gly Ser Tyr Leu Tyr Lys Glu Thr Trp Asn Thr
1 5 10 15Gly Val Val Leu Leu Leu Thr Leu Met Ala Thr Ala Phe Val Gly Tyr
20 25 30Val Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala Thr Val Ile Thr
35 40 45Asn Leu Phe Ser Ala Ile Pro Tyr Ile Gly Gln Thr Leu Val Glu Trp
50 55 60Ala Trp Gly Gly Phe Ser Val Asp Asn Pro Thr Leu Thr Arg Phe Phe
65 70 75 80Ala Leu His Phe Leu Leu Pro Phe Val Ile Ala Gly Ile Thr Ile Ile
85 90 95His Leu Met Phe Leu His Glu Ser Gly Ser Asn Asn Pro Leu Gly Ile
100 105 110Ser Ser Asn Ala Asp Lys Ile Pro Phe His Pro Tyr Tyr Ser Ile Lys
115 120 125Asp Ile Leu Gly Leu Thr Ile Met Leu Thr Pro Leu Leu Thr Leu Thr
130 135 140

Leu Phe Ser Pro Asn Leu Leu Gly Asp Pro Glu Asn Phe Thr Pro Ala
145 150 155 160

Asn Pro Leu Val Thr Pro Pro His Ile Lys Pro Glu Trp Tyr Phe Leu
165 170 175

Phe Ala Tyr Ala Ile Leu Arg Ser Ile Pro Asn Lys Leu Gly Gly Val
180 185 190

Leu Ala Leu Ala Ala Ser Val Leu Ile
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<212> PRT
<213> Sus scrofa

<400> 887
Ile Phe Gly Tyr Leu Ala Asn Arg Leu Gly Arg Arg Lys Val Leu Ile
1 5 10 15

Leu Asn Tyr Leu Gln Thr Ala Val Ser Gly Thr Cys Ala Phe Ala
20 25 30

Pro Asn Phe Pro Val Tyr Cys Ala Phe Arg Leu Leu Ser Gly Met Ser
35 40 45

Leu Ala Gly Ile Ser Leu Ser Cys Met Thr Leu Asn Val Glu Trp Met
50 55 60

Pro Ile His Thr Arg Ala Cys Val Gly Thr Leu Ile
65 70 75

<210> 888
<211> 176
<212> PRT
<213> Sus scrofa

<400> 888
Ala Val Tyr Phe Ala Val Asn Met Ala Val Gly Val Trp Ser Ser Cys
1 5 10 15

Arg Ala Ser Arg Asn Thr Val Ser Gly Tyr Phe Leu Ala Gly Arg Asp
20 25 30

Met Met Trp Arg Pro Ile Gly Ala Ser Leu Phe Ala Ser Ser Glu Gly
35 40 45

Ser Gly Leu Phe Val Gly Leu Ala Gly Ser Gly Ala Ala Gly Gly Leu
50 55 60

Ala Val Ala Gly Phe Glu Trp His Ala Thr Tyr Val Leu Leu Ala Leu
65 70 75 80

Ala Trp Val Phe Val Pro Ile Tyr Ile Ser Ser Glu Ile Val Thr Met
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Pro Glu Tyr Ile Gln Lys Arg Tyr Gly Gly Gln Arg Ile Arg Met Tyr
 100 105 110

Leu Ser Val Leu Ser Leu Leu Leu Ser Ile Phe Thr Lys Ile Ser Ile
 115 120 125

Asp Leu Tyr Ala Gly Ala Leu Phe Val His Ile Cys Leu Gly Trp Asn
 130 135 140

Phe Tyr Leu Ser Thr Cys Leu Met Leu Val Ile Thr Ala Leu Tyr Thr
 145 150 155 160

Ile Ala Gly Gly Leu Ala Ala Val Ile Tyr Thr Asp Ala Leu Gln Thr
 165 170 175

<210> 889

<211> 76

<212> PRT

<213> Sus scrofa

<400> 889

Ser Ser Ala Val Leu Leu Thr Glu Leu Thr Lys Leu Leu Leu Cys Ala
 1 5 10 15

Leu Ser Leu Leu Val Gly Trp Gln Ala Trp Pro Pro Arg Thr Pro Pro
 20 25 30

Trp Arg Gln Ala Ala Pro Phe Ala Leu Ser Ala Leu Leu Tyr Gly Ala
 35 40 45

Asn Asn Asn Leu Val Ile His Leu Gln His Tyr Met Asp Pro Ser Thr
 50 55 60

Tyr Gln Val Leu Ser Asn Leu Lys Ile Gly Ser Thr
 65 70 75

<210> 890

<211> 201

<212> PRT

<213> Salmo salar

<400> 890

Val Ser Leu Gln Met Phe Leu Ile Leu Ala Phe Gly Ala Thr Glu Ile
 1 5 10 15

Ile Met Phe Tyr Ile Met Phe Glu Ala Thr Leu Leu Pro Thr Leu Ile
 20 25 30

Ile Ile Thr Arg Trp Gly Asn Gln Thr Glu Arg Leu Asn Ala Gly Thr
 35 40 45

Tyr Phe Leu Phe Tyr Thr Leu Ala Gly Ser Leu Pro Leu Leu Val Ala
 50 55 60

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Leu Leu Leu Leu Gln Asn Asp Ser Gly Thr Leu Ser Met Phe Thr Leu
65 70 75 80

Gln Tyr Thr Gln Pro Met His Leu Leu Thr Trp Gly Asn Lys Leu Trp
85 90 95

Trp Ala Ala Cys Leu Leu Ala Phe Leu Val Lys Met Pro Val Tyr Gly
100 105 110

Val His Leu Trp Leu Pro Lys Ala His Val Glu Ala Pro Ile Ala Gly
115 120 125

Ser Met Ile Leu Ala Ala Val Leu Leu Lys Leu Gly Gly Tyr Gly Met
130 135 140

Met Arg Met Met Val Met Leu Asp Pro Leu Thr Lys Glu Leu Ala Tyr
145 150 155 160

Pro Phe Ile Val Leu Ala Leu Trp Gly Ile Ile Met Thr Gly Ser Ile
165 170 175

Cys Leu Arg Gln Thr Asp Leu Lys Ser Leu Ile Ala Tyr Ser Ser Val
180 185 190

Gly His Met Gly Leu Val Ala Gly Gly
195 200

<210> 891
<211> 101
<212> PRT
<213> Sus scrofa

<400> 891
Phe Ala Ser Glu Leu Ser Val Tyr Thr Leu Thr Ala Ile Thr Leu Glu
1 5 10 15

Arg Trp His Thr Ile Thr His Ala Met Gln Leu Gln Cys Lys Val Gln
20 25 30

Leu Arg His Ala Ala Ser Ile Met Leu Val Gly Trp Ile Phe Ala Phe
35 40 45

Thr Val Ala Leu Phe Pro Ile Phe Gly Ile Ser Ser Tyr Met Lys Val
50 55 60

Ser Ile Cys Leu Pro Met Asp Ile Asp Ser Pro Leu Ser Gln Leu Tyr
65 70 75 80

Val Val Ser Leu Leu Val Leu Asn Val Leu Ala Phe Val Val Ile Cys
85 90 95

Gly Cys Tyr Thr His
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<210> 892

<211> 76
 <212> PRT
 <213> Sus scrofa

<400> 892

Met Ala Leu Trp Leu Thr Leu Val Ile Ala Leu Thr Cys Phe Gly Gly
 1 5 10 15

Leu Ala Ser Pro Gly Pro Val Pro Pro His Ser Thr Ala Leu Lys Glu
 20 25 30

Leu Ile Glu Glu Leu Val Asn Ile Thr Gln Asn Gln Lys Thr Pro Leu
 35 40 45

Cys Asn Gly Ser Met Val Trp Ser Val Asn Leu Thr Thr Ser Met Gln
 50 55 60

Tyr Cys Ala Ala Leu Glu Ser Leu Ile Asn Ile Ser
 65 70 75

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 <211> 176
 <212> PRT
 <213> Solanum tuberosum

<400> 893

Val Thr Leu Cys Ala Val Leu Leu Phe Ala Gly Ala Val Ala Lys Ser
 1 5 10 15

Ala Gln Phe Pro Leu His Val Trp Leu Pro Asp Ala Met Glu Gly Pro
 20 25 30

Thr Pro Ile Ser Ala Leu Ile His Ala Ala Thr Met Val Ala Ala Gly
 35 40 45

Ile Phe Leu Val Ala Arg Leu Leu Pro Leu Phe Arg Val Ile Pro Tyr
 50 55 60

Ile Met Tyr Leu Ile Ser Val Ile Gly Ile Ile Thr Val Leu Leu Gly
 65 70 75 80

Ala Thr Leu Ala Leu Ala Gln Lys Asp Ile Lys Arg Gly Leu Ala Tyr
 85 90 95

Ser Thr Met Ser Gln Leu Gly Tyr Met Met Leu Ala Leu Gly Met Gly
 100 105 110

Ser Tyr Arg Ser Ala Leu Phe His Leu Ile Thr His Ala Tyr Ser Lys
 115 120 125

Ala Leu Leu Phe Leu Gly Ser Gly Ser Ile Ile His Ser Met Glu Thr
 130 135 140

Ile Val Gly Tyr Ser Pro Ala Lys Ser Gln Asn Met Gly Leu Met Gly
 145 150 155 160

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Gly Leu Arg Lys His Val Pro Ile Thr Lys Ile Thr Phe Leu Leu Gly
 165 170 175

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 <212> PRT
 <213> Sus scrofa

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 Asp Pro Ser Gly Arg Leu Cys Thr Phe Phe Gly Leu Thr Met Thr Ala
 1 5 10 15

Phe Gly Leu Ser Ser Leu Phe Ile Ala Ser Ala Met Ala Val Glu Arg
 20 25 30

Ala Leu Ala Ile Arg Ala Pro His Trp Tyr Ser Ser His Met Lys Thr
 35 40 45

Ser Ala Thr Arg Ala Val Leu Leu Gly Val Trp Leu Ala Val Leu Ala
 50 55 60

Phe Ala Leu Leu Pro Val Leu Gly Val Gly Gln Tyr
 65 70 75

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 <212> PRT
 <213> Solanum tuberosum

<400> 895
 Ala Tyr Met Ser Phe Phe Ser Thr Ser Met Leu Gly Leu Val Thr Ser
 1 5 10 15

Ser Asn Leu Ile Gln Ile Tyr Ile Phe Trp Glu Leu Val Gly Leu Cys
 20 25 30

Ser Tyr Leu Leu Ile Gly Phe Trp Phe Thr Arg Pro Val Ala Ala Asn
 35 40 45

Ala Cys Gln Lys Ala Phe Val Thr Asn Arg Val Gly Asp Phe Gly Leu
 50 55 60

Leu Leu Gly Ile Leu Gly Phe Tyr Trp Ile Thr Gly Ser Phe Glu Phe
 65 70 75 80

Arg Asp Leu Phe Glu Ile Phe Asn Asn Leu Ile Tyr Asn Asn Glu Val
 85 90 95

Asn Phe Leu Phe Val Thr Leu Cys Ala Val Leu Leu Phe Ala Gly Ala
 100 105 110

Val Ala Lys Ser Ala Gln Phe Pro Leu His Val Trp Leu Pro Asp Ala
 115 120 125

Met Glu Gly Pro Thr Pro Ile Ser Ala Leu Ile His Ala Ala Thr Met
 130 135 140

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Val Ala Ala Gly Ile Phe Leu Val Ala Arg Leu Leu Pro Leu Phe Arg
145 150 155 160

Val Ile Pro Tyr Ile Met Tyr Leu Ile Ser Val Ile Gly Ile Ile Thr
165 170 175

Val Leu Leu Gly Ala Thr Leu Ala Leu Ala Gln Lys Asp Ile Lys Arg
180 185 190

Gly Leu Ala Tyr Ser Thr Met Ser Gln Leu Gly Tyr Met Met Leu Ala
195 200 205

Leu Gly Met Gly Ser Tyr Arg Ser Ala Leu Phe His Leu Ile Thr His
210 215 220

Ala Tyr
225

<210> 896
<211> 276
<212> PRT
<213> Meleagris gallopavo

<400> 896
Met Ala Pro Asn Ile Arg Lys Trp His Pro Leu Leu Lys Thr Ile Asn
1 5 10 15

Asn Ser Leu Ile Asp Leu Pro Thr Pro Ser Asn Ile Ser Ala Trp Trp
20 25 30

Asn Phe Gly Ser Leu Leu Ala Val Cys Leu Ile Thr Gln Ile Leu Thr
35 40 45

Gly Leu Leu Leu Ala Met His Tyr Thr Ala Asp Thr Thr Leu Ala Phe
50 55 60

Ser Ser Val Ala Tyr Thr Cys Arg Asn Val Gln Tyr Gly Trp Leu Leu
65 70 75 80

His Asn Leu His Ala Asn Gly Ala Ser Phe Phe Phe Ile Cys Ile Phe
85 90 95

Leu His Ile Gly Arg Gly Leu Tyr Tyr Gly Ser Tyr Leu Tyr Lys Glu
100 105 110

Thr Trp Asn Thr Gly Val Val Leu Leu Leu Thr Leu Met Ala Thr Ala
115 120 125

Phe Val Gly Tyr Val Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala
130 135 140

Thr Val Ile Thr Asn Leu Phe Ser Ala Ile Pro Tyr Ile Gly Gln Thr
145 150 155 160

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Leu Val Glu Trp Ala Trp Gly Gly Phe Ser Val Asp Asn Pro Thr Leu
165 170 175

Thr Arg Phe Phe Ala Leu His Phe Leu Leu Pro Phe Val Ile Ala Gly
180 185 190

Ile Thr Ile Ile His Leu Met Phe Leu His Glu Ser Gly Ser Asn Asn
195 200 205

Pro Leu Gly Ile Ser Ser Asn Ala Asp Lys Ile Pro Phe His Pro Tyr
210 215 220

Tyr Ser Ile Lys Asp Ile Leu Gly Leu Thr Ile Met Leu Thr Pro Leu
225 230 235 240

Leu Thr Leu Thr Leu Phe Ser Pro Asn Leu Leu Gly Asp Pro Glu Asn
245 250 255

Phe Thr Pro Ala Asn Pro Leu Val Thr Pro Pro His Ile Lys Pro Glu
260 265 270

Trp Tyr Phe Leu
275

<210> 897
<211> 151
<212> PRT
<213> Sus scrofa

<400> 897
Val Cys Thr Val Ser Gly Val Leu Phe Ile Ile Tyr Ser Asp Ser Ser
1 5 10 15

Ala Val Ile Ile Cys Leu Ile Thr Val Phe Phe Thr Met Leu Ala Leu
20 25 30

Met Ala Ser Leu Tyr Val His Met Phe Leu Met Ala Arg Leu His Ile
35 40 45

Lys Arg Ile Ala Val Leu Pro Gly Thr Gly Thr Ile Arg Gln Gly Ala
50 55 60

Asn Met Lys Gly Ala Ile Thr Leu Thr Ile Leu Ile Gly Val Phe Val
65 70 75 80

Val Cys Trp Ala Pro Phe Phe Leu His Leu Ile Phe Tyr Ile Ser Cys
85 90 95

Pro Gln Asn Pro Tyr Cys Val Cys Phe Met Ser His Phe Asn Leu Tyr
100 105 110

Leu Ile Leu Ile Met Cys Asn Ser Ile Ile Asp Pro Leu Ile Tyr Ala
115 120 125

Leu Arg Ser Gln Glu Leu Arg Lys Thr Phe Lys Glu Ile Ile Cys Cys
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130 135 140

Tyr Pro Leu Gly Gly Leu Cys
145 150

<210> 898
<211> 76
<212> PRT
<213> Capra hircus

<400> 898
Trp Val Tyr His Leu Thr Ser Ala Trp Met Val Phe Val Val Ile Ala
1 5 10 15

Ser Val Phe Thr Asn Gly Leu Val Leu Ala Ala Thr Met Arg Phe Lys
20 25 30

Lys Leu Arg His Pro Leu Asn Trp Ile Leu Val Asn Leu Ala Ile Ala
35 40 45

Asp Leu Ala Glu Thr Ile Ile Ala Ser Thr Ile Ser Val Val Asn Gln
50 55 60

Met Tyr Gly Tyr Phe Val Leu Gly His Pro Leu Cys
65 70 75

<210> 899
<211> 176
<212> PRT
<213> Sus scrofa

<400> 899
Met Leu Lys Ile Ile Ile Pro Thr Thr Met Leu Leu Pro Met Thr Trp
1 5 10 15

Met Ser Lys His Asn Met Ile Trp Ile Asn Ala Thr Val His Ser Leu
20 25 30

Leu Ile Ser Leu Ile Ser Leu Ser Leu Leu Asn Gln Leu Gly Glu Asn
35 40 45

Ser Leu Asn Phe Ser Leu Thr Phe Phe Ser Asp Ser Leu Ser Ala Pro
50 55 60

Leu Leu Val Leu Thr Thr Trp Leu Leu Pro Leu Met Leu Met Ala Ser
65 70 75 80

Gln Ser His Leu Ser Lys Glu Thr Thr Thr Arg Lys Lys Leu Tyr Ile
85 90 95

Thr Met Leu Ile Leu Leu Gln Leu Phe Leu Ile Met Thr Phe Thr Ala
100 105 110

Thr Glu Leu Ile Leu Phe Tyr Ile Leu Phe Glu Ala Thr Leu Val Pro
115 120 125

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Thr Leu Ile Ile Ile Thr Arg Trp Gly Asn Gln Thr Glu Arg Leu Asn
130 135 140

Ala Gly Leu Tyr Phe Leu Phe Tyr Thr Leu Ala Gly Ser Leu Pro Leu
145 150 155 160

Leu Val Ala Leu Val Tyr Ile Gln Asn Thr Thr Gly Ser Leu Asn Phe
165 170 175

<210> 900
<211> 176
<212> PRT
<213> Salmo salar

<400> 900
Ile Thr Asp Leu Asn Leu Gly Val Leu Phe Val Leu Ala Leu Ser Ser
1 5 10 15

Leu Ala Val Tyr Ser Ile Leu Gly Ser Gly Trp Ala Ser Asn Ser Lys
20 25 30

Tyr Ala Leu Ile Gly Ala Leu Arg Ala Val Ala Gln Thr Ile Ser Tyr
35 40 45

Glu Val Ser Leu Gly Leu Ile Leu Leu Ser Val Ile Ile Phe Thr Gly
50 55 60

Gly Phe Thr Leu Gln Thr Phe Asn Val Ala Gln Glu Ser Ile Trp Leu
65 70 75 80

Leu Val Pro Ala Trp Pro Leu Ala Ala Met Trp Tyr Ile Ser Thr Leu
85 90 95

Ala Glu Thr Asn Arg Ala Pro Phe Asp Leu Thr Glu Gly Glu Ser Glu
100 105 110

Leu Val Ser Gly Phe Asn Val Glu Tyr Ala Gly Gly Pro Phe Ala Leu
115 120 125

Phe Phe Leu Ala Glu Tyr Ala Asn Ile Leu Leu Met Asn Thr Leu Ser
130 135 140

Ala Ile Leu Phe Leu Gly Ala Ser His Ile Pro Ala Phe Pro Glu Leu
145 150 155 160

Thr Ala Val Asn Leu Met Thr Lys Ala Ala Leu Leu Ser Val Val Phe
165 170 175

<210> 901
<211> 101
<212> PRT
<213> Salmo salar

<400> 901
Asp Val Ala Leu Gly Pro Leu Lys Gln Ile Pro Met Asn Leu Phe Ile
1 5 10 15

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Met Tyr Met Ser Gly Asn Thr Ile Ser Ile Phe Pro Ile Met Met Val
20 25 30

Cys Met Met Ala Trp Arg Pro Ile Gln Ala Leu Met Ser Met Ser Ala
35 40 45

Thr Phe Lys Leu Leu Glu Asn Ser Asn Gln Gln Trp Leu Gln Gly Leu
50 55 60

Val Tyr Ser Val Gly Asn Leu Leu Gly Ser Ala Leu Ala Ile Tyr Lys
65 70 75 80

Cys Gln Ser Met Gly Leu Leu Pro Thr His Ser Ser Asp Trp Leu Ala
85 90 95

Phe Ile Glu Pro Pro
100

<210> 902
<211> 76
<212> PRT
<213> Sus scrofa

<400> 902
Leu Phe Glu Ile Ser Lys Tyr Val Ile Tyr Lys Phe Leu Thr Val Phe
1 5 10 15

Leu Ala Ile Pro Leu Ala Phe Ala Ala Gly Ile Leu Phe Ala Thr Leu
20 25 30

Ser Cys Leu His Ile Trp Ile Ile Ile Pro Phe Val Lys Thr Cys Leu
35 40 45

Met Val Leu Pro Ser Val Gln Thr Ile Trp Lys Ser Val Thr Asp Val
50 55 60

Val Ile Ala Pro Leu Cys Thr Ser Ala Gly Arg Ser
65 70 75

<210> 903
<211> 126
<212> PRT
<213> Sus scrofa

<400> 903
Phe Phe Leu Ala Gly Arg Ser Met Val Trp Trp Pro Val Gly Ala Ser
1 5 10 15

Leu Phe Ala Ser Tyr Ile Gly Ser Gly His Phe Val Gly Leu Ala Gly
20 25 30

Thr Gly Ala Ala Ala Gly Ile Ala Thr Gly Gly Phe Glu Trp Asn Ala
35 40 45

Leu Ile Trp Val Val Val Leu Gly Trp Leu Phe Val Pro Ile Tyr Ile
50 55 60

Lys Ala Gly Val Val Thr Met Pro Glu Tyr Leu Arg Lys Arg Phe Gly
65 70 75 80

Gly Lys Arg Ile Gln Val Tyr Leu Ser Ile Leu Ser Leu Met Leu Tyr
85 90 95

Ile Phe Thr Lys Ile Ser Ala Asp Ile Phe Ser Gly Ala Ile Phe Ile
100 105 110

Thr Leu Ala Leu Gly Leu Asp Leu Tyr Leu Ala Ile Phe Leu
115 120 125

<210> 904
<211> 76
<212> PRT
<213> Salmo salar

<400> 904
Ile Ile Glu Ala Leu Asn Thr Ser His Leu Asn Ala Trp Ala Leu Thr
1 5 10 15

Leu Thr Leu Leu Ala Thr Ser Phe Thr Ala Val Tyr Ser Leu Arg Val
20 25 30

Val Phe Phe Val Ser Met Gly His Pro Arg Phe Thr Ala Thr Ala Pro
35 40 45

Ile Asn Glu Asn Asn Pro Ser Val Ile Asn Pro Ile Lys Arg Leu Ala
50 55 60

Trp Gly Ser Ile Ile Ala Gly Leu Leu Ile Thr Ser
65 70 75

<210> 905
<211> 76
<212> PRT
<213> Salmo salar

<400> 905
Thr Arg Ala Tyr Phe Thr Ser Ala Thr Met Ile Ile Ala Ile Pro Thr
1 5 10 15

Gly Val Lys Val Phe Ser Trp Leu Ala Thr Leu His Gly Gly Ser Ile
20 25 30

Lys Trp Glu Thr Pro Leu Leu Trp Ala Leu Gly Phe Ile Phe Leu Phe
35 40 45

Thr Val Gly Gly Leu Thr Gly Ile Val Leu Ala Asn Ser Ser Leu Asp
50 55 60

Ile Val Leu His Asp Thr Tyr Tyr Val Val Ala His
65 70 75

<210> 906

<211> 101

<212> PRT

<213> *Salmo salar*

<400> 906

Met Leu Lys Ile Leu Ile Pro Thr Leu Met Leu Phe Pro Thr Ile Trp
1 5 10 15Phe Ser Pro Ala Lys Trp Leu Trp Thr Thr Ser Ile Ala Gln Ser Leu
20 25 30Val Ile Ala Leu Ala Ser Leu Ser Trp Leu Lys Trp Ser Ser Glu Thr
35 40 45Gly Trp Ser Ser Ser Asn Leu Tyr Leu Ala Thr Asp Pro Leu Ser Thr
50 55 60Pro Leu Leu Val Leu Thr Cys Trp Leu Leu Pro Leu Met Val Leu Ala
65 70 75 80Ser Gln Asn His Ile Ser Pro Glu Pro Leu Asn Arg Gln Arg Thr Tyr
85 90 95Ile Ser Leu Leu Val
100

<210> 907

<211> 76

<212> PRT

<213> *Capra hircus*

<400> 907

Leu Val Leu Val Pro Phe Leu His Thr Ser Lys Gln Arg Ser Met Met
1 5 10 15Phe Arg Pro Ile Ser Gln Cys Met Phe Trp Ile Leu Val Ala Asp Leu
20 25 30Leu Thr Leu Thr Trp Ile Gly Gly Gln Pro Val Glu His Pro Tyr Ile
35 40 45Ile Ile Gly Gln Leu Ala Ser Ile Met Tyr Phe Leu Ile Ile Leu Val
50 55 60Met Met Pro Val Ala Ser Thr Ile Glu Asn Asn Leu
65 70 75

<210> 908

<211> 76

<212> PRT

<213> *Sus scrofa*

<400> 908

Thr Pro Phe Glu Ile Ser Leu Trp Ile Leu Leu Ala Cys Leu Met Lys
1 5 10 15Ile Gly Phe His Val Ile Pro Thr Ile Ser Ser Ile Val Pro Glu Ser
20 25 30

Cys Leu Leu Ile Val Val Gly Leu Leu Val Gly Gly Leu Ile Lys Ala
35 40 45

Val Gly Glu Thr Pro Pro Phe Leu Gln Ser Glu Val Phe Phe Leu Phe
50 55 60

Leu Leu Pro Pro Ile Ile Leu Asp Ala Gly Tyr Phe
65 70 75

<210> 909
<211> 126
<212> PRT
<213> Solanum tuberosum

<400> 909
Phe Asn Ile Leu Asn Lys Lys Ile Tyr Asn Tyr Phe Pro Tyr Pro Tyr
1 5 10 15

Phe Val Ser Val Ile His Leu Ala Val Gly Val Val Tyr Cys Leu Val
20 25 30

Ser Trp Gly Val Gly Leu Pro Lys Arg Ala Pro Ile Asp Ser Thr Gln
35 40 45

Leu Lys Leu Leu Thr Pro Val Ala Phe Cys His Ala Leu Gly His Val
50 55 60

Thr Ser Asn Val Ser Phe Ala Ala Val Arg Val Ser Phe Thr His Thr
65 70 75 80

Val Lys Ala Leu Glu Pro Phe Phe Asn Ala Ala Ala Ser Gln Phe Ile
85 90 95

Leu Gly Gln Gln Ile Pro Leu Ala Leu Trp Leu Ser Leu Ala Pro Val
100 105 110

Val Leu Gly Val Ser Met Ala Ser Leu Thr Glu Leu Ser Phe
115 120 125

<210> 910
<211> 76
<212> PRT
<213> Sus scrofa

<400> 910
Met Leu Asn Leu Thr Ser Gln Val Pro Glu Pro Ala Leu Asn Gly Thr
1 5 10 15

Leu Pro Gln Ser Ser Ser Cys Phe His Ser Asp Trp Trp Asn Trp Leu
20 25 30

Asn Thr Ile Gln Ala Pro Phe Leu Trp Val Leu Phe Leu Leu Ala Ala
35 40 45

Leu Glu Asn Ile Phe Val Leu Ser Val Phe Cys Leu His Lys Asn Ser
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Cys Thr Val Ala Glu Ile Tyr Leu Gly Asn Leu Ala
65 70 75

<210> 911
<211> 201
<212> PRT
<213> Salmo salar

<400> 911
Gly Leu Tyr Tyr Gly Ser Tyr Leu Tyr Lys Glu Thr Trp Asn Ile Gly
1 5 10 15

Val Val Leu Leu Leu Leu Thr Met Met Thr Ala Phe Val Gly Tyr Val
20 25 30

Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala Thr Val Ile Thr Asn
35 40 45

Leu Leu Ser Ala Val Pro Tyr Val Gly Gly Ala Leu Val Gln Trp Ile
50 55 60

Trp Gly Gly Phe Ser Val Asp Asn Ala Thr Leu Thr Arg Phe Phe Ala
65 70 75 80

Phe His Phe Leu Phe Pro Phe Val Ile Ala Ala Ala Thr Val Leu His
85 90 95

Leu Leu Phe Leu His Glu Thr Gly Ser Asn Asn Pro Ala Gly Ile Asn
100 105 110

Ser Asp Ala Asp Lys Ile Ser Phe His Pro Tyr Phe Ser Tyr Lys Asp
115 120 125

Leu Leu Gly Phe Val Ala Met Leu Leu Gly Leu Thr Ser Leu Ala Leu
130 135 140

Phe Ala Pro Asn Leu Leu Gly Asp Pro Asp Asn Phe Thr Pro Ala Asn
145 150 155 160

Pro Leu Val Thr Pro Pro His Ile Lys Pro Glu Trp Tyr Phe Leu Phe
165 170 175

Ala Tyr Ala Ile Leu Arg Ser Ile Pro Asn Lys Leu Gly Gly Val Leu
180 185 190

Ala Leu Leu Phe Ser Ile Leu Val Leu
195 200

<210> 912
<211> 76
<212> PRT
<213> Sus scrofa

<400> 912

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Leu Ala Ile Leu Ala Leu Leu Ala Val Thr Ser Ile Pro Ser Val Ser
1 5 10 15

Asp Ser Leu Thr Trp Arg Glu Phe His Tyr Ile Gln Ser Thr Leu Gly
20 25 30

Ile Val Ser Leu Leu Leu Gly Thr Ile His Ala Leu Ile Phe Ala Trp
35 40 45

Asn Lys Trp Val Asp Ile Lys Gln Phe Ile Trp Tyr Thr Pro Pro Thr
50 55 60

Phe Met Ile Ala Val Phe Leu Pro Thr Val Val Leu
65 70 75

<210> 913
<211> 176
<212> PRT
<213> Salmo salar

<400> 913
Met Ala Asn Leu Arg Lys Thr His Pro Leu Leu Lys Ile Ala Asn Asp
1 5 10 15

Ala Leu Val Asp Leu Pro Ala Pro Ser Asn Ile Ser Val Trp Trp Asn
20 25 30

Phe Gly Ser Leu Leu Gly Leu Cys Leu Ala Thr Gln Ile Leu Thr Gly
35 40 45

Leu Phe Leu Ala Met His Tyr Thr Ser Asp Ile Ser Thr Ala Phe Ser
50 55 60

Ser Val Cys His Ile Cys Arg Asp Val Ser Tyr Gly Trp Leu Ile Arg
65 70 75 80

Asn Ile His Ala Asn Gly Ala Ser Phe Phe Phe Ile Cys Ile Tyr Met
85 90 95

His Ile Ala Arg Gly Leu Tyr Tyr Gly Ser Tyr Leu Tyr Lys Glu Thr
100 105 110

Trp Asn Ile Gly Val Val Leu Leu Leu Leu Thr Met Met Thr Ala Phe
115 120 125

Val Gly Tyr Val Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala Thr
130 135 140

Val Ile Thr Asn Leu Leu Ser Ala Val Pro Tyr Val Gly Gly Ala Leu
145 150 155 160

Val Gln Trp Ile Trp Gly Gly Phe Ser Val Asp Asn Ala Thr Leu Thr
165 170 175

<210> 914

<211> 176

<212> PRT

<213> Salmo salar

<400> 914

Leu Leu Ala Phe Leu Val Lys Met Pro Val Tyr Gly Val His Leu Trp
1 5 10 15

Leu Pro Lys Ala His Val Glu Ala Pro Ile Ala Gly Ser Met Ile Leu
20 25 30

Ala Ala Val Leu Leu Lys Leu Gly Gly Tyr Gly Met Met Arg Met Met
35 40 45

Val Met Leu Asp Pro Leu Thr Lys Glu Leu Ala Tyr Pro Phe Ile Val
50 55 60

Leu Ala Leu Trp Gly Ile Ile Met Thr Gly Ser Ile Cys Leu Arg Gln
65 70 75 80

Thr Asp Leu Lys Ser Leu Ile Ala Tyr Ser Ser Val Gly His Met Gly
85 90 95

Leu Val Ala Gly Gly Ile Leu Ile Gln Thr Pro Trp Gly Phe Thr Gly
100 105 110

Ala Ile Ile Leu Met Ile Ala His Gly Leu Ala Ser Ser Ala Leu Phe
115 120 125

Cys Leu Ala Asn Thr Ser Tyr Glu Arg Thr His Ser Arg Thr Met Leu
130 135 140

Leu Ala Arg Gly Met Gln Met Ile Leu Pro Leu Met Thr Thr Trp Trp
145 150 155 160

Phe Val Ala Ser Leu Ala Asn Leu Ala Leu Pro Pro Leu Pro Asn Leu
165 170 175

<210> 915

<211> 76

<212> PRT

<213> Sus scrofa

<400> 915

Leu Ile Leu Met Pro Met Leu His Thr Ser Lys Gln Arg Gly Met Met
1 5 10 15

Phe Arg Pro Leu Ser Gln Cys Leu Phe Trp Met Leu Val Ala Asp Leu
20 25 30

Ile Thr Leu Thr Trp Ile Gly Gly Gln Pro Val Glu His Pro Phe Ile
35 40 45

Ile Ile Gly Gln Leu Ala Ser Ile Leu Tyr Phe Leu Ile Ile Leu Val
50 55 60

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Leu Met Pro Ile Thr Ser Ile Ile Glu Asn Asn Leu
65 70 75

<210> 916
<211> 76
<212> PRT
<213> Sus scrofa

<400> 916
Ile Phe Met Leu Asn Asn Glu Cys Pro Asn Met Pro Leu Ile Gly Leu
1 5 10 15

Leu Leu Ala Ala Ala Gly Lys Ser Ala Gln Phe Gly Leu His Pro Trp
20 25 30

Leu Pro Ser Ala Met Glu Gly Pro Thr Pro Val Ser Ala Leu Leu His
35 40 45

Ser Ser Thr Met Val Val Ala Gly Val Phe Leu Leu Ile Arg Phe Tyr
50 55 60

Pro Leu Met Glu Thr Asn Lys Leu Val Gln Thr Met
65 70 75

<210> 917
<211> 126
<212> PRT
<213> Solanum tuberosum

<400> 917
Gly Pro Ser Ile Ala Val Ile Ser Ile Phe Leu Ser Tyr Ser Val Ile
1 5 10 15

Pro Phe Gly Asp His Leu Val Leu Ala Asp Leu Ser Ile Gly Val Phe
20 25 30

Phe Trp Ile Ala Ile Ser Ser Ile Ala Pro Val Gly Leu Leu Met Ser
35 40 45

Gly Tyr Gly Ser Asn Asn Lys Tyr Ser Phe Leu Gly Gly Leu Arg Ala
50 55 60

Ala Ala Gln Ser Ile Ser Tyr Glu Ile Pro Leu Ala Leu Cys Val Leu
65 70 75 80

Ser Ile Ser Leu Leu Ser Asn Ser Ser Ser Thr Val Asp Ile Val Glu
85 90 95

Ala Gln Ser Lys Tyr Gly Phe Trp Gly Trp Asn Leu Trp Arg Gln Pro
100 105 110

Ile Gly Phe Ile Val Phe Leu Ile Ser Ser Leu Ala Glu Cys
115 120 125

<210> 918
<211> 76
<212> PRT

<213> Sus scrofa

<400> 918

Met Ser Ala Leu Ser Leu Val Ile Leu Gly Leu Leu Met Ala Val Pro
 1 5 10 15

Pro Ala Ser Cys Gln Gln Gly Leu Gly Asn Leu Gln Pro Trp Met Gln
 20 25 30

Gly Leu Ile Ala Val Ala Val Phe Leu Val Leu Val Ala Ile Ala Phe
 35 40 45

Ala Ile Asn His Phe Trp Cys Gln Glu Glu Arg Glu Pro Met Asn Met
 50 55 60

Val Met Thr Thr Gly Asn Lys Ala Asp Gly Ile Leu
 65 70 75

<210> 919

<211> 76

<212> PRT

<213> Sus scrofa

<400> 919

Leu Thr Phe Leu Trp Thr Glu Gln Ala His Ser Val Thr Val Leu Ala
 1 5 10 15

Val Asn Ser Ile Gly Ala Ser Ser Ala Asn Phe Asn Leu Thr Phe Ser
 20 25 30

Trp Pro Met Ser Lys Val Asn Ile Val Gln Ser Leu Ser Ala Tyr Pro
 35 40 45

Leu Asn Ser Ser Cys Val Gly Leu Ser Trp Leu Leu Ser Pro Ser Asp
 50 55 60

Tyr Asn Leu Met Tyr Phe Ile Leu Glu Trp Lys Ile
 65 70 75

<210> 920

<211> 126

<212> PRT

<213> Solanum tuberosum

<400> 920

Leu His Ile Phe Arg Gly Leu Tyr Tyr Ala Ser Tyr Ser Ser Pro Arg
 1 5 10 15

Glu Phe Val Trp Cys Leu Gly Val Val Ile Phe Leu Leu Met Ile Val
 20 25 30

Thr Ala Phe Ile Gly Tyr Val Leu Pro Trp Gly Gln Met Ser Phe Trp
 35 40 45

Gly Ala Thr Val Ile Thr Ser Leu Ala Ser Ala Ile Pro Val Val Gly
 50 55 60

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Asp Thr Ile Val Thr Trp Leu Trp Gly Gly Phe Ser Val Asp Asn Ala
65 70 75 80

Thr Leu Asn Arg Phe Phe Ser Leu His Tyr Leu Leu Pro Phe Ile Leu
85 90 95

Val Gly Ala Ser Leu Leu His Leu Ala Ala Leu His Gln Tyr Gly Ser
100 105 110

Asn Asn Pro Leu Gly Val His Ser Glu Met Asp Lys Ile Ala
115 120 125

<210> 921
<211> 201
<212> PRT
<213> Salmo salar

<400> 921
Met Thr Thr Thr Leu Ile Thr His Ile Ile Asn Pro Leu Ala Tyr Ile
1 5 10 15

Val Pro Val Leu Leu Ala Val Ala Phe Leu Thr Leu Leu Glu Arg Lys
20 25 30

Val Leu Gly Tyr Met Gln Leu Arg Lys Gly Pro Asn Ile Val Gly Pro
35 40 45

Tyr Gly Leu Leu Gln Pro Ile Ala Asp Gly Leu Lys Leu Phe Ile Lys
50 55 60

Glu Pro Val Arg Pro Ser Thr Ser Ser Pro Phe Leu Phe Leu Ala Thr
65 70 75 80

Pro Met Leu Ala Leu Thr Leu Ala Leu Thr Leu Trp Ala Pro Met Pro
85 90 95

Ile Pro Tyr Pro Ile Thr Asp Leu Asn Leu Gly Val Leu Phe Val Leu
100 105 110

Ala Leu Ser Ser Leu Ala Val Tyr Ser Ile Leu Gly Ser Gly Trp Ala
115 120 125

Ser Asn Ser Lys Tyr Ala Leu Ile Gly Ala Leu Arg Ala Val Ala Gln
130 135 140

Thr Ile Ser Tyr Glu Val Ser Leu Gly Leu Ile Leu Leu Ser Val Ile
145 150 155 160

Ile Phe Thr Gly Gly Phe Thr Leu Gln Thr Phe Asn Val Ala Gln Glu
165 170 175

Ser Ile Trp Leu Leu Val Pro Ala Trp Pro Leu Ala Ala Met Trp Tyr
180 185 190

Ile Ser Thr Leu Ala Glu Thr Asn Arg

195

<210> 922
<211> 201
<212> PRT
<213> Salmo salar

<400> 922

Met Leu Lys Ile Leu Ile Pro Thr Leu Met Leu Phe Pro Thr Ile Trp
1 5 10 15

Phe Ser Pro Ala Lys Trp Leu Trp Thr Thr Ser Ile Ala Gln Ser Leu
20 25 30

Val Ile Ala Leu Ala Ser Leu Ser Trp Leu Lys Trp Ser Ser Glu Thr
35 40 45

Gly Trp Ser Ser Ser Asn Leu Tyr Leu Ala Thr Asp Pro Leu Ser Thr
50 55 60

Pro Leu Leu Val Leu Thr Cys Trp Leu Leu Pro Leu Met Val Leu Ala
65 70 75 80

Ser Gln Asn His Ile Ser Pro Glu Pro Leu Asn Arg Gln Arg Thr Tyr
85 90 95

Ile Ser Leu Leu Val Ser Leu Gln Met Phe Leu Ile Leu Ala Phe Gly
100 105 110

Ala Thr Glu Ile Ile Met Phe Tyr Ile Met Phe Glu Ala Thr Leu Leu
115 120 125

Pro Thr Leu Ile Ile Ile Thr Arg Trp Gly Asn Gln Thr Glu Arg Leu
130 135 140

Asn Ala Gly Thr Tyr Phe Leu Phe Tyr Thr Leu Ala Gly Ser Leu Pro
145 150 155 160

Leu Leu Val Ala Leu Leu Leu Leu Gln Asn Asp Ser Gly Thr Leu Ser
165 170 175

Met Phe Thr Leu Gln Tyr Thr Gln Pro Met His Leu Leu Thr Trp Gly
180 185 190

Asn Lys Leu Trp Trp Ala Ala Cys Leu
195 200

<210> 923
<211> 176
<212> PRT
<213> Salmo salar

<400> 923

Met Thr Leu Leu Thr His Val Leu Ala Cys Leu Phe Gly Met Gly Ser
1 5 10 15

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Trp Val Ala Ile Asn Gly Ile Trp Val Glu Leu Pro Leu Ile Val Pro
20 25 30

Glu Ile Pro Glu Gly Trp Tyr Leu Pro Ser Tyr Leu Thr Val Leu Ile
35 40 45

Gln Met Ala Asn Val Gly Pro Leu Phe Val Thr Leu Met His Arg Phe
50 55 60

Arg Pro Gly Lys Leu Asp Glu Arg Pro Val Ile Tyr Ser Ile Val Gly
65 70 75 80

Leu Gly Val Val Ala Thr Phe Leu Leu Ala Phe Phe Trp Lys His Thr
85 90 95

Val Pro Leu Ala Gly Ala Thr His Ser Val Pro Leu Leu Val Leu Cys
100 105 110

Phe Leu Leu Ser Val Val Asp Cys Thr Ser Ser Val Thr Phe Leu Pro
115 120 125

Phe Met Met Arg Leu Gly Pro Gln Tyr Leu Thr Thr Tyr Phe Val Gly
130 135 140

Glu Gly Val Ser Gly Leu Val Pro Ala Val Val Ala Leu Val Gln Gly
145 150 155 160

Val Gly Val Val His Cys Arg Asn Ala Thr Val Ala Ser Leu Ala Asn
165 170 175

<210> 924

<211> 76

<212> PRT

<213> Sus scrofa

<400> 924

Leu Ser Pro Leu Leu Leu Leu Phe Ala Leu Trp Ile Arg Ile Gly Ala
1 5 10 15

Lys Ile Ser Asn Phe Thr Phe Gly Leu Thr Ile Ile Phe His Leu Gly
20 25 30

His Ala Met Leu Ala Met Tyr Val Tyr Trp Thr Gln Leu Asn Met Phe
35 40 45

Gln Thr Leu Lys Tyr Leu Ala Ile Leu Gly Ser Val Thr Phe Leu Ala
50 55 60

Gly Asn Arg Met Leu Ala Gln Gln Ala Ile Lys Arg
65 70 75

<210> 925

<211> 76

<212> PRT

<213> Salmo salar

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<400> 925

Met His Pro Thr Thr Leu Ile Leu Ser Ser Thr Leu Leu Met Ile Phe
1 5 10 15

Ala Leu Leu Leu Tyr Pro Leu Ile Thr Thr Leu Asn Pro Thr Pro Gln
20 25 30

Gln Glu Asn Trp Ala Leu Thr His Val Lys Thr Ala Ile Lys Met Ala
35 40 45

Phe Leu Val Ser Leu Leu Pro Leu Phe Ile Phe Leu Asp Gln Gly Thr
50 55 60

Glu Thr Ile Val Thr Asn Trp Gln Trp Met Asn Thr
65 70 75

<210> 926

<211> 101

<212> PRT

<213> Sus scrofa

<400> 926

Ala Tyr Arg Gln Pro Ile Leu Ile Ala Val Val Leu Gln Leu Ser Gln
1 5 10 15

Gln Leu Ser Gly Ile Asn Ala Val Phe Tyr Tyr Ser Thr Ser Ile Phe
20 25 30

Glu Lys Ala Gly Val Gln Gln Pro Val Tyr Ala Thr Ile Gly Ser Gly
35 40 45

Ile Val Asn Thr Ala Phe Thr Val Val Ser Leu Phe Val Val Glu Arg
50 55 60

Ala Gly Arg Arg Thr Leu His Leu Ile Gly Leu Ala Gly Met Ala Gly
65 70 75 80

Cys Ala Val Leu Met Thr Ile Ala Leu Ala Leu Leu Glu Gln Leu Pro
85 90 95

Trp Met Ser Tyr Leu
100

<210> 927

<211> 76

<212> PRT

<213> Solanum tuberosum

<400> 927

Met Phe Leu Phe Ile Phe Val Ser Asn Trp Ser Gly Ala Leu Leu Pro
1 5 10 15

Trp Lys Ile Ile Gln Leu Pro His Gly Glu Leu Ala Ala Pro Thr Asn
20 25 30

Asp Ile Asn Thr Thr Val Ala Leu Ala Leu Leu Thr Ser Val Ala Tyr
35 40 45

Phe Tyr Ala Gly Leu Thr Lys Lys Gly Leu Gly Tyr Phe Gly Lys Tyr
50 55 60

Ile Gln Pro Thr Pro Ile Leu Leu Pro Ile Asn Ile
65 70 75

<210> 928
<211> 126
<212> PRT
<213> Salmo salar

<400> 928
Met Ala Ile Thr Arg Trp Phe Phe Ser Thr Asn His Lys Asp Ile Gly
1 5 10 15

Thr Leu Tyr Leu Val Phe Gly Ala Trp Ala Gly Met Val Gly Thr Ala
20 25 30

Leu Ser Leu Leu Ile Arg Ala Glu Leu Ser Gln Pro Gly Ala Leu Leu
35 40 45

Gly Asp Asp Gln Ile Tyr Asn Val Ile Val Thr Ala His Ala Phe Val
50 55 60

Met Ile Phe Phe Met Val Met Pro Ile Met Ile Gly Gly Phe Gly Asn
65 70 75 80

Trp Leu Ile Pro Leu Met Ile Gly Ala Pro Asp Met Ala Phe Pro Arg
85 90 95

Met Asn Asn Met Ser Phe Trp Leu Leu Pro Pro Ser Phe Leu Leu Leu
100 105 110

Leu Ala Ser Ser Gly Val Glu Ala Gly Ala Gly Thr Gly Trp
115 120 125

<210> 929
<211> 151
<212> PRT
<213> Sus scrofa

<400> 929
Leu Gly Val Ser Leu Gly Ala Ile Phe Leu Val Thr Val Val Leu Met
1 5 10 15

Gly Cys Glu Leu Trp Ala Thr Val Ile Met Cys Val Thr Ile Ala Met
20 25 30

Ile Leu Val Asn Met Phe Gly Val Met Trp Leu Trp Gly Ile Ser Leu
35 40 45

Asn Ala Val Ser Leu Val Asn Leu Val Met Ser Cys Gly Ile Ser Val
50 55 60

Glu Phe Cys Ser His Ile Thr Arg Ala Phe Thr Leu Ser Thr Lys Gly
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65 70 75 80

Ser Arg Val Asp Arg Ala Glu Glu Ala Leu Ala His Met Gly Ser Ser
85 90 95

Val Phe Ser Gly Ile Thr Leu Thr Lys Phe Gly Gly Ile Val Val Leu
100 105 110

Ala Phe Ala Lys Ser Gln Ile Phe Gln Ile Phe Tyr Phe Arg Met Tyr
115 120 125

Leu Ala Ile Val Leu Leu Gly Ala Thr His Gly Leu Ile Phe Leu Pro
130 135 140

Val Leu Leu Ser Tyr Ile Gly
145 150

<210> 930
<211> 76
<212> PRT
<213> Salmo salar

<400> 930
Pro Leu Leu Val His Ser Ala Ser Gly Thr Thr Leu Ile Val Ile Ala
1 5 10 15

Trp Val Leu Phe Val Leu Thr Leu Ser Tyr Val Lys Val Ile Ile Gly
20 25 30

Val Ile Leu Arg Asp Glu Gly His Ser Ala Leu Val Trp Cys Gly Ala
35 40 45

Val Val Gln Leu Gly Ser Met Leu Gly Ala Leu Ser Met Phe Pro Leu
50 55 60

Val Ser Val Tyr Gly Leu Phe Lys Ser Gly Asp Pro
65 70 75

<210> 931
<211> 276
<212> PRT
<213> Sus scrofa

<400> 931
Met Phe Val Asn Arg Trp Leu Tyr Ser Thr Asn His Lys Asp Ile Gly
1 5 10 15

Thr Leu Tyr Leu Leu Phe Gly Ala Trp Ala Gly Met Val Gly Thr Ala
20 25 30

Leu Ser Leu Leu Ile Arg Ala Glu Leu Gly Gln Pro Gly Thr Leu Leu
35 40 45

Gly Asp Asp Gln Ile Tyr Asn Val Ile Val Thr Ala His Ala Phe Val
50 55 60

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Met Ile Phe Phe Met Val Met Pro Ile Met Ile Gly Gly Phe Gly Asn
65 70 75 80

Trp Leu Val Pro Leu Met Ile Gly Ala Pro Asp Met Ala Phe Pro Arg
85 90 95

Met Asn Asn Met Ser Phe Trp Leu Leu Pro Pro Ser Phe Leu Leu Leu
100 105 110

Leu Ala Ser Ser Met Val Glu Ala Gly Ala Gly Thr Gly Trp Thr Val
115 120 125

Tyr Pro Pro Leu Ala Gly Asn Leu Ala His Ala Gly Ala Ser Val Asp
130 135 140

Leu Thr Ile Phe Ser Leu His Leu Ala Gly Val Ser Ser Ile Leu Gly
145 150 155 160

Ala Ile Asn Phe Ile Thr Thr Ile Ile Asn Met Lys Pro Pro Ala Met
165 170 175

Ser Gln Tyr Gln Thr Pro Leu Phe Val Trp Ser Val Leu Ile Thr Ala
180 185 190

Val Leu Leu Leu Leu Ser Leu Pro Val Leu Ala Ala Gly Ile Thr Met
195 200 205

Leu Leu Thr Asp Arg Asn Leu Asn Thr Thr Phe Phe Asp Pro Ala Gly
210 215 220

Gly Gly Asp Pro Ile Leu Tyr Gln His Leu Phe Trp Phe Phe Gly His
225 230 235 240

Pro Glu Val Tyr Ile Leu Ile Leu Pro Gly Phe Gly Met Ile Ser His
245 250 255

Ile Val Thr Tyr Tyr Ser Gly Lys Lys Glu Pro Phe Gly Tyr Met Gly
260 265 270

Met Val Trp Ala
275

<210> 932
<211> 276
<212> PRT
<213> Sus scrofa

<400> 932
Met Leu Lys Ile Ile Ile Pro Thr Thr Met Leu Leu Pro Met Thr Trp
1 5 10 15

Met Ser Lys His Asn Met Ile Trp Ile Asn Ala Thr Val His Ser Leu
20 25 30

Leu Ile Ser Leu Ile Ser Leu Ser Leu Leu Asn Gln Leu Gly Glu Asn
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Ser Leu Asn Phe Ser Leu Thr Phe Phe Ser Asp Ser Leu Ser Ala Pro
50 55 60

Leu Leu Val Leu Thr Thr Trp Leu Leu Pro Leu Met Leu Met Ala Ser
65 70 75 80

Gln Ser His Leu Ser Lys Glu Thr Thr Thr Arg Lys Lys Leu Tyr Ile
85 90 95

Thr Met Leu Ile Leu Leu Gln Leu Phe Leu Ile Met Thr Phe Thr Ala
100 105 110

Thr Glu Leu Ile Leu Phe Tyr Ile Leu Phe Glu Ala Thr Leu Val Pro
115 120 125

Thr Leu Ile Ile Ile Thr Arg Trp Gly Asn Gln Thr Glu Arg Leu Asn
130 135 140

Ala Gly Leu Tyr Phe Leu Phe Tyr Thr Leu Ala Gly Ser Leu Pro Leu
145 150 155 160

Leu Val Ala Leu Val Tyr Ile Gln Asn Thr Thr Gly Ser Leu Asn Phe
165 170 175

Leu Ile Ile His Tyr Trp Ser His Pro Leu Ser Asn Ser Trp Ser Asn
180 185 190

Ile Phe Met Trp Leu Ala Cys Ile Met Ala Phe Met Val Lys Met Pro
195 200 205

Leu Tyr Gly Leu His Leu Trp Leu Pro Lys Ala His Val Glu Ala Pro
210 215 220

Ile Ala Gly Ser Met Val Leu Ala Ala Val Leu Leu Lys Leu Gly Gly
225 230 235 240

Tyr Gly Met Met Arg Ile Thr Thr Ile Leu Asn Pro Leu Thr Asn Tyr
245 250 255

Met Ala Tyr Pro Phe Leu Met Leu Ser Met Trp Gly Met Ile Met Thr
260 265 270

Ser Ser Ile Cys
275

<210> 933

<211> 176

<212> PRT

<213> Sus scrofa

<400> 933

Met Phe Met Ile Asn Ile Leu Ser Leu Ile Ile Pro Ile Leu Leu Ala
1 5 10 15

Val Ala Phe Leu Thr Leu Val Glu Arg Lys Val Leu Gly Tyr Met Gln
20 25 30

Leu Arg Lys Gly Pro Asn Val Val Gly Pro Tyr Gly Leu Leu Gln Pro
35 40 45

Ile Ala Asp Ala Leu Lys Leu Phe Thr Lys Glu Pro Leu Arg Pro Ala
50 55 60

Thr Ser Ser Ile Ser Met Phe Ile Ile Ala Pro Ile Leu Ala Leu Ser
65 70 75 80

Leu Ala Leu Thr Met Trp Val Pro Leu Pro Met Pro Tyr Pro Leu Ile
85 90 95

Asn Met Asn Leu Gly Val Leu Phe Met Leu Ala Met Ser Ser Leu Ala
100 105 110

Val Tyr Ser Ile Leu Trp Ser Gly Trp Ala Ser Asn Ser Lys Tyr Ala
115 120 125

Leu Ile Gly Ala Leu Arg Ala Val Ala Gln Thr Ile Ser Tyr Glu Val
130 135 140

Thr Leu Ala Ile Ile Leu Leu Ser Val Leu Leu Met Asn Gly Ser Tyr
145 150 155 160

Thr Leu Ser Thr Leu Ile Thr Thr Gln Glu His Ile Trp Met Ile Phe
165 170 175

<210> 934
<211> 151
<212> PRT
<213> Salmo salar

<400> 934
Gly Ile Leu Ile Gln Thr Pro Trp Gly Phe Thr Gly Ala Ile Ile Leu
1 5 10 15

Met Ile Ala His Gly Leu Ala Ser Ser Ala Leu Phe Cys Leu Ala Asn
20 25 30

Thr Ser Tyr Glu Arg Thr His Ser Arg Thr Met Leu Leu Ala Arg Gly
35 40 45

Met Gln Met Ile Leu Pro Leu Met Thr Thr Trp Trp Phe Val Ala Ser
50 55 60

Leu Ala Asn Leu Ala Leu Pro Pro Leu Pro Asn Leu Met Gly Glu Leu
65 70 75 80

Met Ile Ile Thr Ser Met Phe Asn Trp Ser His Trp Thr Leu Leu Leu
85 90 95

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Thr Gly Leu Gly Thr Leu Ile Thr Ala Ser Tyr Ser Leu Tyr Leu Phe
100 105 110

Leu Met Thr Gln Arg Gly Pro Leu Pro Ser His Ile Ile Ala Leu Glu
115 120 125

Pro Thr His Thr Arg Glu His Leu Leu Ile Thr Leu His Leu Ile Pro
130 135 140

Ile Ile Leu Leu Ile Leu Lys
145 150

<210> 935

<211> 76

<212> PRT

<213> Capra hircus

<400> 935

Met Asn Glu Asn Leu Phe Thr Ser Phe Ile Thr Pro Met Met Leu Gly
1 5 10 15

Leu Pro Leu Val Thr Leu Ile Ile Leu Phe Pro Ser Leu Leu Phe Pro
20 25 30

Ser Ser Asn Arg Leu Ile Asn Asn Arg Leu Val Ser Leu Gln Gln Trp
35 40 45

Ala Leu Gln Leu Met Ser Lys Gln Met Met Ser Ile His Asn Thr Lys
50 55 60

Gly Gln Thr Trp Thr Leu Met Leu Met Ser Leu Ile
65 70 75

<210> 936

<211> 176

<212> PRT

<213> Sus scrofa

<400> 936

Ser Val Gln Glu Thr Trp Leu Ala Ala Leu Ile Leu Leu Ala Val Leu
1 5 10 15

Glu Gly Ile Leu Leu Leu Met Leu Ile Phe Leu Arg Gln Arg Ile Arg
20 25 30

Ile Ala Ile Ala Leu Leu Glu Glu Ala Ser Arg Ala Val Gly Gln Met
35 40 45

Met Ser Thr Leu Phe Tyr Pro Leu Val Thr Phe Val Leu Leu Leu Val
50 55 60

Cys Ile Ala Tyr Trp Ala Met Thr Ala Leu Tyr Leu Ala Thr Ser Gly
65 70 75 80

Gln Pro Gln Tyr Val Leu Trp Ala Pro Asn Val Ser Leu Ala Gly Cys
85 90 95

Glu Lys Val Met Met Asn Thr Ser Cys Asp Pro Met Asn Gln Pro Val
100 105 110

Asn Ser Thr Cys Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Leu Ser
115 120 125

Thr Gly Leu Val Gln Arg Ser Leu Phe Asn Leu Gln Ile Tyr Gly Val
130 135 140

Leu Gly Leu Phe Trp Thr Ile Asn Trp Val Leu Ala Leu Gly Gln Cys
145 150 155 160

Val Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro
165 170 175

<210> 937
<211> 101
<212> PRT
<213> Salmo salar

<400> 937
Val Ser Leu Gln Met Phe Leu Ile Leu Ala Phe Gly Ala Thr Glu Ile
1 5 10 15

Ile Met Phe Tyr Ile Met Phe Glu Ala Thr Leu Leu Pro Thr Leu Ile
20 25 30

Ile Ile Thr Arg Trp Gly Asn Gln Thr Glu Arg Leu Asn Ala Gly Thr
35 40 45

Tyr Phe Leu Phe Tyr Thr Leu Ala Gly Ser Leu Pro Leu Leu Val Ala
50 55 60

Leu Leu Leu Leu Gln Asn Asp Ser Gly Thr Leu Ser Met Phe Thr Leu
65 70 75 80

Gln Tyr Thr Gln Pro Met His Leu Leu Thr Trp Gly Asn Lys Leu Trp
85 90 95

Trp Ala Ala Cys Leu
100

<210> 938
<211> 76
<212> PRT
<213> Sus scrofa

<400> 938
Trp Met Leu Val Phe Arg Leu Ile Gln Gly Leu Val Ser Lys Ala Gly
1 5 10 15

Trp Met Ile Gly Tyr Ile Leu Ile Thr Glu Phe Val Gly Leu Ser Tyr
20 25 30

Arg Arg Thr Val Gly Ile Phe Tyr Gln Val Ala Phe Thr Phe Gly Leu
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40

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Leu Val Leu Ala Gly Val Ala Tyr Ala Leu Pro His Trp Arg Trp Leu
50 55 60

Gln Phe Thr Val Thr Leu Pro Asn Phe Cys Phe Leu
65 70 75

<210> 939

<211> 176

<212> PRT

<213> Meleagris gallopavo

<400> 939

Met Ala Pro Asn Ile Arg Lys Trp His Pro Leu Leu Lys Thr Ile Asn
1 5 10 15

Asn Ser Leu Ile Asp Leu Pro Thr Pro Ser Asn Ile Ser Ala Trp Trp
20 25 30

Asn Phe Gly Ser Leu Leu Ala Val Cys Leu Ile Thr Gln Ile Leu Thr
35 40 45

Gly Leu Leu Leu Ala Met His Tyr Thr Ala Asp Thr Thr Leu Ala Phe
50 55 60

Ser Ser Val Ala Tyr Thr Cys Arg Asn Val Gln Tyr Gly Trp Leu Leu
65 70 75 80

His Asn Leu His Ala Asn Gly Ala Ser Phe Phe Phe Ile Cys Ile Phe
85 90 95

Leu His Ile Gly Arg Gly Leu Tyr Tyr Gly Ser Tyr Leu Tyr Lys Glu
100 105 110

Thr Trp Asn Thr Gly Val Val Leu Leu Leu Thr Leu Met Ala Thr Ala
115 120 125

Phe Val Gly Tyr Val Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala
130 135 140

Thr Val Ile Thr Asn Leu Phe Ser Ala Ile Pro Tyr Ile Gly Gln Thr
145 150 155 160

Leu Val Glu Trp Ala Trp Gly Gly Phe Ser Val Asp Asn Pro Thr Leu
165 170 175

<210> 940

<211> 151

<212> PRT

<213> Capra hircus

<400> 940

Met Ala Pro Trp Pro Pro Arg Asn Ser Ser Leu Thr Pro Trp Pro Asp
1 5 10 15

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Ile Pro Thr Leu Ala Pro Asn Thr Ala Asn Ala Ser Gly Leu Pro Gly
20 25 30

Val Pro Trp Ala Val Ala Leu Ala Gly Ala Leu Leu Ala Leu Ala Val
35 40 45

Leu Ala Ile Val Gly Gly Asn Leu Leu Val Ile Val Ala Ile Ala Arg
50 55 60

Thr Pro Arg Leu Gln Thr Met Thr Asn Val Phe Val Thr Ser Leu Ala
65 70 75 80

Thr Ala Asp Leu Val Val Gly Leu Leu Val Val Pro Pro Gly Ala Thr
85 90 95

Leu Ala Leu Thr Gly His Trp Pro Leu Gly Val Thr Gly Cys Glu Leu
100 105 110

Trp Thr Ser Val Asp Val Leu Cys Val Thr Ala Ser Ile Glu Thr Leu
115 120 125

Cys Ala Leu Ala Val Asp Arg Tyr Leu Ala Val Thr Asn Pro Leu Arg
130 135 140

Tyr Gly Ala Leu Val Thr Lys
145 150

<210> 941
<211> 101
<212> PRT
<213> Sus scrofa

<400> 941
Tyr Glu Phe Asn Gly Ile Phe Ser Val Leu Met Leu Ala Trp Ile Phe
1 5 10 15

Leu Pro Ile Tyr Ile Ala Gly Gln Val Thr Thr Met Pro Glu Tyr Leu
20 25 30

Arg Lys Arg Phe Gly Gly Ser Arg Ile Pro Ile Thr Leu Ala Val Leu
35 40 45

Tyr Leu Phe Ile Tyr Ile Phe Thr Lys Ile Ser Val Asp Met Tyr Ala
50 55 60

Gly Ala Ile Phe Ile Gln Gln Ser Leu His Leu Asn Leu Tyr Leu Ala
65 70 75 80

Ile Val Gly Leu Leu Ala Ile Thr Ala Leu Tyr Thr Ile Ala Gly Gly
85 90 95

Leu Ala Ala Val Ile
100

<210> 942

<211> 76
 <212> PRT
 <213> Sus scrofa

<400> 942

Leu Gln Trp Ser Thr Leu Val Gln Gly Phe Leu His Thr Phe His Gly
 1 5 10 15

Gly His Ile His Ile Gly Val Glu Ser Met Ile Asn Ala Asp Phe Cys
 20 25 30

Ala Gly Ala Val Leu Ile Ser Phe Gly Ala Ile Leu Gly Lys Thr Gly
 35 40 45

Pro Ala Gln Leu Leu Leu Met Ala Leu Leu Glu Val Val Leu Phe Gly
 50 55 60

Leu Asn Glu Phe Val Leu Leu Ser Leu Leu Gly Val
 65 70 75

<210> 943
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 943

Ile Gln Trp Ala Leu Leu Met Gln Gly Trp Leu His Ser Phe His Ser
 1 5 10 15

Gly Tyr Ile Val Leu Gly Val Glu Asn Leu Ile Asn Ala Asp Phe Cys
 20 25 30

Val Gly Ser Val Cys Val Ala Phe Gly Ala Val Leu Gly Lys Val Ser
 35 40 45

Pro Val Gln Leu Leu Ile Met Thr Leu Phe Gln Val Thr Leu Phe Ser
 50 55 60

Val Asn Glu Phe Ile Leu Leu Asn Leu Leu Glu Val
 65 70 75

<210> 944
 <211> 276
 <212> PRT
 <213> Salmo salar

<400> 944

Ser Phe Trp Leu Leu Pro Pro Ser Phe Leu Leu Leu Ala Ser Ser
 1 5 10 15

Gly Val Glu Ala Gly Ala Gly Thr Gly Trp Thr Val Tyr Pro Pro Leu
 20 25 30

Ala Gly Asn Leu Ala His Ala Gly Ala Ser Val Asp Leu Thr Ile Phe
 35 40 45

Ser Leu His Leu Ala Gly Ile Ser Ser Ile Leu Gly Ala Ile Asn Phe
 50 55 60

Ile Thr Thr Ile Ile Asn Met Lys Pro Pro Ala Ile Ser Gln Tyr Gln
65 70 75 80

Thr Pro Leu Phe Val Trp Ala Val Leu Val Thr Ala Val Leu Leu Leu
85 90 95

Leu Ser Leu Pro Val Leu Ala Ala Gly Ile Thr Met Leu Leu Thr Asp
100 105 110

Arg Asn Leu Asn Thr Thr Phe Phe Asp Pro Ala Gly Gly Gly Asp Pro
115 120 125

Ile Leu Tyr Gln His Leu Phe Trp Phe Phe Gly His Pro Glu Val Tyr
130 135 140

Ile Leu Ile Leu Pro Gly Phe Gly Met Ile Ser His Ile Val Ala Tyr
145 150 155 160

Tyr Ser Gly Lys Lys Glu Pro Phe Gly Tyr Met Gly Met Val Trp Ala
165 170 175

Met Met Ala Ile Gly Leu Leu Gly Phe Ile Val Trp Ala His His Met
180 185 190

Phe Thr Val Gly Met Asp Val Asp Thr Arg Ala Tyr Phe Thr Ser Ala
195 200 205

Thr Met Ile Ile Ala Ile Pro Thr Gly Val Lys Val Phe Ser Trp Leu
210 215 220

Ala Thr Leu His Gly Gly Ser Ile Lys Trp Glu Thr Pro Leu Leu Trp
225 230 235 240

Ala Leu Gly Phe Ile Phe Leu Phe Thr Val Gly Gly Leu Thr Gly Ile
245 250 255

Val Leu Ala Asn Ser Ser Leu Asp Ile Val Leu His Asp Thr Tyr Tyr
260 265 270

Val Val Ala His
275

<210> 945
<211> 76
<212> PRT
<213> Sus scrofa

<400> 945
Thr Ile Leu Asn Leu Leu Ile Tyr Ile Thr Met Thr Leu Ala Met Phe
1 5 10 15

Met Leu Leu Ile His Ser Ser Ala Thr Thr Thr Leu Ser Leu Ser His
20 25 30

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Thr Trp Asn Lys Met Pro Val Ile Thr Ser Leu Met Met Val Thr Leu
35 40 45

Leu Ser Met Gly Gly Leu Pro Pro Leu Ser Gly Phe Met Pro Lys Trp
50 55 60

Met Ile Ile Gln Glu Met Thr Lys Asn Glu Ser Ile
65 70 75

<210> 946
<211> 76
<212> PRT
<213> Sus scrofa

<400> 946
Tyr Pro Gln Tyr Tyr Leu Ala Glu Pro Trp Gln Phe Ser Met Leu Ala
1 5 10 15

Ala Tyr Met Phe Met Leu Ile Val Leu Gly Phe Pro Ile Asn Phe Leu
20 25 30

Thr Leu Tyr Val Thr Val Gln His Lys Lys Leu Arg Thr Pro Leu Asn
35 40 45

Tyr Ile Leu Leu Asn Leu Ala Val Ala Asp Leu Phe Met Val Phe Gly
50 55 60

Gly Phe Thr Thr Thr Leu Tyr Thr Ser Leu His Gly
65 70 75

<210> 947
<211> 76
<212> PRT
<213> Sus scrofa

<400> 947
Phe Cys Lys Arg Val Asn Glu Gln Gly Ala Phe Trp Gly Leu Ile Ile
1 5 10 15

Gly Phe Val Met Gly Leu Ile Arg Met Ile Ala Glu Phe Val Tyr Gly
20 25 30

Thr Gly Ser Cys Leu Ala Ala Ser Asn Cys Pro Gln Ile Ile Cys Gly
35 40 45

Val His Tyr Leu Tyr Phe Ala Leu Ile Leu Phe Phe Val Ser Ile Leu
50 55 60

Val Val Leu Ala Ile Ser Leu Leu Thr Lys Pro Ile
65 70 75

<210> 948
<211> 101
<212> PRT
<213> Solanum tuberosum

<400> 948

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Met Asp Leu Ser Glu Pro Ile His Asp Phe Leu Leu Val Phe Leu Gly
1 5 10 15

Ser Gly Leu Ile Leu Gly Gly Leu Gly Val Val Leu Leu Pro Asn Pro
20 25 30

Ile Tyr Ser Ala Phe Ser Leu Gly Leu Val Leu Ile Cys Thr Ser Leu
35 40 45

Phe Tyr Ile Leu Ser Asn Ser Tyr Phe Val Ala Ala Ala Gln Leu Leu
50 55 60

Ile Tyr Val Gly Ala Ile Asn Val Leu Ile Ile Phe Ala Val Met Phe
65 70 75 80

Met Asn Gly Ser Glu Tyr Tyr Lys Asp Phe His Leu Trp Thr Val Gly
85 90 95

Asp Gly Ile Thr Ser
100

<210> 949
<211> 176
<212> PRT
<213> Sus scrofa

<400> 949
Met Ala Ala Pro Thr Leu Ala Arg Leu Val Leu Thr His Leu Leu Val
1 5 10 15

Ala Leu Phe Gly Met Gly Ser Trp Ala Ala Ile Asn Gly Ile Trp Val
20 25 30

Glu Leu Pro Val Val Val Lys Asp Leu Pro Glu Gly Trp Ser Leu Pro
35 40 45

Ser Tyr Leu Ser Val Leu Val Ala Leu Gly Asn Leu Gly Leu Leu Val
50 55 60

Val Thr Leu Trp Arg Arg Leu Ala Pro Gly Lys Gly Glu Arg Ala Pro
65 70 75 80

Ile Gln Val Val Gln Ala Leu Ser Val Val Gly Thr Ala Leu Leu Ala
85 90 95

Pro Leu Trp Gln His Leu Thr Val Met Ala Gly Gln Val His Ser Val
100 105 110

Ala Phe Leu Ala Leu Thr Phe Val Leu Ala Leu Ala Cys Cys Ala Ser
115 120 125

Asn Val Thr Tyr Leu Pro Phe Leu Ser Arg Leu Pro Pro Pro Phe Leu
130 135 140

Arg Ser Phe Phe Leu Gly Gln Gly Leu Ser Ala Leu Leu Pro Cys Val
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Asp Leu Lys Ser Leu Ile Ala Tyr Ser Ser Val Ser His Met Ala Leu
85 90 95

Val Ile Val Ala Ile Met Ile Gln Thr Pro Trp Ser Phe Met Gly Ala
100 105 110

Thr Ala Leu Met Ile Ala His Gly Leu Thr Ser Ser Met Leu Phe Cys
115 120 125

Leu Ala Asn Thr Asn Tyr Glu Arg Val His Ser Arg Thr Met Ile Leu
130 135 140

Ala Arg Gly Leu Gln Thr Leu Leu Pro Leu Met Ala Thr Trp Trp Leu
145 150 155 160

Met Ala Ser Leu Thr Asn Leu Ala Leu Pro Pro Ser Ile Asn Leu Ile
165 170 175

<210> 952
<211> 276
<212> PRT
<213> Sus scrofa

<400> 952
Ser Phe Trp Leu Leu Pro Pro Ser Phe Leu Leu Leu Leu Ala Ser Ser
1 5 10 15

Met Val Glu Ala Gly Ala Gly Thr Gly Trp Thr Val Tyr Pro Pro Leu
20 25 30

Ala Gly Asn Leu Ala His Ala Gly Ala Ser Val Asp Leu Thr Ile Phe
35 40 45

Ser Leu His Leu Ala Gly Val Ser Ser Ile Leu Gly Ala Ile Asn Phe
50 55 60

Ile Thr Thr Ile Ile Asn Met Lys Pro Pro Ala Met Ser Gln Tyr Gln
65 70 75 80

Thr Pro Leu Phe Val Trp Ser Val Leu Ile Thr Ala Val Leu Leu Leu
85 90 95

Leu Ser Leu Pro Val Leu Ala Ala Gly Ile Thr Met Leu Leu Thr Asp
100 105 110

Arg Asn Leu Asn Thr Thr Phe Phe Asp Pro Ala Gly Gly Gly Asp Pro
115 120 125

Ile Leu Tyr Gln His Leu Phe Trp Phe Phe Gly His Pro Glu Val Tyr
130 135 140

Ile Leu Ile Leu Pro Gly Phe Gly Met Ile Ser His Ile Val Thr Tyr
145 150 155 160

Tyr Ser Gly Lys Lys Glu Pro Phe Gly Tyr Met Gly Met Val Trp Ala
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170

175

Met Met Ser Ile Gly Phe Leu Gly Phe Ile Val Trp Ala His His Met
180 185 190

Phe Thr Val Gly Met Asp Val Asp Thr Arg Ala Tyr Phe Thr Ser Ala
195 200 205

Thr Met Ile Ile Ala Ile Pro Thr Gly Val Lys Val Phe Ser Trp Leu
210 215 220

Ala Thr Leu His Gly Gly Asn Ile Lys Trp Ser Pro Ala Met Leu Trp
225 230 235 240

Ala Leu Gly Phe Ile Phe Leu Phe Thr Val Gly Gly Leu Thr Gly Ile
245 250 255

Val Leu Ala Asn Ser Ser Leu Asp Ile Val Leu His Asp Thr Tyr Tyr
260 265 270

Val Val Ala His
275

<210> 953

<211> 151

<212> PRT

<213> Capra hircus

<400> 953

Met Asn Pro Ile Ile Phe Ile Ile Ile Leu Met Thr Val Met Leu Gly
1 5 10 15

Thr Thr Ile Val Met Ile Ser Ser His Trp Leu Arg Ile Trp Ile Gly
20 25 30

Phe Glu Met Asn Met Leu Ala Ile Ile Pro Ile Met Met Lys Lys His
35 40 45

Asn Pro Arg Ala Thr Ala Ala Ser Ser Asp Tyr Phe Leu Thr Gln Ser
50 55 60

Thr Ala Ser Met Leu Leu Met Met Ala Ile Ile Ile Asn Leu Met Phe
65 70 75 80

Ser Gly Gln Trp Thr Val Thr Lys Leu Phe His Pro Thr Ala Ser Met
85 90 95

Leu Met Thr Met Ala Leu Ala Met Lys Leu Gly Met Ala Pro Phe His
100 105 110

Phe Trp Val Pro Glu Val Thr Gln Gly Ile Pro Leu Ser Ser Gly Leu
115 120 125

Ile Leu Leu Thr Trp Gln Lys Leu Val Pro Met Ser Val Leu Tyr Gln
130 135 140

Ile Leu Pro Ser Ile Asn Leu
145 150

<210> 954
<211> 176
<212> PRT
<213> Salmo salar

<400> 954
Met Asn Pro Tyr Val Leu Thr Ile Leu Leu Ser Ser Leu Gly Leu Gly
1 5 10 15

Thr Ile Leu Thr Phe Ala Ser Ser His Trp Leu Leu Ala Trp Met Gly
20 25 30

Leu Glu Ile Asn Thr Leu Ala Ile Ile Pro Ile Met Ala Gln Gln Ser
35 40 45

His Pro Arg Ala Ile Glu Ala Thr Thr Lys Tyr Phe Leu Thr Gln Ala
50 55 60

Thr Ala Ala Ala Met Ile Leu Phe Ala Ser Thr Thr Asn Ala Trp Leu
65 70 75 80

Val Gly Glu Trp Glu Ile His Gln Leu Ser His Pro Leu Ala Thr Thr
85 90 95

Thr Val Met Leu Ala Leu Ala Leu Lys Leu Gly Leu Ala Pro Val His
100 105 110

Phe Trp Leu Pro Glu Val Leu Gln Gly Leu Glu Leu Thr Thr Gly Leu
115 120 125

Ile Leu Ser Thr Trp Gln Lys Leu Ala Pro Phe Ala Leu Met Ile Gln
130 135 140

Val Ala Pro Thr Ile Asn Ser Ser Leu Leu Ile Ala Met Gly Leu Leu
145 150 155 160

Ser Thr Leu Val Gly Gly Trp Gly Gly Leu Asn Gln Thr Gln Leu Arg
165 170 175

<210> 955
<211> 176
<212> PRT
<213> Sus scrofa

<400> 955
Met Phe Val Asn Arg Trp Leu Tyr Ser Thr Asn His Lys Asp Ile Gly
1 5 10 15

Thr Leu Tyr Leu Leu Phe Gly Ala Trp Ala Gly Met Val Gly Thr Ala
20 25 30

Leu Ser Leu Leu Ile Arg Ala Glu Leu Gly Gln Pro Gly Thr Leu Leu

35

40

45

Gly Asp Asp Gln Ile Tyr Asn Val Ile Val Thr Ala His Ala Phe Val
50 55 60

Met Ile Phe Phe Met Val Met Pro Ile Met Ile Gly Gly Phe Gly Asn
65 70 75 80

Trp Leu Val Pro Leu Met Ile Gly Ala Pro Asp Met Ala Phe Pro Arg
85 90 95

Met Asn Asn Met Ser Phe Trp Leu Leu Pro Pro Ser Phe Leu Leu Leu
100 105 110

Leu Ala Ser Ser Met Val Glu Ala Gly Ala Gly Thr Gly Trp Thr Val
115 120 125

Tyr Pro Pro Leu Ala Gly Asn Leu Ala His Ala Gly Ala Ser Val Asp
130 135 140

Leu Thr Ile Phe Ser Leu His Leu Ala Gly Val Ser Ser Ile Leu Gly
145 150 155 160

Ala Ile Asn Phe Ile Thr Thr Ile Ile Asn Met Lys Pro Pro Ala Met
165 170 175

<210> 956

<211> 76

<212> PRT

<213> Sus scrofa

<400> 956

Met Asn Pro Phe Ala Ser Leu Thr Leu Thr Thr Leu Ile Ile Leu Thr
1 5 10 15

Ile Pro Ile Met Met Ser Asn Ser Asn Ile Tyr Lys Thr Asn Leu Tyr
20 25 30

Pro Asn Tyr Val Lys Thr Thr Val Ser Tyr Ala Phe Thr Leu Ser Leu
35 40 45

Val Pro Leu Leu Met Phe Met His Thr Gly Gln Glu Met Ile Ile Ser
50 55 60

Asn Trp His Trp Met Thr Leu Gln Thr Val Glu Leu
65 70 75

<210> 957

<211> 76

<212> PRT

<213> Salmo salar

<400> 957

Met Thr Leu Ser Phe Phe Asp Gln Phe Met Ser Pro Thr Tyr Leu Gly
1 5 10 15

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Ile Pro Leu Ile Ala Val Ala Leu Thr Leu Pro Trp Ile Leu Phe Pro
20 25 30

Thr Pro Ser Thr Arg Trp Leu Asn Asn Arg Leu Ile Thr Leu Gln Gly
35 40 45

Trp Phe Ile Asn Arg Phe Thr Gln Gln Leu Leu Leu Pro Leu Asn Leu
50 55 60

Gly Gly His Lys Trp Ala Val Leu Leu Thr Ser Leu
65 70 75

<210> 958
<211> 76
<212> PRT
<213> Sus scrofa

<400> 958
Met Val Leu Glu Met Leu Asn Pro Met Tyr Tyr Lys Ile Thr Ser Met
1 5 10 15

Val Ser Glu Val Val Pro Phe Ala Ser Ile Ala Val Leu Leu Leu Thr
20 25 30

Gly Phe Leu Leu Leu Leu Trp Asn Tyr Glu Asn Thr Ser Ser Ile Pro
35 40 45

Ser Pro Gly Tyr Phe Leu Gly Ile Gly Pro Leu Ile Ser His Phe Arg
50 55 60

Phe Leu Trp Met Gly Ile Gly Ser Ala Cys Asn Tyr
65 70 75

<210> 959
<211> 126
<212> PRT
<213> Sus scrofa

<400> 959
Ile Met Ile Gln Thr Pro Trp Ser Phe Met Gly Ala Thr Ala Leu Met
1 5 10 15

Ile Ala His Gly Leu Thr Ser Ser Met Leu Phe Cys Leu Ala Asn Thr
20 25 30

Asn Tyr Glu Arg Val His Ser Arg Thr Met Ile Leu Ala Arg Gly Leu
35 40 45

Gln Thr Leu Leu Pro Leu Met Ala Thr Trp Trp Leu Met Ala Ser Leu
50 55 60

Thr Asn Leu Ala Leu Pro Pro Ser Ile Asn Leu Ile Gly Glu Leu Phe
65 70 75 80

Ile Ile Thr Ala Ser Phe Ser Trp Ser Asn Ile Thr Ile Ile Leu Met
85 90 95

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Gly Met Asn Met Met Ile Thr Ala Leu Tyr Ser Leu Tyr Met Leu Ile
100 105 110

Thr Thr Gln Arg Gly Lys Tyr Thr His His Ile Asn Asn Ile
115 120 125

<210> 960

<211> 76

<212> PRT

<213> Capra hircus

<400> 960

Ala Leu Ala Met Lys Leu Gly Met Ala Pro Phe His Phe Trp Val Pro
1 5 10 15

Glu Val Thr Gln Gly Ile Pro Leu Ser Ser Gly Leu Ile Leu Leu Thr
20 25 30

Trp Gln Lys Leu Val Pro Met Ser Val Leu Tyr Gln Ile Leu Pro Ser
35 40 45

Ile Asn Leu Asp Leu Ile Leu Thr Leu Ser Ile Leu Ser Ile Met Ile
50 55 60

Gly Gly Trp Gly Gly Leu Asn Gln Thr Gln Leu Arg
65 70 75

<210> 961

<211> 176

<212> PRT

<213> Sus scrofa

<400> 961

Ser Phe Trp Leu Leu Pro Pro Ser Phe Leu Leu Leu Leu Ala Ser Ser
1 5 10 15

Met Val Glu Ala Gly Ala Gly Thr Gly Trp Thr Val Tyr Pro Pro Leu
20 25 30

Ala Gly Asn Leu Ala His Ala Gly Ala Ser Val Asp Leu Thr Ile Phe
35 40 45

Ser Leu His Leu Ala Gly Val Ser Ser Ile Leu Gly Ala Ile Asn Phe
50 55 60

Ile Thr Thr Ile Ile Asn Met Lys Pro Pro Ala Met Ser Gln Tyr Gln
65 70 75 80

Thr Pro Leu Phe Val Trp Ser Val Leu Ile Thr Ala Val Leu Leu Leu
85 90 95

Leu Ser Leu Pro Val Leu Ala Ala Gly Ile Thr Met Leu Leu Thr Asp
100 105 110

Arg Asn Leu Asn Thr Thr Phe Phe Asp Pro Ala Gly Gly Gly Asp Pro
115 120 125

Ile Leu Tyr Gln His Leu Phe Trp Phe Phe Gly His Pro Glu Val Tyr
130 135 140

Ile Leu Ile Leu Pro Gly Phe Gly Met Ile Ser His Ile Val Thr Tyr
145 150 155 160

Tyr Ser Gly Lys Lys Glu Pro Phe Gly Tyr Met Gly Met Val Trp Ala
165 170 175

<210> 962
<211> 226
<212> PRT
<213> Salmo salar

<400> 962
Met Ala Ile Thr Arg Trp Phe Phe Ser Thr Asn His Lys Asp Ile Gly
1 5 10 15

Thr Leu Tyr Leu Val Phe Gly Ala Trp Ala Gly Met Val Gly Thr Ala
20 25 30

Leu Ser Leu Leu Ile Arg Ala Glu Leu Ser Gln Pro Gly Ala Leu Leu
35 40 45

Gly Asp Asp Gln Ile Tyr Asn Val Ile Val Thr Ala His Ala Phe Val
50 55 60

Met Ile Phe Phe Met Val Met Pro Ile Met Ile Gly Gly Phe Gly Asn
65 70 75 80

Trp Leu Ile Pro Leu Met Ile Gly Ala Pro Asp Met Ala Phe Pro Arg
85 90 95

Met Asn Asn Met Ser Phe Trp Leu Leu Pro Pro Ser Phe Leu Leu Leu
100 105 110

Leu Ala Ser Ser Gly Val Glu Ala Gly Ala Gly Thr Gly Trp Thr Val
115 120 125

Tyr Pro Pro Leu Ala Gly Asn Leu Ala His Ala Gly Ala Ser Val Asp
130 135 140

Leu Thr Ile Phe Ser Leu His Leu Ala Gly Ile Ser Ser Ile Leu Gly
145 150 155 160

Ala Ile Asn Phe Ile Thr Thr Ile Ile Asn Met Lys Pro Pro Ala Ile
165 170 175

Ser Gln Tyr Gln Thr Pro Leu Phe Val Trp Ala Val Leu Val Thr Ala
180 185 190

Val Leu Leu Leu Leu Ser Leu Pro Val Leu Ala Ala Gly Ile Thr Met
195 200 205

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Leu Leu Thr Asp Arg Asn Leu Asn Thr Thr Phe Phe Asp Pro Ala Gly
210 215 220

Gly Gly
225

<210> 963
<211> 276
<212> PRT
<213> Salmo salar

<400> 963
Met Asn Pro Tyr Val Leu Thr Ile Leu Leu Ser Ser Leu Gly Leu Gly
1 5 10 15

Thr Ile Leu Thr Phe Ala Ser Ser His Trp Leu Leu Ala Trp Met Gly
20 25 30

Leu Glu Ile Asn Thr Leu Ala Ile Ile Pro Ile Met Ala Gln Gln Ser
35 40 45

His Pro Arg Ala Ile Glu Ala Thr Thr Lys Tyr Phe Leu Thr Gln Ala
50 55 60

Thr Ala Ala Ala Met Ile Leu Phe Ala Ser Thr Thr Asn Ala Trp Leu
65 70 75 80

Val Gly Glu Trp Glu Ile His Gln Leu Ser His Pro Leu Ala Thr Thr
85 90 95

Thr Val Met Leu Ala Leu Ala Leu Lys Leu Gly Leu Ala Pro Val His
100 105 110

Phe Trp Leu Pro Glu Val Leu Gln Gly Leu Glu Leu Thr Thr Gly Leu
115 120 125

Ile Leu Ser Thr Trp Gln Lys Leu Ala Pro Phe Ala Leu Met Ile Gln
130 135 140

Val Ala Pro Thr Ile Asn Ser Ser Leu Leu Ile Ala Met Gly Leu Leu
145 150 155 160

Ser Thr Leu Val Gly Gly Trp Gly Gly Leu Asn Gln Thr Gln Leu Arg
165 170 175

Lys Ile Leu Ala Tyr Ser Ser Ile Ala His Leu Gly Trp Met Val Leu
180 185 190

Ile Leu Gln Tyr Ala Pro Ser Leu Thr Leu Leu Ser Leu Phe Leu Tyr
195 200 205

Ile Ile Met Thr Ser Ser Ala Phe Leu Thr Leu Lys Thr Asn Asn Ser
210 215 220

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Leu Thr Ile Asn Thr Leu Ala Thr Ser Trp Thr Lys Ser Pro Thr Leu
225 230 235 240

Ala Ala Leu Thr Ala Leu Val Leu Leu Ser Leu Gly Gly Leu Pro Pro
245 250 255

Leu Ser Gly Phe Met Pro Lys Trp Leu Ile Leu Gln Glu Leu Thr Lys
260 265 270

Gln Gly Leu Pro
275

<210> 964
<211> 76
<212> PRT
<213> Sus scrofa

<400> 964
Asn Leu Gly Met Ala Ile Pro Leu Trp Ser Ala Thr Val Phe Thr Gly
1 5 10 15

Phe Arg Tyr Lys Thr Lys Thr Ser Leu Ala His Phe Leu Pro Gln Gly
20 25 30

Thr Pro Ala Leu Leu Ile Pro Met Leu Val Ile Ile Glu Thr Ile Ser
35 40 45

Leu Phe Ile Gln Pro Val Ala Leu Ala Val Arg Leu Thr Ala Asn Ile
50 55 60

Thr Ala Gly His Leu Leu Ile His Leu Ile Gly Gly
65 70 75

<210> 965
<211> 76
<212> PRT
<213> Capra hircus

<400> 965
Asn Leu Gly Met Ala Ile Pro Leu Trp Ala Gly Ala Val Ile Thr Gly
1 5 10 15

Phe Arg Asn Lys Thr Lys Ala Ser Leu Ala His Phe Tyr Pro Gln Gly
20 25 30

Thr Pro Thr Pro Leu Ile Pro Met Leu Val Ile Ile Glu Thr Ile Ser
35 40 45

Leu Phe Ile Gln Pro Met Ala Leu Ala Val Arg Leu Thr Ala Asn Ile
50 55 60

Thr Ala Gly His Leu Leu Ile His Leu Ile Gly Gly
65 70 75

<210> 966
<211> 126
<212> PRT

<213> Sus scrofa

<400> 966

Leu Gly Ser Cys Ala Ser Ala Ala Ser Lys Ser Lys Ser Gln Val Thr
 1 5 10 15

Val Leu Pro Glu Trp Gly Phe Ser Leu Arg Ala Phe Phe Ser Pro Ser
 20 25 30

Leu Leu Pro Thr Lys Gln Ser Ala Ser Leu Val Ser Phe Leu Val Gly
 35 40 45

Phe Leu Ala Phe Leu Ile Leu Gly Leu Ser Ile Leu Thr Thr Tyr Gly
 50 55 60

Val His Ala Ile Ala Arg Leu Glu Ala Trp Ser Leu Ala Leu Leu Val
 65 70 75 80

Leu Phe Leu Val Leu Cys Val Ala Val Val Leu Thr Ile Trp Arg Gln
 85 90 95

Pro Gln Asn Gln Gln Lys Val Ala Phe Met Val Pro Phe Leu Pro Phe
 100 105 110

Leu Pro Ala Phe Ser Ile Leu Val Asn Ile Tyr Leu Met Val
 115 120 125

<210> 967

<211> 76

<212> PRT

<213> Sus scrofa

<400> 967

Met Val Leu Glu Met Leu Asn Pro Met His Tyr Lys Val Thr Ser Met
 1 5 10 15

Val Ser Glu Val Val Pro Phe Ala Ser Ile Ala Val Leu Leu Leu Thr
 20 25 30

Gly Phe Leu Leu Leu Val Trp Asn Tyr Lys Asn Thr Ser Ser Ile Pro
 35 40 45

Gly Pro Gly Tyr Phe Leu Gly Ile Gly Pro Leu Ile Ser Tyr Leu Arg
 50 55 60

Phe Leu Trp Met Gly Ile Gly Ser Ala Cys Asn Tyr
 65 70 75

<210> 968

<211> 176

<212> PRT

<213> Salmo salar

<400> 968

Ser Phe Trp Leu Leu Pro Pro Ser Phe Leu Leu Leu Leu Ala Ser Ser
 1 5 10 15

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Gly Val Glu Ala Gly Ala Gly Thr Gly Trp Thr Val Tyr Pro Pro Leu
20 25 30

Ala Gly Asn Leu Ala His Ala Gly Ala Ser Val Asp Leu Thr Ile Phe
35 40 45

Ser Leu His Leu Ala Gly Ile Ser Ser Ile Leu Gly Ala Ile Asn Phe
50 55 60

Ile Thr Thr Ile Ile Asn Met Lys Pro Pro Ala Ile Ser Gln Tyr Gln
65 70 75 80

Thr Pro Leu Phe Val Trp Ala Val Leu Val Thr Ala Val Leu Leu Leu
85 90 95

Leu Ser Leu Pro Val Leu Ala Ala Gly Ile Thr Met Leu Leu Thr Asp
100 105 110

Arg Asn Leu Asn Thr Thr Phe Phe Asp Pro Ala Gly Gly Gly Asp Pro
115 120 125

Ile Leu Tyr Gln His Leu Phe Trp Phe Phe Gly His Pro Glu Val Tyr
130 135 140

Ile Leu Ile Leu Pro Gly Phe Gly Met Ile Ser His Ile Val Ala Tyr
145 150 155 160

Tyr Ser Gly Lys Lys Glu Pro Phe Gly Tyr Met Gly Met Val Trp Ala
165 170 175

<210> 969
<211> 126
<212> PRT
<213> Sus scrofa

<400> 969
Thr Arg Ser Cys Ala Ile Leu Pro Ala Leu Leu Val Ala Val Phe Lys
1 5 10 15

Glu Leu Gln Asp Leu Ser Ser Leu Asn Asp Leu Leu Asn Val Leu Gln
20 25 30

Ser Leu Leu Leu Pro Phe Ala Val Leu Pro Ile Leu Thr Phe Thr Ser
35 40 45

Met Pro Ala Leu Met Gln Glu Phe Ala Ser Gly Arg Val Asn Lys Val
50 55 60

Ile Thr Ser Ser Ile Met Leu Leu Val Cys Ala Ile Asn Phe Tyr Phe
65 70 75 80

Leu Val Ser Tyr Leu Pro Ser Leu Pro His Pro Ala Tyr Phe Gly Leu
85 90 95

Val Ala Leu Leu Ala Val Ile Tyr Leu Gly Leu Thr Thr Tyr Leu Val
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100

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110

Trp Thr Cys Leu Ile Ala His Gly Ala Thr Leu Leu Val His
 115 120 125

<210> 970
 <211> 76
 <212> PRT
 <213> Salmo salar

<400> 970
 Ala Leu Ala Leu Lys Leu Gly Leu Ala Pro Val His Phe Trp Leu Pro
 1 5 10 15

Glu Val Leu Gln Gly Leu Glu Leu Thr Thr Gly Leu Ile Leu Ser Thr
 20 25 30

Trp Gln Lys Leu Ala Pro Phe Ala Leu Met Ile Gln Val Ala Pro Thr
 35 40 45

Ile Asn Ser Ser Leu Leu Ile Ala Met Gly Leu Leu Ser Thr Leu Val
 50 55 60

Gly Gly Trp Gly Gly Leu Asn Gln Thr Gln Leu Arg
 65 70 75

<210> 971
 <211> 176
 <212> PRT
 <213> Sus scrofa

<400> 971
 Ala Leu Ala Met Lys Leu Gly Leu Ser Pro Phe His Phe Trp Val Pro
 1 5 10 15

Glu Val Thr Gln Gly Ile Ser Leu Gln Ala Gly Leu Leu Leu Leu Thr
 20 25 30

Trp Gln Lys Leu Ala Pro Leu Ser Val Leu Cys Gln Ile Ser Gln Ser
 35 40 45

Ile Asn Pro Asn Leu Met Leu Thr Met Ala Met Leu Ser Ile Leu Ile
 50 55 60

Gly Gly Trp Gly Gly Leu Asn Gln Thr Gln Leu Arg Lys Ile Met Ala
 65 70 75 80

Tyr Ser Ser Ile Ala His Met Gly Trp Met Thr Ala Val Leu Pro Tyr
 85 90 95

Asn Thr Thr Met Thr Ile Leu Asn Leu Leu Ile Tyr Ile Thr Met Thr
 100 105 110

Leu Ala Met Phe Met Leu Leu Ile His Ser Ser Ala Thr Thr Thr Leu
 115 120 125

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Ser Leu Ser His Thr Trp Asn Lys Met Pro Val Ile Thr Ser Leu Met
 130 135 140

Met Val Thr Leu Leu Ser Met Gly Gly Leu Pro Pro Leu Ser Gly Phe
 145 150 155 160

Met Pro Lys Trp Met Ile Ile Gln Glu Met Thr Lys Asn Glu Ser Ile
 165 170 175

<210> 972
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 972
 Ser Val Leu Leu Asp Gln Trp Met Phe Gly Lys Val Met Cys His Ile
 1 5 10 15

Met Pro Phe Leu Gln Cys Val Thr Val Leu Val Ser Thr Leu Ile Leu
 20 25 30

Ile Ser Ile Ala Ile Val Arg Tyr His Met Ile Lys His Pro Val Ser
 35 40 45

Asn Asn Leu Thr Ala Asn His Gly Tyr Phe Leu Ile Ala Thr Val Trp
 50 55 60

Thr Leu Gly Leu Ala Ile Cys Ser Pro Leu Pro Val
 65 70 75

<210> 973
 <211> 101
 <212> PRT
 <213> Sus scrofa

<400> 973
 Gly Leu Tyr Tyr Gly Ser Tyr Met Phe Leu Glu Thr Trp Asn Ile Gly
 1 5 10 15

Val Val Leu Leu Phe Thr Val Met Ala Thr Ala Phe Met Gly Tyr Val
 20 25 30

Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala Thr Val Ile Thr Asn
 35 40 45

Leu Leu Ser Ala Ile Pro Tyr Ile Gly Thr Asp Leu Val Glu Trp Ile
 50 55 60

Trp Gly Gly Phe Ser Val Asp Lys Ala Thr Leu Thr Arg Phe Phe Ala
 65 70 75 80

Phe His Phe Ile Leu Pro Phe Ile Ile Thr Ala Leu Ala Ala Val His
 85 90 95

Leu Leu Phe Leu His
 100

<210> 974
 <211> 151
 <212> PRT
 <213> Sus scrofa

<400> 974
 Met Asn Pro Ile Ile Tyr Thr Thr Leu Ile Met Thr Val Met Ser Gly
 1 5 10 15
 Thr Met Leu Val Met Ile Ser Ser His Trp Leu Leu Ile Trp Ile Gly
 20 25 30
 Phe Glu Met Asn Leu Leu Ala Met Ile Pro Val Leu Met Lys Asn Phe
 35 40 45
 Asn Pro Arg Ala Thr Glu Ala Ala Thr Lys Tyr Phe Leu Thr Gln Ala
 50 55 60
 Thr Ala Ser Met Met Leu Met Met Ala Ile Ile Ile Asn Leu Leu Tyr
 65 70 75 80
 Ser Gly Gln Trp Thr Ile Thr Lys Met Phe Asn Pro Val Ala Met Thr
 85 90 95
 Met Met Thr Met Ala Leu Ala Met Lys Leu Gly Leu Ser Pro Phe His
 100 105 110
 Phe Trp Val Pro Glu Val Thr Gln Gly Ile Ser Leu Gln Ala Gly Leu
 115 120 125
 Leu Leu Leu Thr Trp Gln Lys Leu Ala Pro Leu Ser Val Leu Cys Gln
 130 135 140
 Ile Ser Gln Ser Ile Asn Pro
 145 150

<210> 975
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 975
 Met Ala Phe Met Val Lys Met Pro Leu Tyr Gly Leu His Leu Trp Leu
 1 5 10 15
 Pro Lys Ala His Val Glu Ala Pro Ile Ala Gly Ser Met Val Leu Ala
 20 25 30
 Ala Val Leu Leu Lys Leu Gly Gly Tyr Gly Met Met Arg Ile Thr Thr
 35 40 45
 Ile Leu Asn Pro Leu Thr Asn Tyr Met Ala Tyr Pro Phe Leu Met Leu
 50 55 60
 Ser Met Trp Gly Met Ile Met Thr Ser Ser Ile Cys
 65 70 75

<210> 976
 <211> 176
 <212> PRT
 <213> Capra hircus

<400> 976
 Met Asn Glu Asn Leu Phe Thr Ser Phe Ile Thr Pro Met Met Leu Gly
 1 5 10 15
 Leu Pro Leu Val Thr Leu Ile Ile Leu Phe Pro Ser Leu Leu Phe Pro
 20 25 30
 Ser Ser Asn Arg Leu Ile Asn Asn Arg Leu Val Ser Leu Gln Gln Trp
 35 40 45
 Ala Leu Gln Leu Met Ser Lys Gln Met Met Ser Ile His Asn Thr Lys
 50 55 60
 Gly Gln Thr Trp Thr Leu Met Leu Met Ser Leu Ile Leu Phe Ile Gly
 65 70 75 80
 Ser Thr Asn Leu Leu Gly Leu Leu Pro His Ser Phe Thr Pro Thr Thr
 85 90 95
 Gln Leu Ser Met Asn Leu Gly Met Ala Ile Pro Leu Trp Ala Gly Ala
 100 105 110
 Val Ile Thr Gly Phe Arg Asn Lys Thr Lys Ala Ser Leu Ala His Phe
 115 120 125
 Tyr Pro Gln Gly Thr Pro Thr Pro Leu Ile Pro Met Leu Val Ile Ile
 130 135 140
 Glu Thr Ile Ser Leu Phe Ile Gln Pro Met Ala Leu Ala Val Arg Leu
 145 150 155 160
 Thr Ala Asn Ile Thr Ala Gly His Leu Leu Ile His Leu Ile Gly Gly
 165 170 175

<210> 977
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 977
 Met Leu Lys Ile Ile Ile Pro Thr Thr Met Leu Leu Pro Met Thr Trp
 1 5 10 15
 Met Ser Lys His Asn Met Ile Trp Ile Asn Ala Thr Val His Ser Leu
 20 25 30
 Leu Ile Ser Leu Ile Ser Leu Ser Leu Leu Asn Gln Leu Gly Glu Asn
 35 40 45
 Ser Leu Asn Phe Ser Leu Thr Phe Phe Ser Asp Ser Leu Ser Ala Pro
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 50 55 60
 Leu Leu Val Leu Thr Thr Trp Leu Leu Pro Leu Met
 65 70 75
 <210> 978
 <211> 101
 <212> PRT
 <213> Meleagris gallopavo
 <400> 978
 Arg Gly Leu Tyr Tyr Gly Ser Tyr Leu Tyr Lys Glu Thr Trp Asn Thr
 1 5 10 15
 Gly Val Val Leu Leu Leu Thr Leu Met Ala Thr Ala Phe Val Gly Tyr
 20 25 30
 Val Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala Thr Val Ile Thr
 35 40 45
 Asn Leu Phe Ser Ala Ile Pro Tyr Ile Gly Gln Thr Leu Val Glu Trp
 50 55 60
 Ala Trp Gly Gly Phe Ser Val Asp Asn Pro Thr Leu Thr Arg Phe Phe
 65 70 75 80
 Ala Leu His Phe Leu Leu Pro Phe Val Ile Ala Gly Ile Thr Ile Ile
 85 90 95
 His Leu Met Phe Leu
 100
 <210> 979
 <211> 226
 <212> PRT
 <213> Sus scrofa
 <400> 979
 Leu Leu Gln Leu Phe Leu Ile Met Thr Phe Thr Ala Thr Glu Leu Ile
 1 5 10 15
 Leu Phe Tyr Ile Leu Phe Glu Ala Thr Leu Val Pro Thr Leu Ile Ile
 20 25 30
 Ile Thr Arg Trp Gly Asn Gln Thr Glu Arg Leu Asn Ala Gly Leu Tyr
 35 40 45
 Phe Leu Phe Tyr Thr Leu Ala Gly Ser Leu Pro Leu Leu Val Ala Leu
 50 55 60
 Val Tyr Ile Gln Asn Thr Thr Gly Ser Leu Asn Phe Leu Ile Ile His
 65 70 75 80
 Tyr Trp Ser His Pro Leu Ser Asn Ser Trp Ser Asn Ile Phe Met Trp
 85 90 95

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Leu Ala Cys Ile Met Ala Phe Met Val Lys Met Pro Leu Tyr Gly Leu
100 105 110

His Leu Trp Leu Pro Lys Ala His Val Glu Ala Pro Ile Ala Gly Ser
115 120 125

Met Val Leu Ala Ala Val Leu Leu Lys Leu Gly Gly Tyr Gly Met Met
130 135 140

Arg Ile Thr Thr Ile Leu Asn Pro Leu Thr Asn Tyr Met Ala Tyr Pro
145 150 155 160

Phe Leu Met Leu Ser Met Trp Gly Met Ile Met Thr Ser Ser Ile Cys
165 170 175

Leu Arg Gln Thr Asp Leu Lys Ser Leu Ile Ala Tyr Ser Ser Val Ser
180 185 190

His Met Ala Leu Val Ile Val Ala Ile Met Ile Gln Thr Pro Trp Ser
195 200 205

Phe Met Gly Ala Thr Ala Leu Met Ile Ala His Gly Leu Thr Ser Ser
210 215 220

Met Leu
225

<210> 980
<211> 176
<212> PRT
<213> Salmo salar

<400> 980
Ala Leu Ala Leu Lys Leu Gly Leu Ala Pro Val His Phe Trp Leu Pro
1 5 10 15

Glu Val Leu Gln Gly Leu Glu Leu Thr Thr Gly Leu Ile Leu Ser Thr
20 25 30

Trp Gln Lys Leu Ala Pro Phe Ala Leu Met Ile Gln Val Ala Pro Thr
35 40 45

Ile Asn Ser Ser Leu Leu Ile Ala Met Gly Leu Leu Ser Thr Leu Val
50 55 60

Gly Gly Trp Gly Gly Leu Asn Gln Thr Gln Leu Arg Lys Ile Leu Ala
65 70 75 80

Tyr Ser Ser Ile Ala His Leu Gly Trp Met Val Leu Ile Leu Gln Tyr
85 90 95

Ala Pro Ser Leu Thr Leu Leu Ser Leu Phe Leu Tyr Ile Ile Met Thr
100 105 110

Ser Ser Ala Phe Leu Thr Leu Lys Thr Asn Asn Ser Leu Thr Ile Asn
Page 602

115

120

125

Thr Leu Ala Thr Ser Trp Thr Lys Ser Pro Thr Leu Ala Ala Leu Thr
 130 135 140

Ala Leu Val Leu Leu Ser Leu Gly Gly Leu Pro Pro Leu Ser Gly Phe
 145 150 155 160

Met Pro Lys Trp Leu Ile Leu Gln Glu Leu Thr Lys Gln Gly Leu Pro
 165 170 175

<210> 981

<211> 101

<212> PRT

<213> Meleagris gallopavo

<400> 981

Met Thr Glu Ala Leu Ile Ser Ala Ala Leu Asn Gly Thr Gln Pro Glu
 1 5 10 15

Leu Leu Ala Gly Gly Trp Ala Ala Gly Asn Ala Ser Thr Lys Cys Ser
 20 25 30

Leu Thr Lys Thr Gly Phe Gln Phe Tyr Tyr Leu Pro Thr Val Tyr Ile
 35 40 45

Leu Val Phe Ile Thr Gly Phe Leu Gly Asn Ser Val Ala Ile Trp Met
 50 55 60

Phe Val Phe His Met Arg Pro Trp Ser Gly Ile Ser Val Tyr Met Phe
 65 70 75 80

Asn Leu Ala Leu Ala Asp Phe Leu Tyr Val Leu Thr Leu Pro Ala Leu
 85 90 95

Ile Phe Tyr Tyr Phe
 100

<210> 982

<211> 76

<212> PRT

<213> Salmo salar

<400> 982

Met Asn Pro Tyr Val Leu Thr Ile Leu Leu Ser Ser Leu Gly Leu Gly
 1 5 10 15

Thr Ile Leu Thr Phe Ala Ser Ser His Trp Leu Leu Ala Trp Met Gly
 20 25 30

Leu Glu Ile Asn Thr Leu Ala Ile Ile Pro Ile Met Ala Gln Gln Ser
 35 40 45

His Pro Arg Ala Ile Glu Ala Thr Thr Lys Tyr Phe Leu Thr Gln Ala
 50 55 60

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Thr Ala Ala Ala Met Ile Leu Phe Ala Ser Thr Thr
65 70 75

<210> 983

<211> 251

<212> PRT

<213> Capra hircus

<400> 983

Met Asn Pro Ile Ile Phe Ile Ile Ile Leu Met Thr Val Met Leu Gly
1 5 10 15

Thr Thr Ile Val Met Ile Ser Ser His Trp Leu Arg Ile Trp Ile Gly
20 25 30

Phe Glu Met Asn Met Leu Ala Ile Ile Pro Ile Met Met Lys Lys His
35 40 45

Asn Pro Arg Ala Thr Ala Ala Ser Ser Asp Tyr Phe Leu Thr Gln Ser
50 55 60

Thr Ala Ser Met Leu Leu Met Met Ala Ile Ile Ile Asn Leu Met Phe
65 70 75 80

Ser Gly Gln Trp Thr Val Thr Lys Leu Phe His Pro Thr Ala Ser Met
85 90 95

Leu Met Thr Met Ala Leu Ala Met Lys Leu Gly Met Ala Pro Phe His
100 105 110

Phe Trp Val Pro Glu Val Thr Gln Gly Ile Pro Leu Ser Ser Gly Leu
115 120 125

Ile Leu Leu Thr Trp Gln Lys Leu Val Pro Met Ser Val Leu Tyr Gln
130 135 140

Ile Leu Pro Ser Ile Asn Leu Asp Leu Ile Leu Thr Leu Ser Ile Leu
145 150 155 160

Ser Ile Met Ile Gly Gly Trp Gly Gly Leu Asn Gln Thr Gln Leu Arg
165 170 175

Lys Ile Met Ala Tyr Ser Ser Ile Ala His Met Gly Trp Met Thr Ala
180 185 190

Ile Leu Pro Tyr Asn Pro Thr Met Met Leu Leu Asn Leu Ile Ile Tyr
195 200 205

Ile Thr Met Thr Ser Thr Met Phe Leu Leu Phe Met Ala Asn Ser Thr
210 215 220

Thr Thr Thr Leu Ser Leu Ser Leu Thr Trp Asn Lys Met Pro Ile Met
225 230 235 240

Thr Thr Leu Val Leu Ile Thr Leu Leu Ser Met

245

250

<210> 984
<211> 176
<212> PRT
<213> Capra hircus

<400> 984
Ala Leu Ala Met Lys Leu Gly Met Ala Pro Phe His Phe Trp Val Pro
1 5 10 15
Glu Val Thr Gln Gly Ile Pro Leu Ser Ser Gly Leu Ile Leu Leu Thr
20 25 30
Trp Gln Lys Leu Val Pro Met Ser Val Leu Tyr Gln Ile Leu Pro Ser
35 40 45
Ile Asn Leu Asp Leu Ile Leu Thr Leu Ser Ile Leu Ser Ile Met Ile
50 55 60
Gly Gly Trp Gly Gly Leu Asn Gln Thr Gln Leu Arg Lys Ile Met Ala
65 70 75 80
Tyr Ser Ser Ile Ala His Met Gly Trp Met Thr Ala Ile Leu Pro Tyr
85 90 95
Asn Pro Thr Met Met Leu Leu Asn Leu Ile Ile Tyr Ile Thr Met Thr
100 105 110
Ser Thr Met Phe Leu Leu Phe Met Ala Asn Ser Thr Thr Thr Thr Leu
115 120 125
Ser Leu Ser Leu Thr Trp Asn Lys Met Pro Ile Met Thr Thr Leu Val
130 135 140
Leu Ile Thr Leu Leu Ser Met Gly Gly Leu Pro Pro Leu Ser Gly Phe
145 150 155 160
Val Pro Lys Trp Met Ile Ile Gln Glu Met Thr Lys Asn Asn Ser Ile
165 170 175

<210> 985
<211> 101
<212> PRT
<213> Sus scrofa

<400> 985
Ala Ser Gly Pro Val Pro Leu His Val Thr Ala Pro Gly Leu Leu Leu
1 5 10 15
Leu Leu Leu Tyr Cys Leu Ile Ser Gly Leu Ser Ser Val Tyr Thr Glu
20 25 30
Leu Leu Leu Lys Arg Gln Arg Leu Pro Leu Ala Leu Gln Asn Leu Phe
35 40 45

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Leu Tyr Thr Phe Gly Val Leu Leu Asn Leu Gly Leu His Ala Gly Gly
50 55 60

Gly Pro Gly Pro Gly Leu Leu Glu Gly Phe Ser Gly Trp Ala Ala Leu
65 70 75 80

Val Val Leu Ser Gln Ala Leu Asn Gly Leu Leu Met Ser Ala Val Met
85 90 95

Lys His Gly Ser Ser
100

<210> 986
<211> 76
<212> PRT
<213> Sus scrofa

<400> 986
Gly Val Leu Phe Met Leu Ala Met Ser Ser Leu Ala Val Tyr Ser Ile
1 5 10 15

Leu Trp Ser Gly Trp Ala Ser Asn Ser Lys Tyr Ala Leu Ile Gly Ala
20 25 30

Leu Arg Ala Val Ala Gln Thr Ile Ser Tyr Glu Val Thr Leu Ala Ile
35 40 45

Ile Leu Leu Ser Val Leu Leu Met Asn Gly Ser Tyr Thr Leu Ser Thr
50 55 60

Leu Ile Thr Thr Gln Glu His Ile Trp Met Ile Phe
65 70 75

<210> 987
<211> 76
<212> PRT
<213> Solanum tuberosum

<400> 987
Val Thr Leu Cys Ala Val Leu Leu Phe Ala Gly Ala Val Ala Lys Ser
1 5 10 15

Ala Gln Phe Pro Leu His Val Trp Leu Pro Asp Ala Met Glu Gly Pro
20 25 30

Thr Pro Ile Ser Ala Leu Ile His Ala Ala Thr Met Val Ala Ala Gly
35 40 45

Ile Phe Leu Val Ala Arg Leu Leu Pro Leu Phe Arg Val Ile Pro Tyr
50 55 60

Ile Met Tyr Leu Ile Ser Val Ile Gly Ile Ile Thr
65 70 75

<210> 988
<211> 76
<212> PRT

<213> Sus scrofa

<400> 988

Ala Leu Ala Met Lys Leu Gly Leu Ser Pro Phe His Phe Trp Val Pro
 1 5 10 15

Glu Val Thr Gln Gly Ile Ser Leu Gln Ala Gly Leu Leu Leu Leu Thr
 20 25 30

Trp Gln Lys Leu Ala Pro Leu Ser Val Leu Cys Gln Ile Ser Gln Ser
 35 40 45

Ile Asn Pro Asn Leu Met Leu Thr Met Ala Met Leu Ser Ile Leu Ile
 50 55 60

Gly Gly Trp Gly Gly Leu Asn Gln Thr Gln Leu Arg
 65 70 75

<210> 989

<211> 176

<212> PRT

<213> Salmo salar

<400> 989

Met Thr Leu Ser Phe Phe Asp Gln Phe Met Ser Pro Thr Tyr Leu Gly
 1 5 10 15

Ile Pro Leu Ile Ala Val Ala Leu Thr Leu Pro Trp Ile Leu Phe Pro
 20 25 30

Thr Pro Ser Thr Arg Trp Leu Asn Asn Arg Leu Ile Thr Leu Gln Gly
 35 40 45

Trp Phe Ile Asn Arg Phe Thr Gln Gln Leu Leu Leu Pro Leu Asn Leu
 50 55 60

Gly Gly His Lys Trp Ala Val Leu Leu Thr Ser Leu Met Leu Phe Leu
 65 70 75 80

Ile Thr Leu Asn Met Leu Gly Leu Leu Pro Tyr Thr Phe Thr Pro Thr
 85 90 95

Thr Gln Leu Ser Leu Asn Met Gly Leu Ala Val Pro Leu Trp Leu Ala
 100 105 110

Thr Val Ile Ile Gly Met Arg Asn Gln Pro Thr Ala Ala Leu Gly His
 115 120 125

Leu Leu Pro Glu Gly Thr Pro Val Pro Leu Ile Pro Val Leu Ile Ile
 130 135 140

Ile Glu Thr Ile Ser Leu Phe Ile Arg Pro Leu Ala Leu Gly Val Arg
 145 150 155 160

Leu Thr Ala Asn Leu Thr Ala Gly His Leu Leu Ile Gln Leu Ile Ala
 165 170 175

<210> 990
 <211> 101
 <212> PRT
 <213> Capra hircus

<400> 990
 Gly Leu Tyr Tyr Gly Ser Tyr Thr Phe Leu Glu Thr Trp Asn Ile Gly
 1 5 10 15
 Val Ile Leu Leu Leu Ala Thr Met Ala Thr Ala Phe Met Gly Tyr Val
 20 25 30
 Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala Thr Val Ile Thr Asn
 35 40 45
 Leu Leu Ser Ala Ile Pro Tyr Ile Gly Thr Asn Leu Val Glu Trp Ile
 50 55 60
 Trp Gly Gly Phe Ser Val Asp Lys Ala Thr Leu Thr Arg Phe Phe Ala
 65 70 75 80
 Phe His Phe Ile Leu Pro Phe Ile Ile Thr Ala Leu Ala Met Val His
 85 90 95
 Leu Leu Phe Leu His
 100

<210> 991
 <211> 251
 <212> PRT
 <213> Sus scrofa

<400> 991
 Met Asn Pro Ile Ile Tyr Thr Thr Leu Ile Met Thr Val Met Ser Gly
 1 5 10 15
 Thr Met Leu Val Met Ile Ser Ser His Trp Leu Leu Ile Trp Ile Gly
 20 25 30
 Phe Glu Met Asn Leu Leu Ala Met Ile Pro Val Leu Met Lys Asn Phe
 35 40 45
 Asn Pro Arg Ala Thr Glu Ala Ala Thr Lys Tyr Phe Leu Thr Gln Ala
 50 55 60
 Thr Ala Ser Met Met Leu Met Met Ala Ile Ile Ile Asn Leu Leu Tyr
 65 70 75 80
 Ser Gly Gln Trp Thr Ile Thr Lys Met Phe Asn Pro Val Ala Met Thr
 85 90 95
 Met Met Thr Met Ala Leu Ala Met Lys Leu Gly Leu Ser Pro Phe His
 100 105 110
 Phe Trp Val Pro Glu Val Thr Gln Gly Ile Ser Leu Gln Ala Gly Leu

115
 120
 125
 Leu Leu Leu Thr Trp Gln Lys Leu Ala Pro Leu Ser Val Leu Cys Gln
 130 135 140
 Ile Ser Gln Ser Ile Asn Pro Asn Leu Met Leu Thr Met Ala Met Leu
 145 150 155 160
 Ser Ile Leu Ile Gly Gly Trp Gly Gly Leu Asn Gln Thr Gln Leu Arg
 165 170 175
 Lys Ile Met Ala Tyr Ser Ser Ile Ala His Met Gly Trp Met Thr Ala
 180 185 190
 Val Leu Pro Tyr Asn Thr Thr Met Thr Ile Leu Asn Leu Leu Ile Tyr
 195 200 205
 Ile Thr Met Thr Leu Ala Met Phe Met Leu Leu Ile His Ser Ser Ala
 210 215 220
 Thr Thr Thr Leu Ser Leu Ser His Thr Trp Asn Lys Met Pro Val Ile
 225 230 235 240
 Thr Ser Leu Met Met Val Thr Leu Leu Ser Met
 245 250

<210> 992
 <211> 76
 <212> PRT
 <213> Sus scrofa

<400> 992
 Thr Leu His Gly Gly Asn Ile Lys Trp Ser Pro Ala Met Leu Trp Ala
 1 5 10 15

Leu Gly Phe Ile Phe Leu Phe Thr Val Gly Gly Leu Thr Gly Ile Val
 20 25 30

Leu Ala Asn Ser Ser Leu Asp Ile Val Leu His Asp Thr Tyr Tyr Val
 35 40 45

Val Ala His Phe His Tyr Val Leu Ser Met Gly Ala Val Phe Ala Ile
 50 55 60

Met Gly Gly Phe Val His Trp Phe Pro Leu Phe Ser
 65 70 75

<210> 993
 <211> 101
 <212> PRT
 <213> Meleagris gallopavo

<400> 993
 Met Thr Pro Leu Pro Ala Gly Asn Gly Ser Val Pro Asn Cys Ser Trp
 1 5 10 15

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Ala Ala Val Leu Ser Arg Gln Trp Ala Val Gly Ala Ala Leu Ser Ile
20 25 30

Thr Ile Leu Val Ile Val Ala Gly Asn Leu Leu Val Ile Val Ala Ile
35 40 45

Ala Lys Thr Pro Arg Leu Gln Thr Met Thr Asn Val Phe Val Thr Ser
50 55 60

Leu Ala Cys Ala Asp Leu Val Met Gly Leu Leu Val Val Pro Pro Gly
65 70 75 80

Ala Thr Ile Leu Leu Ser Gly His Trp Pro Tyr Gly Thr Val Val Cys
85 90 95

Glu Leu Trp Thr Ser
100

<210> 994
<211> 76
<212> PRT
<213> Sus scrofa

<400> 994
Ser Asn Tyr Val Phe Val Phe Leu Gly Leu Ile Leu Tyr Cys Val Val
1 5 10 15

Thr Ser Pro Met Leu Leu Val Ala Leu Ala Val Phe Phe Gly Ala Cys
20 25 30

Tyr Ile Leu Tyr Leu Arg Thr Leu Gln Ser Lys Phe Val Leu Phe Gly
35 40 45

Arg Glu Val Ser Pro Ala His Gln Tyr Ala Leu Ala Gly Gly Val Ser
50 55 60

Phe Pro Phe Phe Trp Leu Ala Gly Ala Gly Ser Ala
65 70 75

<210> 995
<211> 76
<212> PRT
<213> Sus scrofa

<400> 995
Met Glu Ser Leu Phe Pro Ala Pro Phe Trp Glu Val Leu Tyr Gly Ser
1 5 10 15

Pro Leu Gln Gly Asn Leu Ser Leu Leu Ser Pro Asn His Ser Leu Leu
20 25 30

Pro Pro His Leu Leu Leu Asn Ala Ser His Gly Ala Phe Leu Pro Leu
35 40 45

Gly Leu Lys Val Thr Ile Val Gly Leu Tyr Leu Ala Val Cys Val Gly
50 55 60

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Gly Leu Leu Gly Asn Cys Leu Val Met Tyr Val Ile
65 70 75

<210> 996
<211> 101
<212> PRT
<213> Salmo salar

<400> 996
Gly Leu Tyr Tyr Gly Ser Tyr Leu Tyr Lys Glu Thr Trp Asn Ile Gly
1 5 10 15

Val Val Leu Leu Leu Leu Thr Met Met Thr Ala Phe Val Gly Tyr Val
20 25 30

Leu Pro Trp Gly Gln Met Ser Phe Trp Gly Ala Thr Val Ile Thr Asn
35 40 45

Leu Leu Ser Ala Val Pro Tyr Val Gly Gly Ala Leu Val Gln Trp Ile
50 55 60

Trp Gly Gly Phe Ser Val Asp Asn Ala Thr Leu Thr Arg Phe Phe Ala
65 70 75 80

Phe His Phe Leu Phe Pro Phe Val Ile Ala Ala Ala Thr Val Leu His
85 90 95

Leu Leu Phe Leu His
100

<210> 997
<211> 76
<212> PRT
<213> Sus scrofa

<400> 997
Ser Phe Trp Leu Leu Pro Pro Ser Phe Leu Leu Leu Leu Ala Ser Ser
1 5 10 15

Met Val Glu Ala Gly Ala Gly Thr Gly Trp Thr Val Tyr Pro Pro Leu
20 25 30

Ala Gly Asn Leu Ala His Ala Gly Ala Ser Val Asp Leu Thr Ile Phe
35 40 45

Ser Leu His Leu Ala Gly Val Ser Ser Ile Leu Gly Ala Ile Asn Phe
50 55 60

Ile Thr Thr Ile Ile Asn Met Lys Pro Pro Ala Met
65 70 75

<210> 998
<211> 151
<212> PRT
<213> Salmo salar

<400> 998

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Gln Ser Ser Phe Gly Thr Gly Phe Tyr Ser Gly Pro Glu Leu Ala Phe
1 5 10 15

Ile Phe Val Val Leu Ala Trp Val Asn Ala Leu Thr Asn Ala Val Leu
20 25 30

Pro Ser Val Gln Ser Tyr Ser Cys Leu Pro Tyr Gly Asn Gln Ala Tyr
35 40 45

His Leu Ala Ala Thr Met Ala Ala Val Ala Asn Pro Val Ala Cys Phe
50 55 60

Ile Ala Met Phe Leu Pro Leu Arg Ser Leu Val Leu Ile Gly Leu Leu
65 70 75 80

Thr Ile Val Gly Thr Gly Phe Gly Thr Tyr Ile Met Ala Met Ala Thr
85 90 95

Leu Ser Pro Cys Pro Leu Leu Val His Ser Ala Ser Gly Thr Thr Leu
100 105 110

Ile Val Ile Ala Trp Val Leu Phe Val Leu Thr Leu Ser Tyr Val Lys
115 120 125

Val Ile Ile Gly Val Ile Leu Arg Asp Glu Gly His Ser Ala Leu Val
130 135 140

Trp Cys Gly Ala Val Val Gln
145 150

<210> 999
<211> 76
<212> PRT
<213> Salmo salar

<400> 999
Ser Phe Trp Leu Leu Pro Pro Ser Phe Leu Leu Leu Leu Ala Ser Ser
1 5 10 15

Gly Val Glu Ala Gly Ala Gly Thr Gly Trp Thr Val Tyr Pro Pro Leu
20 25 30

Ala Gly Asn Leu Ala His Ala Gly Ala Ser Val Asp Leu Thr Ile Phe
35 40 45

Ser Leu His Leu Ala Gly Ile Ser Ser Ile Leu Gly Ala Ile Asn Phe
50 55 60

Ile Thr Thr Ile Ile Asn Met Lys Pro Pro Ala Ile
65 70 75

<210> 1000
<211> 126
<212> PRT
<213> Sus scrofa

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<400> 1000

Arg Gly Ala Cys Leu Leu Gly Leu Leu Ala Thr Thr Ser Ala Leu Thr
1 5 10 15

Asn Gly Val Leu Pro Ala Val Gln Ser Tyr Ser Ser Leu Pro Tyr Gly
20 25 30

Arg Leu Ala Tyr His Leu Ala Val Val Leu Gly Ser Ala Ser Asn Pro
35 40 45

Leu Ala Cys Phe Leu Ala Met Gly Ile Leu Cys Arg Ser Leu Ala Gly
50 55 60

Leu Gly Gly Leu Ser Leu Leu Gly Thr Leu Phe Gly Ala Tyr Leu Met
65 70 75 80

Ala Leu Ala Ile Leu Ser Pro Cys Pro Pro Leu Val Gly Thr Ser Ala
85 90 95

Gly Met Val Leu Val Val Val Leu Trp Ala Leu Cys Leu Gly Val Phe
100 105 110

Ser Tyr Val Lys Val Ala Thr Ser Ser Leu Leu His Gly Gly
115 120 125

<210> 1001

<211> 126

<212> PRT

<213> Zea mays

<400> 1001

Met Ala Asp Arg Asp Arg Ser Gly Ile Tyr Gly Gly Ala His Ala Thr
1 5 10 15

Tyr Gly Gln Gln Gln Gln Gln Gly Gly Gly Gly Arg Pro Met Gly Glu
20 25 30

Gln Val Lys Lys Gly Met Leu His Asp Lys Gly Pro Thr Ala Ser Gln
35 40 45

Ala Leu Thr Val Ala Thr Leu Phe Pro Leu Gly Gly Leu Leu Leu Val
50 55 60

Leu Ser Gly Leu Ala Leu Thr Ala Ser Val Val Gly Leu Ala Val Ala
65 70 75 80

Thr Pro Val Phe Leu Ile Phe Ser Pro Val Leu Val Pro Ala Ala Leu
85 90 95

Leu Ile Gly Thr Ala Val Met Gly Phe Leu Thr Ser Gly Ala Leu Gly
100 105 110

Leu Gly Gly Leu Ser Ser Leu Thr Cys Leu Ala Asn Thr Ala
115 120 125

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<210> 1002
<211> 126
<212> PRT
<213> Zea mays

<400> 1002
Thr Leu Leu Ile Ser Lys Ile Arg Glu Glu Tyr Pro Asp Arg Met Met
1 5 10 15

Leu Thr Phe Ser Val Phe Pro Ser Pro Lys Val Ser Asp Thr Val Val
20 25 30

Glu Pro Tyr Asn Ala Thr Leu Ser Val His Gln Leu Val Glu Asn Ala
35 40 45

Asp Glu Cys Met Val Leu Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe
50 55 60

Arg Thr Leu Lys Leu Thr Asn Pro Ser Phe Gly Asp Leu Asn His Leu
65 70 75 80

Ile Ser Ala Thr Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly
85 90 95

Gln Leu Asn Ser Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe
100 105 110

Pro Arg Leu His Phe Phe Met Val Gly Phe Ala Pro Leu Thr
115 120 125

<210> 1003
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1003
Pro Ala Leu Ala Ala Gly Cys Thr Ala Val Leu Lys Pro Ser Glu Leu
1 5 10 15

Ala Ser Leu Thr Cys Leu Glu Leu Gly Gly Ile Cys Ala Glu Ile Gly
20 25 30

Leu Pro Pro Gly Val Leu Asn Ile Ile Thr Gly Leu Gly Thr Glu Ala
35 40 45

Gly Ala Pro Leu Ala Ser His Pro His Val Asp Lys Ile Ala Phe Thr
50 55 60

Gly Ser Thr Glu Thr Gly Lys Arg Ile Met Ile Thr
65 70 75

<210> 1004
<211> 76
<212> PRT
<213> Zea mays

<400> 1004
Val Leu Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe Arg Thr Leu Lys

1 5 10 15

Leu Ala Thr Pro Thr Phe Gly Asp Leu Asn His Leu Ile Ser Ala Thr
 20 25 30

Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn Ser
 35 40 45

Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe Pro Arg Leu His
 50 55 60

Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg
65 70 75

<210> 1005
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1005
 Thr Ser Thr Gly Ala Ala Lys Ala Val Ser Leu Val Leu Pro Asn Leu
 1 5 10 15

Lys Gly Lys Leu Asn Gly Ile Ala Leu Arg Val Pro Thr Pro Asn Val
 20 25 30

Ser Val Val Asp Leu Val Val Gln Val Ser Lys Lys Thr Leu Ala Glu
 35 40 45

Glu Val Asn Gln Ala Phe Arg Asp Ala Ala Ala Asn Glu Leu Thr Gly
 50 55 60

Ile Leu Glu Val Cys Asp Val Pro Leu Val Ser Val
65 70 75

<210> 1006
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1006
 Val Leu Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe Arg Thr Leu Lys
 1 5 10 15

Leu Thr Asn Pro Ser Phe Gly Asp Leu Asn His Leu Ile Ser Ala Thr
 20 25 30

Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn Ser
 35 40 45

Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe Pro Arg Leu His
 50 55 60

Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg
65 70 75

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<210> 1007
<211> 76
<212> PRT
<213> Zea mays

<400> 1007
Val Leu Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe Arg Thr Leu Lys
1 5 10 15

Leu Thr Thr Pro Ser Phe Gly Asp Leu Asn His Leu Ile Ser Ala Thr
20 25 30

Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn Ser
35 40 45

Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe Pro Arg Leu His
50 55 60

Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg
65 70 75

<210> 1008
<211> 76
<212> PRT
<213> Zea mays

<400> 1008
Val Leu Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe Arg Thr Leu Lys
1 5 10 15

Leu Thr Thr Pro Ser Phe Gly Asp Leu Asn His Leu Ile Ser Ala Thr
20 25 30

Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn Ser
35 40 45

Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe Pro Arg Leu His
50 55 60

Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg
65 70 75

<210> 1009
<211> 76
<212> PRT
<213> Zea mays

<400> 1009
Val Leu Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe Arg Thr Leu Lys
1 5 10 15

Leu Thr Thr Pro Ser Phe Gly Asp Leu Asn His Leu Ile Ser Ala Thr
20 25 30

Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn Ser
35 40 45

Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe Pro Arg Leu His

50

55

60

Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg
65 70 75

<210> 1010
<211> 76
<212> PRT
<213> Zea mays

<400> 1010
Val Leu Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe Arg Thr Leu Lys
1 5 10 15

Leu Thr Thr Pro Ser Phe Gly Asp Leu Asn His Leu Ile Ser Ala Thr
20 25 30

Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn Ser
35 40 45

Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe Pro Arg Leu His
50 55 60

Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg
65 70 75

<210> 1011
<211> 76
<212> PRT
<213> Zea mays

<400> 1011
Val Leu Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe Arg Thr Leu Lys
1 5 10 15

Leu Thr Thr Pro Ser Phe Gly Asp Leu Asn His Leu Ile Ser Ala Thr
20 25 30

Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn Ser
35 40 45

Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe Pro Arg Leu His
50 55 60

Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg
65 70 75

<210> 1012
<211> 151
<212> PRT
<213> Zea mays

<400> 1012
Thr Asp Gly Arg Pro Thr Gln Gly Gly Phe Ala Ser Thr Met Val Val
1 5 10 15

Asp Gln Lys Phe Val Val Lys Ile Pro Ala Gly Leu Ala Pro Glu Gln
20 25 30

Ala Ala Pro Leu Leu Cys Ala Gly Val Thr Val Tyr Ser Pro Leu Lys
35 40 45

His Phe Gly Leu Thr Asn Pro Gly Leu Arg Gly Gly Ile Leu Gly Leu
50 55 60

Gly Gly Val Gly His Met Gly Val Lys Val Ala Lys Ala Met Gly His
65 70 75 80

His Val Thr Val Ile Ser Ser Ser Ser Lys Lys Arg Ala Glu Ala Met
85 90 95

Asp His Leu Gly Ala Asp Ala Tyr Leu Val Ser Ser Asp Ala Ala Ala
100 105 110

Met Ala Ala Ala Ala Asp Ser Leu Asp Tyr Ile Ile Asp Thr Val Pro
115 120 125

Val His His Pro Leu Glu Pro Tyr Leu Ala Leu Leu Lys Leu Asp Gly
130 135 140

Lys Leu Val Leu Leu Gly Val
145 150

<210> 1013

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1013

Thr Asp Gly Arg Pro Thr Gln Gly Gly Phe Ala Ser Ala Met Val Val
1 5 10 15

Asp Gln Lys Phe Val Val Lys Ile Pro Ala Gly Leu Ala Pro Glu Gln
20 25 30

Ala Ala Pro Leu Leu Cys Ala Gly Leu Thr Val Tyr Ser Pro Leu Lys
35 40 45

His Phe Gly Leu Met Ser Pro Gly Leu Arg Gly Gly Val Leu Gly Leu
50 55 60

Gly Gly Val Gly His Met Gly Val Lys Val Ala Lys Ser Met Gly His
65 70 75 80

His Val Thr Val Ile Ser Ser Ser Ala Arg Lys Arg Gly Glu Ala Met
85 90 95

Asp Asp Leu Gly Ala Asp Ala Tyr Leu Val Ser Ser Asp Ala Ala Ala
100 105 110

Met Ala Ala Ala Gly Asp Ser Leu Asp Tyr Ile Ile Asp Thr Val Pro
115 120 125

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Val His His Pro Leu Glu Pro Tyr Leu Ala Leu Leu Lys Leu Asp Gly
130 135 140

Lys Leu Ile Leu Met Gly Val Ile Asn Gln Pro Leu Ser Phe Ile Ser
145 150 155 160

Pro Met Val Met Leu Gly Arg Lys Ala Ile Thr Gly Ser Phe Ile Gly
165 170 175

<210> 1014
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1014
Pro Ala Gly Leu Pro Leu Asp Ser Ala Ala Pro Leu Leu Cys Ala Gly
1 5 10 15

Val Thr Val Tyr Ser Pro Met Val Ile His Gly Leu Asn Ala Pro Gly
20 25 30

Lys His Val Gly Val Val Gly Leu Gly Gly Leu Gly His Val Ala Val
35 40 45

Lys Phe Ala Lys Ala Phe Gly Met Arg Val Thr Val Ile Ser Thr Ser
50 55 60

Pro Gly Lys Arg Gln Glu Ala Leu Glu His Leu Gly
65 70 75

<210> 1015
<211> 76
<212> PRT
<213> Zea mays

<400> 1015
Asp Ala Leu Lys Leu Lys Val Cys Ala Lys Val Leu Gly Leu Val Lys
1 5 10 15

Val Gly Leu Pro Gln Tyr Glu Gln Cys Cys Pro Leu Leu Glu Gly Leu
20 25 30

Val Asp Leu Asp Ala Ala Leu Cys Leu Cys Thr Ala Ile Lys Ala Asn
35 40 45

Val Leu Gly Ile His Leu Asn Val Pro Leu Ser Leu Asn Phe Ile Leu
50 55 60

Asn Asn Cys Gly Arg Ile Cys Pro Glu Asp Phe Thr
65 70 75

<210> 1016
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1016

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Leu Pro Leu Asp Gly Ala Ala Pro Leu Leu Cys Ala Gly Val Thr Val
1 5 10 15

Tyr Ser Pro Met Val Ile His Gly Leu Asn Ala Pro Gly Lys His Val
20 25 30

Gly Val Val Gly Leu Gly Gly Leu Gly His Val Ala Val Lys Phe Ala
35 40 45

Lys Ala Phe Gly Met Arg Val Thr Val Ile Ser Thr Ser Pro Gly Lys
50 55 60

Arg Arg Glu Ala Leu Glu His Leu Gly Ala Asp Glu
65 70 75

<210> 1017

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1017

Leu Asp Lys Gly Ala Pro Leu Leu Cys Ala Gly Ile Thr Val Tyr Ser
1 5 10 15

Pro Met Lys Tyr His Gly Leu Asn Val Pro Ser Lys His Val Gly Val
20 25 30

Leu Gly Leu Gly Gly Leu Gly His Val Ala Val Lys Phe Ala Lys Ala
35 40 45

Phe Gly Met Thr Val Thr Val Ile Ser Ser Ser Pro Gly Lys Arg Gln
50 55 60

Glu Ala Leu Glu Arg Leu Gly Ala Asp Ala Phe Val Val Ser Lys Asn
65 70 75 80

Ala Asp Glu Met Asn Ala Ala Thr Gly Thr Met Asp Gly Ile Ile Asn
85 90 95

Thr Val Ser Ala Asn Ile Pro Ile Ala Pro Leu Leu Gly Leu Leu Lys
100 105 110

Pro Asn Gly Lys Met Ile Leu Val Gly Leu Pro Glu Lys Pro
115 120 125

<210> 1018

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1018

Gln Glu Leu Gln Asn Glu Lys Lys Leu Ala Glu Asp Leu Lys Phe Glu
1 5 10 15

Ile Lys Gly Leu Gln Asn Asp Leu Met Asn Thr Lys Glu Asp Lys Lys
20 25 30

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Lys Leu Gln Glu Glu Leu Lys Glu Lys Leu Asp Leu Ile Gln Val Leu
35 40 45

Glu Glu Lys Ile Thr Leu Leu Thr Thr Glu Ile Lys Asp Lys Glu Val
50 55 60

Ser Leu Arg Ser Asn Thr Ser Lys Leu Ala Glu Lys
65 70 75

<210> 1019

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1019

Pro Asp Thr Leu Pro Leu Asp Ala Ala Ala Pro Leu Leu Cys Ala Gly
1 5 10 15

Ile Thr Val Tyr Ser Pro Met Lys Gln His Gly Met Leu Gln Ala Asp
20 25 30

Ala Ala Gly Arg Arg Leu Gly Val Val Gly Leu Gly Gly Leu Gly His
35 40 45

Val Ala Val Lys Phe Gly Lys Ala Phe Gly Leu His Val Thr Val Ile
50 55 60

Ser Thr Ser Pro Ala Lys Glu Arg Glu Ala Arg Glu Asn Leu Lys Ala
65 70 75 80

Asp Asn Phe Val Val Ser Thr Asp Gln Lys Gln Met Gln Ala Met Thr
85 90 95

Arg Ser Leu Asp Tyr Ile Ile Asp Thr Val Ala Ala Thr His Ser Leu
100 105 110

Gly Pro Ile Leu Glu Leu Leu Lys Val Asn Gly Lys Leu Val
115 120 125

<210> 1020

<211> 126

<212> PRT

<213> Zea mays

<400> 1020

Asn Gln Val Glu Thr Ser Asp Val Val Val Gln Pro Tyr Asn Ser Leu
1 5 10 15

Leu Thr Leu Lys Arg Leu Thr Leu Asn Ala Asp Cys Val Val Val Leu
20 25 30

Asp Asn Thr Ala Leu Asn Arg Ile Ala Val Glu Arg Leu His Leu Ser
35 40 45

Asn Pro Thr Phe Ala Gln Thr Asn Ser Leu Val Ser Thr Val Met Ser
50 55 60

Ala Ser Thr Thr Thr Leu Arg Tyr Pro Gly Tyr Met Asn Asn Asp Leu
65 70 75 80

Val Gly Leu Leu Ala Ser Leu Ile Pro Thr Pro Arg Cys His Phe Leu
85 90 95

Met Thr Gly Tyr Thr Pro Leu Thr Val Glu Arg Gln Val Asn Met Ile
100 105 110

Arg Lys Thr Thr Val Leu Asp Val Met Arg Arg Leu Leu Gln
115 120 125

<210> 1021

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1021

Asp Gly Tyr Pro Leu Glu Lys Ala Ala Pro Leu Leu Cys Ala Gly Ile
1 5 10 15

Thr Val Tyr Ser Pro Met Met Arg His Asn Met Asn Gln Pro Gly Lys
20 25 30

Ser Leu Gly Val Ile Gly Leu Gly Gly Leu Gly His Met Ala Val Lys
35 40 45

Phe Gly Lys Ala Phe Gly Leu Lys Val Thr Val Ile Ser Thr Ser Glu
50 55 60

Ser Lys Arg Lys Glu Ala Ile Asp Leu Leu Gly Ala Asp Asn Phe Val
65 70 75 80

Val Ser Ser Asp Glu Asn Gln Met Glu Thr Leu Lys Ser Ser Leu Asn
85 90 95

Phe Ile Ile Asp Thr Ala Ser Gly Asp His Pro Phe Asp Pro Tyr Leu
100 105 110

Thr Leu Leu Lys Val Gly Gly Val Met Ala Leu Leu Ser Phe
115 120 125

<210> 1022

<211> 176

<212> PRT

<213> Zea mays

<400> 1022

Ile Leu Ala Ile Leu Ser Met Ile Leu Gly Asn Leu Leu Ala Ile Thr
1 5 10 15

Gln Thr Ser Met Lys Arg Met Leu Ala Tyr Ser Ser Ile Gly Gln Ile
20 25 30

Gly Tyr Val Ile Ile Gly Ile Ile Val Gly Asp Ser Asn Asp Gly Tyr

Ala Ser Met Ile Thr Tyr Met Leu Phe Tyr Ile Ser Met Asn Leu Gly
50 55 60

Thr Phe Ala Cys Ile Val Leu Phe Gly Leu Arg Thr Gly Thr Asp Asn
65 70 75 80

Ile Arg Asp Tyr Ala Gly Leu Tyr Thr Lys Asp Pro Phe Leu Ala Leu
85 90 95

Ser Leu Ala Leu Cys Leu Leu Ser Leu Gly Gly Leu Pro Pro Leu Ala
100 105 110

Gly Phe Phe Gly Lys Leu Tyr Leu Phe Trp Cys Gly Trp Gln Ala Gly
115 120 125

Leu Tyr Phe Leu Val Ser Ile Gly Leu Leu Thr Ser Val Leu Ser Ile
130 135 140

Tyr Tyr Tyr Leu Lys Ile Ile Lys Leu Leu Met Thr Gly Arg Asn Gln
145 150 155 160

Glu Ile Thr Pro Tyr Val Arg Asn Tyr Arg Arg Ser Pro Leu Arg Ser
165 170 175

<210> 1023

<211> 176

<212> PRT

<213> Zea mays

<400> 1023

Ile Leu Ala Ile Leu Ser Met Ile Leu Gly Asn Leu Leu Ala Ile Thr
1 5 10 15

Gln Thr Ser Met Lys Arg Met Leu Ala Tyr Ser Ser Ile Gly Gln Ile
20 25 30

Gly Tyr Val Ile Ile Gly Ile Ile Val Gly Asp Ser Asn Asp Gly Tyr
35 40 45

Ala Ser Met Ile Thr Tyr Met Leu Phe Tyr Ile Ser Met Asn Leu Gly
50 55 60

Thr Phe Ala Cys Ile Val Leu Phe Gly Leu Arg Thr Gly Thr Asp Asn
65 70 75 80

Ile Arg Asp Tyr Ala Gly Leu Tyr Thr Lys Asp Pro Phe Leu Ala Leu
85 90 95

Ser Leu Ala Leu Cys Leu Leu Ser Leu Gly Gly Leu Pro Pro Leu Ala
100 105 110

Gly Phe Phe Gly Lys Leu Tyr Leu Phe Trp Cys Gly Trp Gln Ala Gly
115 120 125

Leu Tyr Phe Leu Val Ser Ile Gly Leu Leu Thr Ser Val Leu Ser Ile
130 135 140

Tyr Tyr Tyr Leu Lys Ile Ile Lys Leu Leu Met Thr Gly Arg Asn Gln
145 150 155 160

Glu Ile Thr Pro Tyr Val Arg Asn Tyr Arg Arg Ser Pro Leu Arg Ser
165 170 175

<210> 1024

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1024

Val Leu Gly Thr Phe Leu Leu Trp Phe Gly Trp Tyr Gly Phe Asn Pro
1 5 10 15

Gly Ser Phe Leu Thr Ile Leu Lys Ser Tyr Asp His Thr Ile Arg Gly
20 25 30

Thr Tyr Tyr Gly Gln Trp Ser Ala Ile Gly Arg Thr Ala Val Thr Thr
35 40 45

Thr Leu Ala Gly Cys Thr Ala Ala Leu Thr Thr Leu Phe Cys Lys Arg
50 55 60

Leu Leu Val Ala His Trp Asn Val Val Asp Val Cys Asn Gly Leu Leu
65 70 75 80

Gly Gly Phe Ala Ala Ile Thr Ser Gly Cys Ala Val Val Glu Pro Trp
85 90 95

Ala Ala Ile Val Cys Gly Phe Ile Ala Ala Trp Val Leu Ile Gly Phe
100 105 110

Asn Ala Leu Ala Ala Lys Leu Lys Tyr Asp Asp Pro Leu Glu
115 120 125

<210> 1025

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1025

Ala Asp Tyr Pro Leu Ser Lys Ala Ala Pro Leu Leu Cys Ala Gly Ile
1 5 10 15

Thr Val Tyr Thr Pro Met Ile Arg His Asn Met Asn Gln Pro Gly Lys
20 25 30

Ser Leu Gly Val Ile Gly Leu Gly Gly Leu Gly His Met Ala Val Lys
35 40 45

Phe Gly Lys Ala Phe Gly Leu Lys Val Thr Val Phe Ser Thr Ser Glu
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50

55

60

Ser Lys Arg Glu Glu Ala Ile Asn Leu Leu Gly Ala Asp Asn Phe Val
65 70 75 80

Ile Ser Ser Asp Glu Asn Gln Met Glu Ser Leu Lys Ser Ser Leu His
85 90 95

Phe Ile Ile Asp Thr Ala Ser Gly Asp His Gln Phe Asp Pro Tyr Leu
100 105 110

Ser Leu Leu Lys Val Gly Gly Val Met Val Leu Leu Ser Phe
115 120 125

<210> 1026

<211> 226

<212> PRT

<213> Oryza sativa

<400> 1026

Gln Phe Tyr His Thr Glu Thr Gly Thr Asp Ser Lys Glu Ile Phe Ser
1 5 10 15

Ala Ala Leu Pro Thr Leu Leu Asp Glu Ile Ile Cys Phe Pro Gly Glu
20 25 30

Ser Asp Gln Ile Glu Thr Asp Arg Arg Met Ala Lys Ile Ser Pro Thr
35 40 45

Ile Gln Asn Ile Ala Arg Ile Leu Thr Gly Asn Asp Asn Leu Pro Glu
50 55 60

Phe Leu Lys Asn Asp Phe Val Arg Leu Leu Asn Ser Ile Asp Lys Lys
65 70 75 80

Met Leu His Ser Ser Asp Val Asn Leu Gln Lys Gln Ala Leu Gln Arg
85 90 95

Ile Arg Lys Leu Val Glu Met Met Gly Pro Tyr Leu Ser Thr His Ala
100 105 110

Pro Lys Ile Met Val Leu Leu Ile Phe Ala Ile Asp Lys Glu Thr Leu
115 120 125

Gln Met Asp Gly Leu Asp Val Leu His Phe Phe Ile Lys Arg Leu Ala
130 135 140

Glu Val Ser Cys Thr Ser Ile Lys Tyr Val Met Ser Gln Val Val Ala
145 150 155 160

Ala Phe Ile Pro Ser Leu Glu Arg Cys Arg Glu Arg Pro Leu Val His
165 170 175

Leu Gly Lys Ile Val Glu Ile Leu Glu Glu Leu Val Val Lys Asn Ile
180 185 190

Ile Leu Leu Lys Gln His Ile Arg Glu Leu Pro Leu Leu Pro Ser Leu
195 200 205

Pro Ser Leu Ser Gly Val Asn Lys Val Ile Gln Glu Ala Arg Gly Leu
210 215 220

Met Thr
225

<210> 1027
<211> 101
<212> PRT
<213> Zea mays

<400> 1027
Met Glu Thr Ser Asp Val Val Val Gln Pro Tyr Asn Ser Leu Leu Thr
1 5 10 15

Leu Lys Arg Leu Thr Leu Asn Ala Asp Cys Val Val Val Leu Asp Asn
20 25 30

Thr Ala Leu Asn Arg Ile Ala Val Glu Arg Leu His Leu Ser Asn Pro
35 40 45

Thr Phe Ala Gln Thr Asn Ser Leu Val Ser Thr Val Met Ser Ala Ser
50 55 60

Thr Thr Thr Leu Arg Tyr Pro Gly Tyr Met Asn Asn Asp Leu Val Gly
65 70 75 80

Leu Leu Ala Ser Leu Ile Pro Thr Pro Arg Cys His Phe Leu Met Thr
85 90 95

Gly Tyr Thr Pro Leu
100

<210> 1028
<211> 101
<212> PRT
<213> Zea mays

<400> 1028
Val Glu Thr Ser Asp Val Val Val Gln Pro Tyr Asn Ser Leu Leu Thr
1 5 10 15

Leu Lys Arg Leu Thr Leu Asn Ala Asp Cys Val Val Val Leu Asp Asn
20 25 30

Thr Ala Leu Asn Arg Ile Ala Val Glu Arg Leu His Leu Ser Asn Pro
35 40 45

Thr Phe Ala Gln Thr Asn Ser Leu Val Ser Thr Val Met Ser Ala Ser
50 55 60

Thr Thr Thr Leu Arg Tyr Pro Gly Tyr Met Asn Asn Asp Leu Val Gly
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Val Leu Leu Ile Phe Ala Ile Asp Lys Glu Thr Leu Gln Met Asp Gly
20 25 30

Leu Asp Val Leu His Phe Phe Ile Lys Arg Leu Ala Glu Val Ser Cys
35 40 45

Thr Ser Ile Lys Tyr Val Met Ser Gln Val Val Ala Ala Phe Ile Pro
50 55 60

Ser Leu Glu Arg Cys Arg Glu Arg Pro Leu Val His Leu Gly Lys Ile
65 70 75 80

Val Glu Ile Leu Glu Glu Leu Val Val Lys Asn Ile Ile Leu Leu Lys
85 90 95

Gln His Ile Arg Glu
100

<210> 1031

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1031

Val Glu Met Met Gly Pro Tyr Leu Ser Thr His Ala Pro Lys Ile Met
1 5 10 15

Val Leu Leu Ile Phe Ala Ile Asp Lys Glu Thr Leu Gln Met Asp Gly
20 25 30

Leu Asp Val Leu His Phe Phe Ile Lys Arg Leu Ala Glu Val Ser Cys
35 40 45

Thr Ser Ile Lys Tyr Val Met Ser Gln Val Val Ala Ala Phe Ile Pro
50 55 60

Ser Leu Glu Arg Cys Arg Glu Arg Pro Leu Val His Leu Gly Lys Ile
65 70 75 80

Val Glu Ile Leu Glu Glu Leu Val Val Lys Asn Ile Ile Leu Leu Lys
85 90 95

Gln His Ile Arg Glu Leu Pro Leu Leu Pro Ser Leu Pro Ser Leu Ser
100 105 110

Gly Val Asn Lys Val Ile Gln Glu Ala Arg Gly Leu Met Thr Leu Gln
115 120 125

Asp His Leu Lys Asp Ala Val Asn Gly Leu Asn His Glu Ser Leu Asn
130 135 140

Val Arg Tyr Met Val Ala Cys Glu Leu Asn Lys Leu Phe Asn Asp Arg
145 150 155 160

Arg Gly Asp Ile Thr Ser Leu Ile Ile Gly Glu Asp Ile Ala Asp Leu

Asp Ile Ile Ser Ser Leu Ile Met Ser Leu Leu Lys Gly Cys Ala Glu
 180 185 190

Glu Ser Arg Thr Val Val Gly Gln Arg
 195 200

<210> 1032

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1032

Ile Glu Gly Lys Lys Val Ile Thr Leu Asp Met Gly Leu Leu Val Ala
 1 5 10 15

Gly Thr Lys Tyr Arg Gly Glu Phe Glu Glu Arg Leu Lys Lys Leu Met
 20 25 30

Glu Glu Ile Lys Gln Ser Asp Glu Ile Ile Leu Phe Ile Asp Glu Val
 35 40 45

His Thr Leu Ile Gly Ala Gly Ala Ala Glu Gly Ala Ile Asp Ala Ala
 50 55 60

Asn Ile Leu Lys Pro Ala Leu Ala Arg Gly Glu Leu
 65 70 75

<210> 1033

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1033

Leu Leu Gly Leu Ile Gly Glu Gly Thr Gly Ile Ala Ala Lys Val Leu
 1 5 10 15

Lys Ser Met Gly Ile Asn Leu Lys Asp Ala Arg Val Glu Val Glu Lys
 20 25 30

Ile Ile Gly Arg Gly Ser Gly Phe Ile Ala Val Glu Ile Pro Phe Thr
 35 40 45

Pro Arg Ala Lys Arg Val Leu Glu Leu Ser Leu Glu Glu Ala Arg Gln
 50 55 60

Leu Gly His Asn Tyr Ile Gly Ser Glu His Leu Leu
 65 70 75

<210> 1034

<211> 76

<212> PRT

<213> Zea mays

<400> 1034

Met Arg Val Leu Leu Val Ala Leu Ala Leu Leu Ala Leu Ala Ala Ser
 1 5 10 15

Ala Thr Ser Thr His Thr Ser Gly Gly Cys Gly Cys Gln Pro Pro Pro
20 25 30

Pro Val His Leu Pro Pro Pro Val His Leu Pro Pro Pro Val His Leu
35 40 45

Pro Pro Pro Val His Leu Pro Pro Pro Val His Leu Pro Pro Pro Val
50 55 60

His Leu Pro Pro Pro Val His Val Pro Pro Pro Val
65 70 75

<210> 1035
<211> 76
<212> PRT
<213> Zea mays

<400> 1035
Met Ser Ser Ser Pro Ser Phe Gly Leu Leu Ala Val Ala Ala Leu Leu
1 5 10 15

Leu Ala Leu Ser Leu Ala Gln His Gly Ser Leu Ala Ala Thr Val Gly
20 25 30

Pro Arg Val Ile Val Val Gly Ala Gly Met Ser Gly Ile Ser Ala Ala
35 40 45

Lys Arg Leu Ser Glu Ala Gly Ile Thr Asp Leu Leu Ile Leu Glu Ala
50 55 60

Thr Asp His Ile Gly Gly Arg Met His Lys Thr Asn
65 70 75

<210> 1036
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1036
Thr Val Leu Gly Lys Leu Lys Glu Leu Ala Lys Arg Leu Lys Leu Lys
1 5 10 15

Val Lys Lys Lys Asp Asn Gly Val Leu Arg Leu Ala Ala Pro Lys Glu
20 25 30

Gly Lys Lys Gly Phe Leu Glu Leu Asp Ala Glu Ile Phe Glu Val Thr
35 40 45

Pro Ser Phe Leu Leu Val Glu Leu Lys Lys Thr Asn Gly Asp Thr Met
50 55 60

Glu Tyr Arg Lys Leu Val Lys Glu Asp Ile Arg Pro
65 70 75

<210> 1037

<211> 76
<212> PRT
<213> Zea mays

<400> 1037

Gly Val Leu Lys Asp Glu Leu Ser Val Val Glu Asn His Ile Asn Asn
1 5 10 15

Leu His Val Asp Thr Ala Ser Asp Leu Asp Leu Ser Val Asp Lys Gln
20 25 30

Leu Lys Leu Glu Lys Gly Ser Leu Gly His Val Phe Arg Met Ser Lys
35 40 45

Lys Glu Glu Gln Lys Val Arg Lys Lys Leu Thr Gly Ser Tyr Leu Ile
50 55 60

Ile Glu Thr Arg Lys Asp Gly Val Lys Phe Thr Asn
65 70 75

<210> 1038
<211> 76
<212> PRT
<213> Zea mays

<400> 1038

Leu Asn Glu Gln Leu Lys Ala Ile Lys Lys Glu Leu Gly Leu Glu Thr
1 5 10 15

Asp Asp Lys Thr Ala Leu Ser Ala Lys Phe Arg Glu Arg Ile Glu Ser
20 25 30

Lys Lys Asp Lys Cys Pro Pro His Val Leu Gln Val Ile Glu Glu Glu
35 40 45

Leu Thr Lys Leu Gln Leu Leu Glu Ala Ser Ser Ser Glu Phe Ser Val
50 55 60

Thr Arg Asn Tyr Leu Asp Trp Leu Thr Val Leu Pro
65 70 75

<210> 1039
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1039

Ala Ala Ala Ile Phe Ala Lys Leu Asn Glu Leu Ala Arg Arg Phe Lys
1 5 10 15

Leu Lys Ile Lys Lys Lys Glu Asn Gly Val Leu Arg Leu Val Ala Pro
20 25 30

Lys Glu Gly Ile Lys Gly Leu Leu Glu Leu Asp Ala Glu Val Phe Glu
35 40 45

Leu Ala Pro Ser Phe His Leu Val Glu Phe Lys Lys Ser Asn Gly Asp
50 55 60

Thr Ile Glu Tyr Gln Lys Leu Met Lys Glu Asp Ile
65 70 75

<210> 1040
<211> 101
<212> PRT
<213> Solanum lycopersicum

<400> 1040
Pro Glu Leu Cys Tyr Ser Ala Ile Val Asn Val Ser Asp Phe Ser Lys
1 5 10 15

Lys Val Thr Ser Gln Lys Asp Val Ile Glu Leu Ser Leu Asn Ile Thr
20 25 30

Val Lys Ala Val Arg Arg Asn Tyr Tyr Ala Val Lys Glu Leu Ile Lys
35 40 45

Thr Arg Lys Gly Leu Thr Pro Arg Glu Lys Val Ala Leu His Asp Cys
50 55 60

Leu Glu Thr Met Asp Glu Thr Leu Asp Glu Leu His Thr Ala Val Glu
65 70 75 80

Asp Leu Glu Leu Tyr Pro Asn Lys Lys Ser Leu Lys Glu His Val Glu
85 90 95

Asp Leu Lys Thr Leu
100

<210> 1041
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1041
Asp Arg Asn Lys Ile Leu Ser Leu Arg Phe Asp Asp Gln Ile Arg Arg
1 5 10 15

Glu Ile Gly Thr Leu Lys Leu Leu Lys His Pro Asn Val Val Arg Leu
20 25 30

His Glu Val Ala Ala Ser Lys Thr Lys Ile Tyr Met Val Leu Glu Tyr
35 40 45

Val Asn Gly Gly Glu Leu Phe Asp Lys Ile Ala Val Lys Gly Lys Leu
50 55 60

Ser Glu His Glu Gly Arg Arg Leu Phe Gln Gln Leu
65 70 75

<210> 1042
<211> 76
<212> PRT
<213> Zea mays

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<400> 1042

Lys Arg Arg Lys Arg Leu Thr Glu Ile Glu Val Gln Cys Tyr Thr Leu
1 5 10 15

Gln Leu Ile Cys Gly Leu Lys Tyr Leu His Ser Arg Arg Val Ile His
20 25 30

Arg Asp Leu Lys Leu Gly Asn Leu Leu Leu Asn Asp Lys Met Glu Leu
35 40 45

Lys Ile Cys Asp Phe Gly Leu Ala Ala Lys Leu Glu Phe Asp Gly Glu
50 55 60

Lys Arg Lys Thr Val Cys Gly Thr Pro Asn Tyr Ile
65 70 75

<210> 1043

<211> 76

<212> PRT

<213> Zea mays

<400> 1043

Gly Val Leu Leu Arg Asp Gln His Gly Ile Pro Leu Val Lys Ser Val
1 5 10 15

Thr Gly Ser Lys Ile Leu Arg Ile Leu Lys Ala His Gly Leu Ala Pro
20 25 30

Glu Ile Pro Glu Asp Leu Tyr Phe Leu Ile Lys Lys Ala Val Ala Ile
35 40 45

Arg Lys His Leu Glu Arg Asn Arg Lys Asp Lys Asp Ser Lys Phe Arg
50 55 60

Leu Ile Leu Val Glu Ser Arg Ile His Arg Leu Ala
65 70 75

<210> 1044

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1044

Lys Arg Leu Asn Leu Leu Glu Gln Lys Phe Asn Leu His Leu Met Val
1 5 10 15

Asn Ala Asp Arg Glu Leu Leu Ala Gln Lys Ala Ala Pro His Arg Asp
20 25 30

Phe Tyr Asn Val Arg Lys Val Asp Thr His Val His His Ser Ala Cys
35 40 45

Met Asn Gln Lys His Leu Leu Arg Phe Ile Lys Ser Lys Leu Arg Lys
50 55 60

Glu Pro Asp Glu Val Val Ile Phe Arg Asp Gly Thr Tyr Leu Thr Leu
65 70 75 80

Lys Glu Val Phe Glu Ser Leu Asp Leu Thr Gly Tyr Asp Leu Asn Val
85 90 95

Asp Leu Leu Asp Val
100

<210> 1045
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1045
Gln Glu Asp Arg Val Glu Phe Phe Val Ser Leu Pro Val Ala Leu Ala
1 5 10 15

Arg Cys Ser Val Val Lys Glu Asp Thr Gly His Met Leu Asp Lys Gln
20 25 30

Lys Leu Lys Thr Phe Lys Val Asn Val Arg Leu Val Ser Lys Leu Cys
35 40 45

Gly Glu Asp Leu Asn Lys Tyr Leu Asn Glu Asp Lys Asp Gly Ile Pro
50 55 60

Leu Pro Gln Asp Tyr Leu His Ala Leu Asp Val Val
65 70 75

<210> 1046
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1046
Asp Cys Arg Leu Ile Gly Leu His Leu Tyr Asp Gly Leu Phe Lys Val
1 5 10 15

Ile Pro Phe Asp Asn Lys Gly Gln Leu Lys Glu Ala Phe Asn Ile Arg
20 25 30

Leu Glu Glu Leu Gln Val Leu Asp Ile Lys Phe Leu Tyr Gly Cys Pro
35 40 45

Lys Pro Thr Ile Val Val Leu Tyr Gln Asp Asn Lys Asp Ala Arg His
50 55 60

Val Lys Thr Tyr Glu Val Ser Leu Lys Asp Lys Asp
65 70 75

<210> 1047
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1047
Gln Leu His Gln Thr Ala Asp Cys Cys Glu Lys Ala Phe Leu Asp Thr
1 5 10 15

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Glu Lys Lys Lys Leu Ile Leu Glu Ser Thr Lys Gly Tyr Ile Cys Asp
20 25 30

Ala Ile Val Ala Val Ile Asp His Leu Gly Thr Val Ser Ser Lys Leu
35 40 45

Glu Gln Gln Leu Gln Glu Lys Ile Glu Ile Thr Gln Thr Glu Lys Lys
50 55 60

Leu Asn Phe Leu Lys Gln Arg Leu Leu Thr Cys Glu
65 70 75

<210> 1048

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1048

Gly Met Met Lys Glu Arg Met Ala Glu Pro Glu Arg Pro Cys Glu Asp
1 5 10 15

Phe Phe Asp His Val Ile Gln Glu Leu Arg Arg Glu Lys Pro Leu Leu
20 25 30

Thr Glu Thr Ile Ala Leu Asp Leu Met Phe Val Leu Leu Phe Ala Ser
35 40 45

Phe Glu Thr Thr Ala Leu Ala Leu Thr Ile Gly Val Lys Leu Leu Thr
50 55 60

Glu Asn Pro Lys Val Val Asp Ala Leu Arg Glu Glu
65 70 75

<210> 1049

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1049

Ser Tyr Gly Val Val Leu Leu Glu Leu Leu Thr Gly Lys Gln Pro Thr
1 5 10 15

Asp Ser Ala Asp Phe Gly Asp Asn Asn Leu Val Gly Trp Val Lys Leu
20 25 30

His Ala Lys Gly Lys Ile Thr Asp Val Phe Asp Arg Glu Leu Leu Lys
35 40 45

Glu Asp Ala Ser Ile Glu Ile Glu Leu Leu Gln His Leu Lys Val Ala
50 55 60

Cys Ala Cys Leu Asp Asp Arg His Trp Lys Arg Pro
65 70 75

<210> 1050

<211> 101

<212> PRT

<213> Zea mays

<400> 1050

Gln Lys Leu Asp Glu Leu Gly Lys Met Ile Thr Ser Leu Asp Pro Gly
 1 5 10 15

Asp Ser Ile Val Ile Ala Lys Ser Leu Ser His Met Leu Asn Leu Ala
 20 25 30

Asn Leu Ala Glu Glu Val Gln Ile Ala Tyr Arg Arg Arg Ile Lys Leu
 35 40 45

Lys Lys Gly Asp Phe Ala Asp Glu Asn Ser Ala Ile Thr Glu Ser Asp
 50 55 60

Ile Glu Glu Thr Leu Lys Arg Leu Val Val Asp Leu Lys Lys Ser Pro
 65 70 75 80

Ala Glu Val Phe Asp Ala Leu Lys Ser Gln Thr Val Asp Leu Val Leu
 85 90 95

Thr Ala His Pro Thr
 100

<210> 1051

<211> 151

<212> PRT

<213> Zea mays

<400> 1051

Lys Ile Gly Thr Glu Pro Thr Ile Arg Lys Tyr Ser Lys Gly Arg Met
 1 5 10 15

Leu Gly Lys Gly Gly Phe Ala Lys Cys Tyr Glu Val Thr Asn Leu Glu
 20 25 30

Asn Lys Lys Val Leu Ala Gly Lys Ile Ile Cys Lys Ala Ser Leu Thr
 35 40 45

Lys Ser Arg Ala Lys Gln Lys Leu Ile Ser Glu Ile Lys Ile His Lys
 50 55 60

Ser Leu Arg His Ser Asn Ile Val Glu Phe Glu His Val Phe Glu Asp
 65 70 75 80

Gln Glu Asn Val Tyr Ile Leu Leu Glu Leu Cys Pro Asn Gln Ser Leu
 85 90 95

His Asp Leu Ile Lys Arg Arg Lys Arg Leu Thr Glu Ile Glu Val Gln
 100 105 110

Cys Tyr Thr Leu Gln Leu Ile Cys Gly Leu Lys Tyr Leu His Ser Arg
 115 120 125

Arg Val Ile His Arg Asp Leu Lys Leu Gly Asn Leu Leu Leu Asn Asp
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130 135 140

Lys Met Glu Leu Lys Ile Cys
145 150

<210> 1052
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1052
Glu Ile Leu Leu Phe Leu Ser Arg Ile Glu Ser His Gly Lys Gly Ile
1 5 10 15

Leu Lys Pro His Glu Leu Leu Ala Glu Phe Asp Ala Ile Arg Gln Asp
20 25 30

Asp Lys Asp Lys Leu Asn Glu His Ala Phe Glu Glu Leu Leu Lys Ser
35 40 45

Thr Gln Glu Ala Ile Val Leu Pro Pro Trp Val Ala Leu Ala Ile Arg
50 55 60

Leu Arg Pro Gly Val Trp Glu Tyr Val Arg Val Asn
65 70 75

<210> 1053
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1053
Ala Val Met Leu Val His Ile Ile Pro Asp Leu Leu Ser Val Lys Thr
1 5 10 15

Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu Leu Asp Arg Glu Met
20 25 30

Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg Tyr Val Arg Met Leu
35 40 45

Thr His Glu Ile Arg Ser Thr Leu Asp Arg His Thr Ile Leu Lys Thr
50 55 60

Thr Leu Val Glu Leu Gly Arg Ala Leu Gln Leu Glu
65 70 75

<210> 1054
<211> 151
<212> PRT
<213> Oryza sativa

<400> 1054
Asp Leu Tyr Glu Lys Leu Glu Lys Val Gly Glu Gly Thr Tyr Gly Lys
1 5 10 15

Val Tyr Lys Ala Arg Glu Lys Ala Thr Gly Arg Ile Val Ala Leu Lys
20 25 30

Lys Thr Arg Leu Pro Glu Asp Asp Glu Gly Val Pro Pro Thr Ala Leu
 35 40 45
 Arg Glu Val Ser Leu Leu Arg Met Leu Ser Gln Asp Ser His Val Val
 50 55 60
 Arg Leu Leu Asp Leu Lys Gln Gly Gln Asn Lys Glu Gly Gln Thr Ile
 65 70 75 80
 Leu Tyr Leu Val Phe Glu Tyr Met Asp Thr Asp Leu Lys Lys Phe Ile
 85 90 95
 Arg Ala His Arg Gln Asn Leu Gln Lys Ile Pro Val Pro Thr Val Lys
 100 105 110
 Ile Leu Met Tyr Gln Leu Cys Lys Gly Val Ala Phe Cys His Gly Arg
 115 120 125
 Gly Val Leu His Arg Asp Leu Lys Pro His Asn Leu Leu Met Asp Arg
 130 135 140
 Lys Thr Met Ala Leu Lys Ile
 145 150
 <210> 1055
 <211> 126
 <212> PRT
 <213> Oryza sativa
 <400> 1055
 Glu Arg Ala Ala Leu Lys Lys Ile Lys Leu Asp Asp Gly Lys Glu Gly
 1 5 10 15
 Phe Pro Arg Gln Ile Leu Arg Glu Ile Lys Leu Leu Lys Lys Leu Asp
 20 25 30
 His Glu Asn Ile Ile Arg Leu Lys Glu Ile Val Val Ser Pro Gly Thr
 35 40 45
 Ala His Gly Ala Gly Gly Ser Asp Asp Tyr Met Tyr Arg Gly Asp Ile
 50 55 60
 Tyr Met Val Phe Glu Tyr Met Asp His Asp Leu Lys Lys Val Leu His
 65 70 75 80
 His Ser Thr Pro Ser Gln Val Lys Tyr Tyr Met Glu Gln Leu Leu Lys
 85 90 95
 Gly Leu His Tyr Cys His Val Asn Asn Val Leu His Arg Asp Ile Lys
 100 105 110
 Gly Ala Asn Leu Leu Ile Ser Gly Gly Gly Lys Leu Leu Lys
 115 120 125

<210> 1056

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1056

Arg Leu Gly Lys Tyr Lys Glu Gly Val Asn Phe Thr Ala Leu Arg Glu
1 5 10 15

Ile Lys Leu Leu Lys Glu Leu Lys Asp Ser Asn Ile Ile Glu Leu Ile
20 25 30

Asp Ala Phe Pro Tyr Lys Gly Asn Leu His Leu Val Phe Glu Phe Met
35 40 45

Glu Thr Asp Leu Glu Ala Val Ile Arg Asp Arg Asn Ile Val Leu Ser
50 55 60

Pro Ala Asp Thr Lys Ser Tyr Ile Gln Met Met Leu
65 70 75

<210> 1057

<211> 76

<212> PRT

<213> Zea mays

<400> 1057

Ser Ala Gly Gln Leu Lys Gly Lys Phe Phe Asn Lys Asp Arg Gln Ser
1 5 10 15

Ala Arg Asp Tyr Leu Leu Asp Lys Leu Lys Asp Asp Lys Asp Lys Asp
20 25 30

Ile Val Arg Gly Met Gly Thr Tyr Thr Leu Glu Cys Val Ala Ile His
35 40 45

Val Leu Ser Lys Leu Phe Asn Val Phe Ser Leu Glu Lys Thr Ser Val
50 55 60

Leu Ala Ala Ala Leu Ile Ser Glu Leu Asp Ile Thr
65 70 75

<210> 1058

<211> 101

<212> PRT

<213> Zea mays

<400> 1058

Met Ala Ile Lys Arg Thr Lys Ala Glu Lys Lys Ile Ala Tyr Asp Lys
1 5 10 15

Lys Leu Cys Ser Leu Leu Asp Glu Tyr Thr Lys Val Leu Ile Ala Leu
20 25 30

Ala Asp Asn Val Gly Ser Lys Gln Leu Gln Asp Ile Arg Arg Gly Leu
35 40 45

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Arg Gly Asp Ser Val Val Leu Met Gly Lys Asn Thr Leu Ile Arg Arg
50 55 60

Cys Ile Lys Val Tyr Ala Glu Lys Thr Gly Asn His Thr Phe Asp Pro
65 70 75 80

Leu Met Asp Leu Leu Val Gly Asn Val Gly Leu Ile Phe Thr Lys Gly
85 90 95

Asp Leu Lys Glu Val
100

<210> 1059

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1059

Ile Ile Asp Asp Gly Leu Ile His Lys Glu Glu Leu Gln Leu Ala Leu
1 5 10 15

Phe Lys Thr Pro Ser Gly Gln Asn Leu Phe Leu Asp Arg Val Phe Asp
20 25 30

Leu Phe Asp Glu Lys Lys Asn Gly Val Ile Glu Phe Asp Glu Phe Ile
35 40 45

His Ala Leu Ser Val Phe His Pro Leu Ala Pro Leu Glu Asp Lys Ile
50 55 60

Asn Phe Ala Phe Arg Leu Tyr Asp Leu Arg Gln Thr
65 70 75

<210> 1060

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1060

Met Val Gln Cys Leu Asp Gly Val Arg Gln Leu Leu Ala Val Val Phe
1 5 10 15

Lys Cys Cys Asp Leu Glu Leu Lys Gln Pro Arg Gly Leu Glu Asp Pro
20 25 30

Gln Val Leu Ala Arg Glu Thr Val Phe Ser Val Ser Glu Val Glu Ala
35 40 45

Leu Tyr Glu Leu Phe Lys Lys Ile Ser Ser Ala Val Ile Asp Asp Gly
50 55 60

Leu Ile Asn Lys Glu Glu Phe Gln Leu Ala Leu Phe Lys Thr Ser Lys
65 70 75 80

Lys Glu Ser Leu Phe Ala Asp Arg Val Phe Asp Leu Phe Asp Thr Lys
85 90 95

His Asn Gly Ile Leu
100

<210> 1061
<211> 76
<212> PRT
<213> Zea mays

<400> 1061
Ala Asp Thr Ala Met Thr Gly Glu Met Thr Leu Arg Gly Leu Val Leu
1 5 10 15

Pro Val Gly Gly Val Lys Asp Lys Val Leu Ala Ala His Arg Tyr Gly
20 25 30

Ile Lys Arg Val Ile Leu Pro Glu Arg Asn Leu Lys Asp Leu Ser Glu
35 40 45

Val Pro Leu Pro Ile Leu Ser Asp Met Glu Ile Leu Leu Val Lys Arg
50 55 60

Ile GluGlu Val Leu Asp His Ala Phe Glu Gly Arg
65 70 75

<210> 1062
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1062
Arg Asp Val Asp Leu Glu Asn Ile Glu Asp Gly Ser Leu Thr Leu Glu
1 5 10 15

Lys Glu Asp Phe Phe Leu Gly Ser Val Ile Asp Ala Val Val Ser Gln
20 25 30

Val Met Leu Leu Leu Arg Glu Lys Gly Val Gln Leu Ile Arg Asp Ile
35 40 45

Pro Glu Glu Ile Lys Thr Leu Thr Val His Gly Asp Gln Val Arg Ile
50 55 60

Gln Gln Val Leu Ala Asp Phe Leu Leu Asn Met Val
65 70 75

<210> 1063
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1063
Gly Leu Thr Val Glu Glu Thr Lys Glu Met Arg Lys Lys Gly Leu Tyr
1 5 10 15

Val Pro Val Leu Thr Lys Leu Ala Lys Asn Gly Tyr Tyr Ala Ser Leu
20 25 30

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Val Pro Met Val Arg Asp Ala Phe Leu Thr Asp Glu Leu Val Arg Ile
35 40 45

Asp Ser Lys Gly Leu Pro Lys Ser Asp Tyr Arg Lys Ile Gly Val Lys
50 55 60

Leu Arg Asp Leu Val Pro Cys Ile Ile Val Ser Phe
65 70 75

<210> 1064
<211> 101
<212> PRT
<213> Zea mays

<400> 1064
Lys Val Gly Lys Glu Gly Val Ile Thr Ile Ala Asp Gly Asn Thr Leu
1 5 10 15

Tyr Asn Glu Leu Glu Val Val Glu Gly Met Lys Leu Asp Arg Gly Tyr
20 25 30

Ile Ser Pro Tyr Phe Ile Thr Asn Ser Lys Thr Gln Lys Cys Glu Leu
35 40 45

Glu Asp Pro Leu Ile Leu Ile His Asp Lys Lys Val Thr Asn Met His
50 55 60

Ala Val Val Lys Val Leu Glu Met Ala Leu Lys Lys Gln Lys Pro Leu
65 70 75 80

Leu Ile Val Ala Glu Asp Val Glu Ser Glu Ala Leu Gly Thr Leu Ile
85 90 95

Ile Asn Lys Leu Arg
100

<210> 1065
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1065
Met Leu Gln Cys Leu Glu Gly Val Lys Gln Leu Cys Gly Val Leu Leu
1 5 10 15

Lys Cys Cys Asp Leu Asp Leu Lys Gln Pro Lys Gly Leu Glu Asp Pro
20 25 30

Glu Ile Leu Ala Arg Glu Thr Val Phe Ser Val Ser Glu Val Glu Ala
35 40 45

Leu Tyr Glu Leu Phe Lys Lys Ile Ser Ser Ala Val Ile Asp Asp Gly
50 55 60

Leu Ile Asn Lys Glu Glu Phe Gln Leu Ala Leu Phe
65 70 75

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<210> 1066
 <211> 101
 <212> PRT
 <213> Zea mays

<400> 1066
 Lys Val Gly Lys Glu Gly Val Ile Thr Ile Ala Asp Gly Asn Thr Leu
 1 5 10 15
 Tyr Asn Glu Leu Glu Val Val Glu Gly Met Lys Leu Asp Arg Gly Tyr
 20 25 30
 Ile Ser Pro Tyr Phe Ile Thr Asn Ser Lys Ala Gln Lys Cys Glu Leu
 35 40 45
 Glu Asp Pro Leu Ile Leu Ile His Asp Lys Lys Val Thr Asn Met His
 50 55 60
 Ala Val Val Lys Val Leu Glu Met Ala Leu Lys Lys Gln Arg Pro Leu
 65 70 75 80
 Leu Ile Val Ala Glu Asp Val Glu Ser Glu Ala Leu Gly Thr Leu Ile
 85 90 95
 Ile Asn Lys Leu Arg
 100

<210> 1067
 <211> 76
 <212> PRT
 <213> Solanum lycopersicum

<400> 1067
 Lys Val Leu Asn Glu Cys Leu Asn Glu Ile Thr Arg Ala Leu Leu Gln
 1 5 10 15
 Ala Asp Val Gln Phe Lys Leu Val Arg Asp Met Ser Thr Asn Ile Lys
 20 25 30
 Lys Ile Val Asn Leu Glu Asp Leu Ala Ala Gly His Asn Lys Arg Arg
 35 40 45
 Ile Ile Gln Gln Ala Val Tyr Asn Glu Leu Cys Lys Ile Leu Asp Pro
 50 55 60
 Gly Lys Pro Ala Phe Thr Leu Lys Lys Gly Lys Pro
 65 70 75

<210> 1068
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1068
 Met Lys Lys Lys Lys Ala Leu Pro Ser Phe Leu Tyr Leu Val Phe Ile
 1 5 10 15

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Val Leu Leu Pro Trp Gly Val Ser Phe Ser Phe Asn Lys Cys Leu Glu
20 25 30

Leu Trp Ile Lys Asn Trp Trp Asn Thr Arg Gln Ser Glu Thr Phe Leu
35 40 45

Thr Asp Ile Gln Glu Lys Arg Ile Leu Glu Gly Phe Ile Glu Leu Glu
50 55 60

Glu Leu Phe Leu Leu Asp Glu Met Ile Lys Glu Lys
65 70 75

<210> 1069

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1069

Thr Glu Asp Gly Leu Ala Ile Glu Gly Pro Glu Phe Arg Glu Lys Ser
1 5 10 15

Leu Asp Glu Leu Leu Lys Leu Ile Pro Lys Ile Gln Val Met Ala Arg
20 25 30

Ser Ser Pro Leu Asp Lys His Thr Leu Val Lys His Leu Arg Thr Thr
35 40 45

Phe Asn Glu Val Val Ala Val Thr Gly Asp Gly Thr Asn Asp Ala Pro
50 55 60

Ala Leu His Glu Ala Asp Ile Gly Leu Ala Met Gly
65 70 75

<210> 1070

<211> 76

<212> PRT

<213> Zea mays

<400> 1070

Gln His Leu Ile Tyr Ile Thr Gly Trp Ser Val Tyr Thr Glu Ile Thr
1 5 10 15

Leu Val Arg Asp Thr Asn Arg Pro Lys Pro Gly Gly Asp Val Thr Leu
20 25 30

Gly Glu Leu Leu Lys Arg Lys Ala Ser Glu Gly Val Arg Val Leu Met
35 40 45

Leu Val Trp Asp Asp Arg Thr Ser Val Gly Leu Leu Lys Lys Asp Gly
50 55 60

Leu Met Ala Thr His Asp Glu Glu Thr Ala Asn Tyr
65 70 75

<210> 1071

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1071

Leu Ala Asp Glu Val Asp Arg Glu Ala Gly Leu Ser Arg Leu Thr Leu
 1 5 10 15

Phe Ser Pro Cys Lys Ile Asn Val Phe Leu Arg Ile Thr Ser Lys Arg
 20 25 30

Asp Asp Gly Tyr His Asp Leu Ala Ser Leu Phe His Val Ile Ser Leu
 35 40 45

Gly Asp Lys Ile Lys Phe Ser Leu Ser Pro Ser Lys Ser Lys Asp Arg
 50 55 60

Leu Ser Thr Asn Val Ala Gly Val Pro Leu Asp Glu Arg Asn Leu Ile
 65 70 75 80

Ile Lys Ala Leu Asn Leu Tyr Arg Lys Lys Thr Gly Thr Asp Asn Tyr
 85 90 95

Phe Trp Ile His Leu
 100

<210> 1072

<211> 76

<212> PRT

<213> Zea mays

<400> 1072

Tyr Glu Ser Leu Gly Gln Leu Lys Asn Lys Phe Ile Asn Ile Asp Glu
 1 5 10 15

Gln Thr Ala Lys Asp Tyr Leu Leu Asp Lys Leu Glu Lys Pro Asp Asp
 20 25 30

Leu Asp Ile Val Arg Ala Met Gly Thr Tyr Thr Leu Glu Cys Ile Val
 35 40 45

Val Phe Val Leu Ser Lys Gln Phe Asn Val Phe Ala Leu Asp Lys Ala
 50 55 60

Ser Val Gln Val Ala Thr Leu Val Ser Glu Leu Asp
 65 70 75

<210> 1073

<211> 101

<212> PRT

<213> Zea mays

<400> 1073

Gly Pro Tyr His Val Ala Arg Val Ser Arg Leu Asp Met Thr Lys Thr
 1 5 10 15

Glu Leu Glu Gln Ala Glu Gln Asp Pro Asp Leu Ile Ala Leu Ser Arg
 20 25 30

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Gln Phe Lys Ala Thr Ala Met Glu Leu Ile Ser Val Leu Glu Gln Lys
35 40 45

Gln Lys Thr Val Gly Arg Thr Lys Val Leu Leu Asp Thr Val Pro Val
50 55 60

Tyr Arg Leu Ala Asp Ile Phe Val Ala Ser Phe Glu Ile Ser Phe Glu
65 70 75 80

Glu Gln Leu Ser Met Leu Asp Ser Val His Leu Lys Val Arg Leu Ser
85 90 95

Lys Ala Thr Glu Leu
100

<210> 1074

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1074

Leu Lys Asp Val Ile Leu Val Ser Tyr Glu Ile Ile His Lys Lys Asp
1 5 10 15

Pro Ala Ala Gly Gln Arg Ile Lys Gln Lys Glu Val Tyr Asp Gln Gln
20 25 30

Lys Glu Leu Ile Leu Leu Ala Glu Arg Val Val Leu Ala Thr Leu Gly
35 40 45

Phe Asp Leu Asn Val His His Pro Tyr Lys Pro Leu Val Glu Ala Ile
50 55 60

Arg Lys Phe Lys Val Ala Gln Asn Ala Leu Ala Gln
65 70 75

<210> 1075

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1075

Leu Asp Arg Leu Asn Glu Leu Arg Thr Ser His Arg Asp Val Met Val
1 5 10 15

Asp Val Val Met Asp Val Leu Arg Ala Leu Ala Ser Pro Asn Leu Asp
20 25 30

Val Lys Arg Lys Val Leu Asp Leu Val Leu Asp Leu Leu Thr Ala Arg
35 40 45

Asn Val Glu Glu Val Val Leu Tyr Leu Lys Lys Glu Val Val Lys Thr
50 55 60

Gln Ala Gly Glu Leu Glu Lys Ser Gly Glu Tyr Arg Gln Met Leu Val
65 70 75 80

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Gln Ala Ile His Ala Cys Ala Val Glu Tyr Pro Glu Val Ala Gly Ser
85 90 95

Val Val His Leu Leu Met Asp Phe Leu Gly Asp Thr Asn Val Ala Ala
100 105 110

Ala Val Asp Val Val Leu Phe Val Arg Glu Ile Ile Glu Thr
115 120 125

<210> 1076

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1076

Pro Leu Lys Asp Val Ile Leu Ile Ser Tyr Glu Ile Ile His Lys Lys
1 5 10 15

Asp Ala Ala Ala Val Gln Arg Ile Lys Gln Lys Glu Val Tyr Glu Gln
20 25 30

Gln Lys Glu Leu Ile Leu Leu Gly Glu Arg Val Val Leu Val Thr Leu
35 40 45

Gly Phe Asp Leu Asn Val His His Pro Tyr Lys Pro Leu Val Glu Ala
50 55 60

Ile Lys Lys Phe Lys Val Ala Gln Asn Ala Leu Ala
65 70 75

<210> 1077

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1077

Lys Asp Thr Ile Leu Asn His Arg Met Leu His Gln Ile Lys Arg Glu
1 5 10 15

Ile Ser Ile Met Lys Ile Val Arg His Pro Asn Ile Val Arg Leu Asn
20 25 30

Glu Val Leu Ala Gly Lys Thr Lys Ile Tyr Ile Ile Leu Glu Leu Ile
35 40 45

Thr Gly Gly Glu Leu Phe Asp Lys Ile Ala Arg Gln Gly Lys Leu Arg
50 55 60

Glu Asn Glu Ala Arg Lys Tyr Phe Gln Gln Leu Ile Asp Ala Ile Asn
65 70 75 80

Tyr Cys His Ser Lys Gly Val Tyr His Arg Asp Leu Lys Pro Glu Asn
85 90 95

Leu Leu Leu Asp Ser Arg Gly Asn Leu Lys Val Ser Asp Phe Gly Leu
100 105 110

Ser Thr Leu Ala Gln Lys Gly Val Gly Leu Leu His Thr Thr
115 120 125

<210> 1078
<211> 176
<212> PRT
<213> Zea mays

<400> 1078
Phe Leu Val Leu Arg Ile Gln Thr Phe Ser Arg Phe Lys Asp Leu Val
1 5 10 15

Thr Ser Thr Asn Glu Leu Val Ser Val Leu Ala Val Leu Ile Ile His
20 25 30

Val Pro Val Arg Leu Arg Asn Phe Asp Ile Lys Asp Ser Ser Tyr Phe
35 40 45

Gly Lys Lys Ser Asp Arg Gly Val Ser Leu Ile Ala Ser Leu Cys Glu
50 55 60

Lys His His Thr Ser Glu Asp Glu Leu Ser Lys Ala Leu Glu Lys Thr
65 70 75 80

Asn Thr Leu Ile Met Asp Ile Leu Lys Lys Lys Pro Cys Pro Ala Thr
85 90 95

Ser Ala Cys Gln Gln Asp Asn Leu Ser Phe Ile Asp Pro Glu Gly Leu
100 105 110

Thr Val Phe Lys Asp Leu Leu Gln Gly Asp Ser Leu Lys Pro Ser Leu
115 120 125

Ile Ile Leu Glu Lys Glu Tyr Glu Asn Ala Ile Asn Thr Lys Gly Glu
130 135 140

Leu Asp Glu Arg Met Phe Ala Asn Asp Glu Asp Ser Leu Leu Gly Ser
145 150 155 160

Gly Ser Leu Ser Gly Gly Ala Ile Asn Leu Pro Gly Thr Lys Arg Lys
165 170 175

<210> 1079
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1079
Leu Asp Ile Ile Ser Ser Leu Ile Met Ser Leu Leu Lys Gly Cys Ala
1 5 10 15

Glu Glu Ser Arg Thr Val Val Gly Gln Arg Leu Lys Leu Val Cys Ala
20 25 30

Asp Cys Leu Gly Ala Leu Gly Ala Val Asp Pro Ala Lys Phe Lys Val
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Met Ser Cys Glu Arg Phe Lys Ile Glu Cys Ser Asp Asp Asp Leu Ile
50 55 60

Phe Glu Leu Ile His Lys His Leu Ala Arg Ala Phe
65 70 75

<210> 1080

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1080

Met Lys Lys Lys Lys Ala Leu Pro Ser Phe Leu Tyr Leu Val Phe Ile
1 5 10 15

Val Leu Leu Pro Trp Gly Val Ser Phe Ser Phe Asn Lys Cys Leu Glu
20 25 30

Leu Trp Ile Lys Asn Trp Trp Asn Thr Arg Gln Ser Gln Thr Leu Leu
35 40 45

Thr Ala Ile Gln Glu Lys Arg Val Leu Glu Arg Phe Met Glu Leu Glu
50 55 60

Asp Leu Phe Ile Leu Asp Glu Met Ile Lys Glu Lys
65 70 75

<210> 1081

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1081

Met Glu Lys Tyr Glu Lys Leu Glu Lys Val Gly Glu Gly Thr Tyr Gly
1 5 10 15

Lys Val Tyr Lys Ala Gln Asp Arg Ala Thr Gly Gln Leu Val Ala Leu
20 25 30

Lys Lys Thr Arg Leu Glu Met Asp Glu Glu Gly Ile Pro Pro Thr Ala
35 40 45

Leu Arg Glu Ile Ser Ile Leu Arg Leu Leu Ser Gln Ser Leu Tyr Val
50 55 60

Val Arg Leu Leu Ser Val Glu Gln Ala Thr Lys Asn Gly Lys Pro Val
65 70 75 80

Leu Tyr Leu Val Phe Glu Phe Leu Asp Thr Asp Leu Lys Lys Phe Val
85 90 95

Asp Ala Tyr Arg Lys Gly Pro Asn Pro Arg Pro Leu Pro Thr Asn Val
100 105 110

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Ile Lys Ser Phe Leu Tyr Gln Leu Cys Lys Gly Val Ala His Cys His
115 120 125

Gly His Gly Val Leu His Arg Asp Leu Lys Pro Gln Asn Leu Leu Val
130 135 140

Asp Lys Glu Lys Gly Ile Leu Lys Ile Ala Asp Leu Gly Leu Gly Arg
145 150 155 160

Ala Phe Thr Val Pro Met Lys Ser Tyr Thr His Glu Ile Val Thr Leu
165 170 175

<210> 1082

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1082

Met Glu Ala Asp Ile Ala Lys Met Glu Phe Asp Leu Lys Gly Thr Ala
1 5 10 15

Ile Ile Cys Arg Ser Gly Ser Pro Leu Ile Leu Ala Asp Leu Lys Lys
20 25 30

Val Ser Val Ser Lys Ala Arg Ala Ile Val Val Leu Ala Glu Glu Gly
35 40 45

Asn Ala Asp Gln Ser Asp Ala Arg Ala Leu Arg Thr Val Leu Ser Leu
50 55 60

Thr Gly Val Lys Glu Gly Leu Arg Gly His Ile Val Val Glu Leu Ser
65 70 75 80

Asp Leu Asp Asn Glu Val Leu Val Lys Leu Val Gly Gly Asp Leu Val
85 90 95

Glu Thr Val Val Ala
100

<210> 1083

<211> 76

<212> PRT

<213> Zea mays

<400> 1083

Phe Leu Val Leu Arg Ile Gln Thr Phe Ser Arg Phe Lys Asp Leu Val
1 5 10 15

Thr Ser Thr Asn Glu Leu Val Ser Val Leu Ala Val Leu Ile Ile His
20 25 30

Val Pro Val Arg Leu Arg Asn Phe Asp Ile Lys Asp Ser Ser Tyr Phe
35 40 45

Gly Lys Lys Ser Asp Arg Gly Val Ser Leu Ile Ala Ser Leu Cys Glu
50 55 60

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Lys His His Thr Ser Glu Asp Glu Leu Ser Lys Ala
65 70 75

<210> 1084
<211> 76
<212> PRT
<213> Zea mays

<400> 1084
Asn Thr Phe Leu Leu Pro Arg Asp Val Leu Ala Ala Thr Asp His Leu
1 5 10 15

Ile Gly Met Lys Phe Gly Thr Gly Ile Leu Asp Asp Asp Asp Met Asn
20 25 30

His Leu Lys Asn Lys Arg Ile Arg Ser Val Ala Asp Leu Leu Gln Asp
35 40 45

Gln Phe Gly Leu Ala Leu Gly Arg Leu Gln His Ala Val Gln Lys Thr
50 55 60

Ile Arg Arg Val Phe Ile Arg Gln Ser Lys Pro Thr
65 70 75

<210> 1085
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1085
Leu Ala Leu Val Ala Arg Lys Leu Leu Leu Asn Ser Val Ile Val Leu
1 5 10 15

Glu Gln Glu Glu Glu Leu Asp Leu Val Ile Asp Ile Ser Arg Lys Met
20 25 30

Ser Val Arg Pro Val Ile Gly Leu Arg Ala Lys Leu Arg Thr Lys His
35 40 45

Ser Gly His Phe Gly Ser Thr Ser Gly Glu Lys Gly Lys Phe Gly Leu
50 55 60

Thr Thr Thr Gln Ile Leu Arg Val Val Lys Lys Leu
65 70 75

<210> 1086
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1086
Val Met Thr Thr Pro Lys Ala Leu Thr Ala Leu Val Ser Cys Ile Thr
1 5 10 15

Ala Leu Met Leu Val His Ile Ile Pro Asp Leu Leu Ser Val Lys Thr
20 25 30

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Arg Glu Leu Phe Leu Lys Lys Lys Ala Ala Gln Leu Asp Arg Glu Met
35 40 45

Gly Ile Ile Arg Thr Gln Glu Glu Thr Gly Arg His Val Arg Met Leu
50 55 60

Thr His Glu Ile Arg Ser Thr Leu Asp Arg His Thr
65 70 75

<210> 1087
<211> 76
<212> PRT
<213> Zea mays

<400> 1087
Gly Thr Leu His Leu Ile Gly Leu Leu Ser Asp Gly Gly Val His Ser
1 5 10 15

Arg Leu Asp Gln Leu Gln Leu Leu Lys Gly Val Ser Glu Arg Gly
20 25 30

Ala Lys Lys Ile Arg Val His Ile Leu Thr Asp Gly Arg Asp Val Leu
35 40 45

Asp Gly Ser Ser Ile Gly Phe Val Glu Thr Leu Glu Asn Asp Leu Leu
50 55 60

Glu Leu Arg Ala Lys Gly Val Asp Ala Gln Ile Ala
65 70 75

<210> 1088
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1088
Asp Ser Asp Asp Asp Asp Asp Lys Asn Asp Asp Glu Tyr Met Leu Leu
1 5 10 15

Ala Glu Ala Arg Gln Pro Leu Trp Arg Lys Val Pro Ile Pro Ser Ser
20 25 30

Lys Ile Asn Pro Tyr Arg Ile Val Ile Val Leu Arg Leu Val Val Leu
35 40 45

Cys Phe Phe Leu Lys Phe Arg Ile Thr Thr Pro Ala Met Asp Ala Val
50 55 60

Pro Leu Trp Leu Ala Ser Val Ile Cys Glu Leu Trp Phe Ala Leu Ser
65 70 75 80

Trp Ile Leu Asp Gln Leu Pro Lys Trp Ser Pro Val Thr Arg Glu Thr
85 90 95

Tyr Leu Asp Arg Leu
100

<210> 1089

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1089

Gly Pro Glu Lys Val Thr Asn Glu Ile Pro His Leu Glu Ala His Leu
1 5 10 15

Leu Arg Asn Leu Asp Lys Lys Gly Ile Val Met Leu Gly Ser Trp Val
20 25 30

Glu Thr Gly Asp Ile Leu Val Gly Lys Leu Thr Pro Gln Val Val Lys
35 40 45

Glu Ser Ser Tyr Ala Pro Glu Asp Arg Leu Leu Arg Ala Ile Leu Gly
50 55 60

Ile Gln Val Ser Thr Ser Lys Glu Thr Cys Leu Lys
65 70 75

<210> 1090

<211> 76

<212> PRT

<213> Zea mays

<400> 1090

Val Ala Ser Glu Asp Met Asp Ser Leu Thr Phe Gly Ala Pro Arg Phe
1 5 10 15

Leu Arg His Leu Met Asp Pro Ser Ser Lys Lys Ile Pro Val Met Glu
20 25 30

Phe Asp Val Ala Lys Val Leu Glu Glu Leu Glu Leu Thr Met Asp Gln
35 40 45

Phe Ile Asp Leu Cys Ile Leu Cys Gly Cys Asp Tyr Cys Asp Ser Ile
50 55 60

Lys Gly Ile Gly Gly Gln Thr Ala Leu Lys Leu Ile
65 70 75

<210> 1091

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1091

Ser Leu Arg Phe Phe Ser Leu Ile Leu Glu Ile Ala Pro Val Ala Lys
1 5 10 15

Asn Met Phe Ser Phe Leu Lys Asp Ser Asp Glu Leu Pro Glu Asn Asn
20 25 30

Pro Lys Leu Arg Ala His Ala Val Lys Val Phe Lys Met Thr Cys Glu
35 40 45

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Ser Ala Ile Gln Leu Arg Glu Lys Gly Glu Val Val Val Gly Glu Thr
 50 55 60

Thr Leu Lys Tyr Leu Gly Ser Ile His Leu Gln Lys
 65 70 75

<210> 1092

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1092

Pro Gln Asn Pro Val Lys Leu Ser Ser Leu Lys His His Ser Gly Val
 1 5 10 15

Leu Tyr Cys Leu Glu Val Thr Lys Asn Tyr Asp Asp Ser Thr Ala Val
 20 25 30

Thr Val Asp Gln Asp Val Glu Ala Leu Leu Gly Glu Leu Asn Phe Ile
 35 40 45

Pro Gly Thr Val Phe Thr Thr Asp Leu Pro Tyr Val Asp Phe Leu Asp
 50 55 60

Arg Val His Lys Ala Glu Leu Lys Leu Arg Gly Lys
 65 70 75

<210> 1093

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1093

Val Leu Gly Thr Leu Ser Leu Pro Ile Asn Leu Pro Asn Thr Asn Tyr
 1 5 10 15

His Arg Gly Phe Gln Ala Arg Lys Ile Ile Val Asn Leu Leu Arg Thr
 20 25 30

Leu Ile Glu Glu Arg Arg Ala Ser Lys Glu Ile Gln His Asp Met Leu
 35 40 45

Gly Tyr Leu Met Asn Glu Glu Ala Thr Arg Phe Lys Leu Thr Asp Asp
 50 55 60

Glu Met Ile Asp Leu Ile Ile Thr Ile Leu Tyr Ser
 65 70 75

<210> 1094

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1094

Ala Asn Thr Thr Leu Ala His Tyr Cys Arg Asp Asn Gly Leu Leu Leu
 1 5 10 15

His Ile His Arg Ala Met His Ala Val Ile Asp Arg Gln Lys Asn His
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20

25

30

Gly Ile His Phe Arg Val Leu Ala Lys Ala Leu Arg Met Ser Gly Gly
35 40 45

Asp His Ile His Ser Gly Thr Val Val Gly Lys Leu Glu Gly Glu Arg
50 55 60

Asp Ile Thr Leu Gly Phe Val Asp Leu Leu Arg Asp
65 70 75

<210> 1095

<211> 76

<212> PRT

<213> Zea mays

<400> 1095

Pro Asn Ala Ala Arg Ser Ile Thr Val Pro Asp Leu Val Lys Glu Asn
1 5 10 15

Thr Lys Leu Leu Thr Leu Leu Asn Glu Lys Thr Lys Ile Ile Asp Leu
20 25 30

Ser Arg Val Glu Ile Tyr Lys Leu Arg Leu Ala Leu Gln Ala Ser Lys
35 40 45

Gln Gln Asn Leu His Leu Thr Gln Thr Asn Ser Gln Met Leu Ala Glu
50 55 60

Ile Asn Thr Gly Lys Asp Arg Ile Lys Met Leu Gln
65 70 75

<210> 1096

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1096

Leu Lys Phe Ile Lys Cys Thr Pro Cys Lys Ser Thr Leu Ile Lys Ala
1 5 10 15

Glu Val Pro Leu Ser Ile Gln Arg Gly Ile Ile Ser Gly Lys Asp Glu
20 25 30

Val Leu Lys Thr Leu Lys Ser Ile Leu Asn Thr Phe Ser Pro Lys Met
35 40 45

Phe Asp Leu Gln Lys Gly Gln Leu Ile Glu Thr Arg Ile Ser Ser Ala
50 55 60

Asp Ile Leu Lys Asp Val Ile Asn Leu Ile Phe Glu
65 70 75

<210> 1097

<211> 201

<212> PRT

<213> Zea mays

<400> 1097

Leu Ser Glu Leu Ala Ser Lys Gly Val Leu Ser Cys Ala Ser Gln Glu
 1 5 10 15

Val Arg Asp Leu Tyr Asn Leu Leu Glu His Arg Phe Leu Pro Leu Asp
 20 25 30

Leu Ala Ser Lys Val Gln Pro Leu Leu Leu Lys Ile Ser Lys Ile Gly
 35 40 45

Gly Lys Leu Ser Ser Ala Ser Ser Val Pro Glu Val Lys Leu Ser Gln
 50 55 60

Tyr Ile Ser Ala Leu Glu Lys Leu Thr Thr Leu Arg Val Leu Gln Gln
 65 70 75 80

Ala Ser Cys Ile Phe Lys Ser Ile Lys Ile Asp Met Leu Ser Arg Met
 85 90 95

Ile Pro Phe Phe Asp Phe Ser Val Val Glu Lys Ile Ser Val Asp Ala
 100 105 110

Ala Lys Gln Asn Phe Val Ala Ile Lys Val Asp His Leu Ser Gly Val
 115 120 125

Val Gln Phe Gly Thr Val Asp Ile Glu Ser Asp Gly Leu Ser Asp His
 130 135 140

Leu Ser Val Leu Ala Asp Ser Leu Asn Lys Ala Arg Ile His Ile Cys
 145 150 155 160

Pro Pro Val Lys Lys Pro Ser Lys Leu Gly Glu Ser Leu Ile Ser Leu
 165 170 175

Ala Ala Ile Val Glu Asn Glu His Lys Arg Leu Leu Ala Arg Lys Ser
 180 185 190

Ile Ile Glu Lys Arg Lys Glu Glu Leu
 195 200

<210> 1098

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1098

Glu Leu Leu Lys Leu Asp Asp Val Ile Asp Leu Val Ile Pro Arg Gly
 1 5 10 15

Ser Asn Lys Leu Val Ser Gln Ile Lys Ala Ser Thr Lys Ile Pro Val
 20 25 30

Leu Gly His Ala Asp Gly Ile Cys His Val Tyr Val Asp Lys Ser Ala
 35 40 45

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Asp Met Asp Met Ala Lys Arg Ile Thr Val Asp Ala Lys Ile Asp Tyr
50 55 60

Pro Ala Ala Cys Asn Ala Met Glu Thr Leu Leu Val His Lys Asp Leu
65 70 75 80

Ala Gln Asn Gly Gly Leu Asn Asp Leu Ile Val Glu Leu Gln Thr Lys
85 90 95

Gly Val Ser Leu Tyr
100

<210> 1099

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1099

Ala Val Glu Thr Leu Leu Glu Ser Ile Phe Asn Asn Thr Ser Gly Glu
1 5 10 15

Val Val Thr Asn Gln Asp Gly Lys Tyr Gln Ile Leu Gly Thr Pro Thr
20 25 30

Glu Thr Ala Leu Leu Glu Phe Ala Leu Leu Leu Asp Gly Asp Cys Lys
35 40 45

Glu Lys Gln Leu Gly Ser Lys Ile Val Lys Val Glu Pro Phe Asn Ser
50 55 60

Thr Lys Lys Arg Met Ser Thr Ile Leu Glu Leu Pro
65 70 75

<210> 1100

<211> 76

<212> PRT

<213> Zea mays

<400> 1100

Glu Phe Arg Thr His Lys Val Ile Tyr Arg Arg Tyr Ala Gly Leu Phe
1 5 10 15

Phe Ser Ile Cys Val Asp Ile Thr Asp Asn Glu Leu Ala Tyr Leu Glu
20 25 30

Cys Ile His Leu Phe Val Glu Ile Leu Asp His Phe Phe Ser Asn Val
35 40 45

Cys Glu Leu Asp Leu Val Phe Asn Phe His Lys Val Tyr Arg Tyr Leu
50 55 60

Ile Leu Asp Glu Phe Ile Leu Ala Gly Glu Leu Gln
65 70 75

<210> 1101

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1101

Leu Val Leu Thr Ile Ile Lys Glu Ser Leu Lys Thr Asp Pro Leu Arg
 1 5 10 15

Tyr Thr Lys Met Lys Glu Arg Leu Val Gly Val Ser Glu Glu Thr Thr
 20 25 30

Thr Gly Val Lys Lys Leu Tyr Gln Met Pro Ala Asn Gly Ser Leu Leu
 35 40 45

Phe Leu Pro Ile Asn Val Asn Asp Ser Val Thr Lys Ser Lys Phe Asp
 50 55 60

Asn Leu Tyr Gly Cys Arg His Ser Leu Pro Asp Gly
 65 70 75

<210> 1102

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1102

Lys Leu Leu Tyr Leu Leu Asn Gln Gly Glu Thr Phe Thr Lys Val Glu
 1 5 10 15

Ala Thr Glu Val Phe Phe Ala Val Thr Lys Leu Phe Gln Ser Lys Asp
 20 25 30

Ala Gly Leu Arg Arg Leu Val Tyr Leu Met Ile Lys Glu Leu Ser Pro
 35 40 45

Ser Ser Asp Glu Val Ile Ile Val Thr Ser Ser Leu Met Lys Asp Met
 50 55 60

Asn Ser Lys Thr Asp Met Tyr Arg Ala Asn Ala Ile
 65 70 75

<210> 1103

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1103

Leu Ser Leu Leu Leu Gln Gly Ile Phe Glu Asn Thr Ser Ala Glu Val
 1 5 10 15

Val Lys Glu Lys Asp Gly Lys Gln Thr Val Leu Gly Thr Pro Thr Glu
 20 25 30

Arg Ala Ile Leu Glu Phe Gly Leu Gly Leu Glu Gly Val His Asp Ala
 35 40 45

Glu Tyr Ser Ala Cys Thr Lys Val Lys Val Glu Pro Phe Asn Ser Val
 50 55 60

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Lys Lys Lys Met Ala Val Leu Ile Ser Leu Pro Ser
65 70 75

<210> 1104
<211> 101
<212> PRT
<213> Zea mays

<400> 1104
Arg Glu Val Asn Arg Leu Leu Asp Thr Leu Gly Pro Arg Phe Val Asp
1 5 10 15

Trp Trp Trp Asp Thr Pro Leu Pro Val Asp Ala Asp Leu Leu Pro Glu
20 25 30

Phe Val Pro Gly Ser Lys Thr Pro Tyr Arg Leu Cys Pro Pro Gly Val
35 40 45

Arg Pro Thr Leu Ala Asp Glu Glu Leu Thr Tyr Leu Arg Lys Leu Ala
50 55 60

Arg Leu Leu Pro Thr His Phe Ala Leu Gly Arg Asn Thr Arg Leu Gln
65 70 75 80

Gly Leu Ala Ala Ala Ile Leu Lys Leu Trp Glu Lys Ser Leu Ile Ala
85 90 95

Lys Ile Ala Val Lys
100

<210> 1105
<211> 76
<212> PRT
<213> Zea mays

<400> 1105
Leu Val Val Val Ser Ala Met Ser Lys Val Thr Asp Met Met Tyr Asn
1 5 10 15

Leu Val Asn Lys Ala Gln Ser Arg Asp Asp Ser Tyr Ile Ala Val Leu
20 25 30

Asp Glu Val Phe Asp Lys His Met Thr Thr Ala Lys Asp Leu Leu Ala
35 40 45

Gly Glu Asp Leu Ala Arg Phe Leu Ser Gln Leu His Ala Asp Ile Ser
50 55 60

Asn Leu Lys Ala Met Leu Arg Ala Ile Tyr Ile Ala
65 70 75

<210> 1106
<211> 101
<212> PRT
<213> Solanum lycopersicum

<400> 1106

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Ile Arg Phe Asp Val Phe Leu Asn Val Asp Asn Asn Val Asn Ala Asn
1 5 10 15

Glu Leu Asp Lys Ala Glu Phe Ala Gly Ser Tyr Thr Ser Leu Pro His
20 25 30

Val His Arg Val Gly Asp Pro Lys His Thr Ala Thr Ala Thr Leu Arg
35 40 45

Leu Ala Ile Thr Glu Leu Leu Glu Asp Ile Gly Leu Glu Asp Glu Asp
50 55 60

Thr Ile Ala Val Thr Leu Val Pro Lys Lys Gly Asp Ile Ser Ile Gly
65 70 75 80

Gly Val Glu Ile Lys Leu Ala Ile Val Lys Leu Val Cys Val Val Asn
85 90 95

Leu Leu Thr Leu Gln
100

<210> 1107

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 1107

Ile Leu Glu Glu Ser Met Arg Ala Arg Asp Leu Leu Met Glu Gln Asn
1 5 10 15

Val Ala Leu Asp Leu Ala Arg Arg Glu Ala Glu Met Ala Val Arg Ala
20 25 30

Arg Asn Asp Phe Leu Ala Val Met Asn His Glu Met Arg Thr Pro Met
35 40 45

His Ala Ile Ile Ala Leu Ser Ser Leu Leu Gln Glu Thr Asp Leu Thr
50 55 60

Pro Glu Gln Arg Leu Met Val Glu Thr Ile Leu Lys Ser Ser Asn Leu
65 70 75 80

Leu Ala Thr Leu Ile Asn Asp Val Leu Asp Leu Ser Arg Leu Glu Asp
85 90 95

Gly Ser Leu Gln Leu Asp Ile Gly Thr Phe Asn Leu His Ala Leu Phe
100 105 110

Arg Glu Val His Ser Leu Ile Lys Pro Ile Ala Ser Val Lys Lys Leu
115 120 125

Phe Val Thr Leu Ser Leu Ser Ser Asp Leu Pro Glu Tyr Val Ile Gly
130 135 140

Asp Glu Lys Arg Leu Met Gln Ile Leu Leu Asn Val Val Gly Asn Ala

145 150 1005_005_PCT_SL17083606 155 160

Val Lys Phe Ser Lys Glu Gly Asn Val Ser Ile Ser Ala Phe Val Ala
165 170 175

<210> 1108
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1108
Asp Glu Asn Thr Ile Cys Val Ala Ala Ile Leu Gly Ser Thr Leu Thr
1 5 10 15

Gly Glu Phe Glu Asp Val Lys Leu Leu Asn Glu Leu Leu Thr Lys Lys
20 25 30

Asn Lys Glu Thr Gly Trp Glu Thr Pro Ile His Val Asp Ala Ala Ser
35 40 45

Gly Gly Phe Ile Ala Pro Phe Leu Trp Pro Asp Leu Glu Trp Asp Phe
50 55 60

Arg Leu Pro Leu Val Lys Ser Ile Asn Val Ser Gly
65 70 75

<210> 1109
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1109
Met Glu Lys Pro Cys Thr Leu Leu Val His Phe Asp Lys Gly Ser Pro
1 5 10 15

Ser Met Ala Asn Glu Ile Lys Ala Asp Leu Glu Gly Ser Asp Val Ala
20 25 30

Ala Lys Val Asp Ala Met Lys Arg Ala Ile Met Leu Leu Leu Asn Gly
35 40 45

Glu Thr Leu Pro His Leu Phe Ile Thr Val Val Arg Tyr Val Leu Pro
50 55 60

Ser Glu Asp His Thr Ile Gln Lys Leu Leu Leu Leu
65 70 75

<210> 1110
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1110
Leu Gln Phe Lys Asp Leu Asp Lys Glu Lys Lys Lys Ile Gln Val Gln
1 5 10 15

Val Thr Arg Asn Gly Phe Arg Gln Arg Leu Ser Ile Tyr Asp Leu Leu
20 25 30

Pro Gly Asp Val Val His Leu Ala Ile Gly Asp Gln Val Pro Ala Asp
35 40 45

Gly Leu Phe Ile Ser Gly Phe Ser Leu Leu Ile Asn Glu Ser Ser Leu
50 55 60

Thr Gly Glu Ser Glu Pro Val Val Val Asn Glu Asp Asn Pro Phe Leu
65 70 75 80

Leu Ser Gly Thr Lys Val Gln Asp Gly Ser Cys Lys Met Leu Ile Thr
85 90 95

Thr Val Gly Met Arg
100

<210> 1111
<211> 76
<212> PRT
<213> Zea mays

<400> 1111
Leu Pro Asp Ser Glu Gly Ala Ile Asp Gly His Leu Arg Glu Val Gly
1 5 10 15

Leu Thr Phe His Leu Leu Lys Asp Val Pro Gly Leu Ile Ser Lys Asn
20 25 30

Ile Gly Arg Ala Leu Asp Asp Ala Phe Lys Pro Leu Gly Ile Ser Asp
35 40 45

Trp Asn Ser Ile Phe Trp Val Ala His Pro Gly Gly Pro Ala Ile Leu
50 55 60

Asp Gln Val Glu Ala Lys Val Gly Leu Asp Lys Ala
65 70 75

<210> 1112
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1112
Glu Phe Ala Gly Ser Tyr Thr Ser Leu Pro His Val His Arg Val Gly
1 5 10 15

Asp Pro Lys His Thr Ala Thr Ala Thr Leu Arg Leu Ala Ile Thr Glu
20 25 30

Leu Leu Glu Asp Ile Gly Leu Glu Asp Glu Asp Thr Ile Ala Val Thr
35 40 45

Leu Val Pro Lys Lys Gly Asp Ile Ser Ile Gly Gly Val Glu Ile Lys
50 55 60

Leu Ala Ile Val Lys Leu Val Cys Val Val Asn Leu
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65

70

75

<210> 1113

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 1113

Leu Ser Asn Met Asp Glu Pro Leu Gly His Thr Leu Lys Arg Thr Glu
1 5 10 15

Ile Ala Asp Gly Phe Ile Leu Glu Lys Ser Ser Ser Pro Leu Gly Val
20 25 30

Val Leu Ile Ile Phe Glu Ser Arg Pro Asp Ala Leu Val Gln Ile Ala
35 40 45

Ser Leu Ala Val Arg Ser Gly Asn Gly Leu Met Leu Lys Gly Gly Lys
50 55 60

Glu Ala Lys Arg Ser Asn Ala Ile Leu His Lys Val Ile Thr Ser Ala
65 70 75 80

Ile Pro Val Ser Val Gly Glu Arg Leu Ile Gly Leu Val Thr Ser Arg
85 90 95

Glu Glu Ile Pro Glu Leu Leu Lys Leu Asp Asp Val Ile Asp Leu Val
100 105 110

Ile Pro Arg Gly Ser Asn Lys Leu Val Ser Gln Ile Lys Ala Ser Thr
115 120 125

Lys Ile Pro Val Leu Gly His Ala Asp Gly Ile Cys His Val Tyr Val
130 135 140

Asp Lys Ser Ala Asp Met Asp Met Ala Lys Arg Ile Thr Val Asp Ala
145 150 155 160

Lys Ile Asp Tyr Pro Ala Ala Cys Asn Ala Met Glu Thr Leu Leu Val
165 170 175

His Lys Asp Leu Ala Gln Asn Gly Gly Leu Asn Asp Leu Ile Val Glu
180 185 190

Leu Gln Thr Lys Gly Val Ser Leu Tyr
195 200

<210> 1114

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1114

Leu Ile Leu Ser Leu Asp Ile Tyr Val Pro Arg Asp Glu Arg Phe Gly
1 5 10 15

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His Leu Lys Met Ser Asp Phe Leu Thr Tyr Ala Leu Lys Ser Ile Val
20 25 30

Gln Phe Ile Leu Pro Glu Leu His Ala Leu Phe Asp Gly Thr Pro Asn
35 40 45

Glu Phe Asp Ser Phe Glu Asp Val Leu Arg Leu Tyr Glu Gly Gly Ile
50 55 60

Lys Leu Pro Gln Gly Pro Leu Phe Lys Ala Leu Thr
65 70 75

<210> 1115

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1115

Ser Val Pro Ile Gly Pro Asp Val Val Ala Leu Lys Gly Thr Gln Gln
1 5 10 15

Thr Leu Lys Cys Thr Gln Lys Gly Leu Ile Leu Cys Val Asp Tyr Ser
20 25 30

Val Met Pro Phe Arg Lys Ala Gly Pro Val Leu Asp Leu Val Gln Lys
35 40 45

Ser Val Arg Tyr Leu Asp Tyr Arg Thr Thr Leu Asn Lys His Gln Leu
50 55 60

Asp Thr Leu Lys Asn Glu Leu Lys Gly Gln Arg Val
65 70 75

<210> 1116

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 1116

Met Pro Leu Val Val Arg Phe Pro Asp Val Leu Lys Asn Arg Leu Glu
1 5 10 15

Thr Leu Gln Ser Ala Phe Asp Met Ala Ile Asn Ser Gln Gly Tyr Glu
20 25 30

Ala His Tyr Gln Gly Val Tyr Pro Val Lys Cys Asn Gln Asp Arg Phe
35 40 45

Val Val Glu Asp Ile Val Lys Phe Gly Ser Pro Tyr Arg Phe Gly Leu
50 55 60

Glu Ala Gly Ser Lys Pro Glu Leu Leu Leu Ala Met Asn Cys Leu Ser
65 70 75 80

Lys Gly Ser Ala Asp Ala Leu Leu Val Cys Asn Gly Phe Lys Asp Thr
85 90 95

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Glu Tyr Ile Ser Leu Ala Leu Val Ala Arg Lys Leu Leu Leu Asn Ser
100 105 110

Val Ile Val Leu Glu Gln Glu Glu Leu Asp Leu Val Ile Asp Ile
115 120 125

Ser Arg Lys Met Ser Val Arg Pro Val Ile Gly Leu Arg Ala Lys Leu
130 135 140

Arg Thr Lys His Ser Gly His Phe Gly Ser Thr Ser Gly Glu Lys Gly
145 150 155 160

Lys Phe Gly Leu Thr Thr Thr Gln Ile Leu Arg Val Val Lys Lys Leu
165 170 175

Asp Glu Ser Gly Met Leu Asp Cys Leu Gln Leu Leu His Phe His Ile
180 185 190

Gly Ser Gln Ile Pro Thr Thr Glu Leu
195 200

<210> 1117

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1117

Asn Gln Glu Pro Pro Asn Leu His Asn Leu Asn Ala Phe Asp Ile Ile
1 5 10 15

Ser Leu Ser Thr Gly Phe Asp Leu Ser Gly Leu Phe Gly Glu Arg Tyr
20 25 30

Gly Arg Arg Glu Ser Leu Phe Thr Ser Arg Lys Pro Ala Ala Ala Val
35 40 45

Leu Val Lys Leu Lys Glu Leu Ala Lys Ala Leu Asn Leu Lys Val Thr
50 55 60

Lys Thr Asp Asn Gly Val Leu Lys Leu Ala Thr Thr
65 70 75

<210> 1118

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1118

Met Glu Lys Pro Ser Thr Leu Leu Val His Phe Asp Lys Gly Ser Ala
1 5 10 15

Ala Met Ala Gly Glu Ile Lys Ala Asp Leu Glu Gly Ser Asp Val Ala
20 25 30

Ala Lys Val Asp Ala Met Lys Arg Ala Val Met Leu Leu Leu Asn Gly
35 40 45

Glu Thr Leu Pro Thr Leu Phe Ile Thr Val Val Arg Tyr Val Leu Pro
50 55 60

Ser Glu Asp His Thr Ile Gln Lys Leu Leu Leu Leu
65 70 75

<210> 1119
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1119
Gly Met Val Leu Asn Gly Lys Ala Val Cys Cys Met His Met Gly Ser
1 5 10 15

Phe Asp Glu Ala Glu Thr Leu Leu Leu Glu Ala Leu Asn Lys Asp Ala
20 25 30

Lys Asp Pro Glu Thr Leu Ala Asn Leu Ile Val Cys Asn Leu His Leu
35 40 45

Gly Lys Pro Ser Ser Arg Tyr Leu Ser Gln Leu Lys Leu Ser His Pro
50 55 60

Asp His Val Leu Val Lys Arg Ala Val Ser Ala Glu
65 70 75

<210> 1120
<211> 76
<212> PRT
<213> Zea mays

<400> 1120
Glu Leu Gln Asn Ser Asn Val Asn Asn Leu Thr Pro Leu Leu Ser Asn
1 5 10 15

Glu Arg Phe His Arg Cys Leu Ile Ala Cys Ser Ala Asp Leu Val Leu
20 25 30

Ala Thr His Lys Thr Val Ile Met Met Phe Pro Ala Val Leu Glu Ser
35 40 45

Thr Gly Leu Thr Ala Phe Asp Leu Ser Lys Ile Ile Glu Asn Phe Val
50 55 60

Arg His Glu Glu Thr Leu Pro Arg Glu Leu Lys Arg
65 70 75

<210> 1121
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1121
Leu Ser Asn Met Asp Glu Pro Leu Gly His Thr Leu Lys Arg Thr Glu
1 5 10 15

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Ile Ala Asp Gly Phe Ile Leu Glu Lys Ser Ser Ser Pro Leu Gly Val
20 25 30

Val Leu Ile Ile Phe Glu Ser Arg Pro Asp Ala Leu Val Gln Ile Ala
35 40 45

Ser Leu Ala Val Arg Ser Gly Asn Gly Leu Met Leu Lys Gly Gly Lys
50 55 60

Glu Ala Lys Arg Ser Asn Ala Ile Leu His Lys Val
65 70 75

<210> 1122

<211> 226

<212> PRT

<213> Oryza sativa

<400> 1122

Val Arg Asp Asn Leu Tyr Asp Tyr Leu Ser Ser Arg Leu Leu Thr His
1 5 10 15

Pro Val Val Ile Ser Glu Phe Ala Glu Ser Val Leu Gly Val Lys Thr
20 25 30

Glu Glu Leu Ile Arg Arg Met Val Pro Ser Ile Ile Pro Lys Leu Ile
35 40 45

Val Ser His Gln Asn Asn Asp Gln Ala Val Val Thr Leu Asn Glu Leu
50 55 60

Ala Ser His Leu Asn Ser Glu Leu Val Pro Leu Ile Val Asn Ser Leu
65 70 75 80

Pro Lys Val Leu Ser Phe Ala Leu Phe Tyr Glu Asp Gly Gln His Leu
85 90 95

Ser Ser Val Leu Gln Phe Tyr His Thr Glu Thr Gly Thr Asp Ser Lys
100 105 110

Glu Ile Phe Ser Ala Ala Leu Pro Thr Leu Leu Asp Glu Ile Ile Cys
115 120 125

Phe Pro Gly Glu Ser Asp Gln Ile Glu Thr Asp Arg Arg Met Ala Lys
130 135 140

Ile Ser Pro Thr Ile Gln Asn Ile Ala Arg Ile Leu Thr Gly Asn Asp
145 150 155 160

Asn Leu Pro Glu Phe Leu Lys Asn Asp Phe Val Arg Leu Leu Asn Ser
165 170 175

Ile Asp Lys Lys Met Leu His Ser Ser Asp Val Asn Leu Gln Lys Gln
180 185 190

Ala Leu Gln Arg Ile Arg Lys Leu Val Glu Met Met Gly Pro Tyr Leu
195 200 205

Ser Thr His Ala Pro Lys Ile Met Val Leu Leu Ile Phe Ala Ile Asp
210 215 220

Lys Glu
225

<210> 1123
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1123
Ser Asp Pro Leu Pro Glu Val Glu Arg Pro Leu Phe Glu Leu Val Ser
1 5 10 15

Ala Ala Gln Thr Leu Leu Pro Asp Ser Glu Gly Ala Ile Asp Gly His
20 25 30

Leu Arg Glu Val Gly Leu Thr Phe His Leu Leu Lys Asp Val Pro Gly
35 40 45

Leu Ile Ser Lys Asn Ile Glu Lys Ser Leu Ile Glu Ala Phe Gln Pro
50 55 60

Leu Gly Ile Ser Asp Trp Asn Ser Ile Phe Trp Ile
65 70 75

<210> 1124
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1124
Met Ala Lys Arg His Leu Leu Leu Val Thr Thr Cys Leu Trp Ala Leu
1 5 10 15

Ser Cys Ala Leu Leu Leu His Ala Ser Ser Asp Gly Phe Leu Arg Val
20 25 30

Asn Leu Asn Lys Lys Arg Leu Asp Lys Glu Asp Leu Thr Ala Ala Lys
35 40 45

Leu Ala Gln Gln Gly Asn Arg Leu Leu Lys Thr Gly Ser Ser Asp Ser
50 55 60

Asp Pro Val Pro Leu Val Asp Tyr Leu Asn Thr Gln
65 70 75

<210> 1125
<211> 126
<212> PRT
<213> Solanum lycopersicum

<400> 1125
Val Cys Met Leu Leu Asp Leu Leu Glu Ala Pro Asp Ser Cys Thr Leu
Page 668

1 5 10 15
 Glu Lys Phe Leu Gly Arg Ile Pro Met Val Phe Asn Val Val Ile Leu
 20 25 30
 Ser Pro His Gly Tyr Phe Ala Gln Glu Asn Val Leu Gly Tyr Pro Asp
 35 40 45
 Thr Gly Gly Gln Val Val Tyr Ile Leu Asp Gln Val Pro Ala Leu Glu
 50 55 60
 Arg Glu Met Leu Lys Arg Ile Lys Glu Gln Gly Leu Asp Ile Ile Pro
 65 70 75 80
 Arg Ile Leu Ile Val Thr Arg Leu Leu Pro Asp Ala Val Gly Thr Thr
 85 90 95
 Cys Gly Gln Arg Leu Glu Lys Val Tyr Gly Thr Glu His Ser His Ile
 100 105 110
 Leu Arg Val Pro Phe Gly Thr Glu Lys Gly Ile Val Arg Lys
 115 120 125

 <210> 1126
 <211> 76
 <212> PRT
 <213> Oryza sativa

 <400> 1126
 Gly Glu Asn Ile Leu Leu Asp Ser Thr Thr Gly Asp Cys Ile His Val
 1 5 10 15
 Asp Phe Ser Cys Leu Phe Asp Lys Gly Leu Leu Leu Glu Lys Pro Glu
 20 25 30
 Val Val Pro Phe Arg Phe Thr Gln Asn Met Val Asp Gly Leu Gly Ile
 35 40 45
 Thr Gly Tyr Glu Gly Val Phe Val Lys Val Cys Glu Ile Thr Leu Ser
 50 55 60
 Val Leu Arg Thr His Lys Glu Ala Leu Met Thr Val
 65 70 75

 <210> 1127
 <211> 76
 <212> PRT
 <213> Solanum lycopersicum

 <400> 1127
 Gln Asp Val Asn Ser Leu Gly Leu Ile Ser Ala Arg Lys Thr Ala Lys
 1 5 10 15
 Ala Val Asp Ile Leu Lys Ile Met Ser Ser Thr Tyr Leu Val Ala Leu
 20 25 30

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Cys Gln Ala Ile Asp Leu Arg His Leu Glu Glu Asn Leu Lys Ser Val
35 40 45

Val Lys Asn Thr Val Ser Gln Val Ala Lys Arg Thr Leu Thr Met Gly
50 55 60

Ala Asn Gly Glu Leu His Pro Ala Arg Phe Ser Glu
65 70 75

<210> 1128

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1128

Glu Leu Ala Met Ser Thr Gly Lys Leu Asp Met Ala Glu Glu Cys Leu
1 5 10 15

Leu His Ala Met Asp Leu Ser Gly Leu Leu Leu Tyr Ser Ser Leu
20 25 30

Gly Asp Ala Glu Gly Leu Thr Lys Leu Thr Ser Met Ala Lys Glu Gln
35 40 45

Gly Lys Asn Asn Val Ala Phe Leu Cys Phe Phe Met Leu Gly Lys Leu
50 55 60

Glu Glu Cys Leu Gln Leu Leu Ile Glu Ser Asn Arg
65 70 75

<210> 1129

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1129

Glu Leu Ala Met Ser Thr Gly Lys Leu Asp Met Ala Glu Glu Cys Leu
1 5 10 15

Leu His Ala Met Asp Leu Ser Gly Leu Leu Leu Tyr Ser Ser Leu
20 25 30

Gly Asp Ala Glu Gly Leu Thr Lys Leu Thr Ser Met Ala Lys Glu Gln
35 40 45

Gly Lys Asn Asn Val Ala Phe Leu Cys Phe Phe Met Leu Gly Lys Leu
50 55 60

Glu Glu Cys Leu Gln Leu Leu Ile Glu Ser Asn Arg
65 70 75

<210> 1130

<211> 76

<212> PRT

<213> Zea mays

<400> 1130

Lys Gln Lys Leu Arg Phe His Tyr Gly Leu Thr Glu Arg Gln Leu Leu
Page 670

1 5 10 15
 Arg Tyr Val His Ile Ala Gly Lys Ala Lys Arg Ser Thr Gly Gln Val
 20 25 30
 Leu Leu Gln Leu Leu Glu Met Arg Leu Asp Asn Ile Leu Phe Arg Leu
 35 40 45
 Gly Met Ala Ser Thr Ile Pro Gly Ala Arg Gln Leu Val Asn His Arg
 50 55 60
 His Ile Leu Val Asn Gly Arg Ile Val Asp Ile Pro
 65 70 75
 <210> 1131
 <211> 76
 <212> PRT
 <213> Solanum lycopersicum
 <400> 1131
 Lys Gln Lys Leu Arg Phe His Tyr Gly Leu Thr Glu Arg Gln Leu Leu
 1 5 10 15
 Lys Tyr Val Arg Ile Ala Arg Lys Ala Lys Gly Ser Thr Gly Gln Val
 20 25 30
 Leu Leu Gln Leu Leu Glu Met Arg Leu Asp Asn Ile Leu Phe Arg Leu
 35 40 45
 Gly Met Ala Ser Thr Ile Pro Ala Ala Arg Gln Leu Val Asn His Arg
 50 55 60
 His Ile Leu Val Asn Gly His Ile Val Asp Ile Pro
 65 70 75
 <210> 1132
 <211> 76
 <212> PRT
 <213> Solanum lycopersicum
 <400> 1132
 Gln Asn Asn Thr Phe Leu Leu Pro Arg Asp Ile Leu Ala Ala Ala Asp
 1 5 10 15
 His Leu Ile Gly Leu Lys Phe Gly Met Gly Ala Leu Asp Asp Met Asn
 20 25 30
 His Leu Lys Asn Lys Arg Ile Arg Ser Val Ala Asp Leu Leu Gln Asp
 35 40 45
 Gln Phe Gly Leu Ala Leu Val Arg Leu Glu Asn Val Val Arg Gly Thr
 50 55 60
 Ile Cys Gly Ala Ile Arg His Lys Leu Ile Pro Thr
 65 70 75

<210> 1133

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1133

Leu Cys Gly Val Leu Ile Ile Gly Glu Glu Thr Ile Val Tyr Cys Ser
 1 5 10 15

Ala Ser Ala Phe Lys Ala Ile Pro Ile Arg Pro Ser Ile Thr Arg Ala
 20 25 30

Tyr Gly Arg Val Asp Ala Asp Gly Ser Arg Tyr Leu Leu Gly Asp His
 35 40 45

Asn Gly Leu Leu His Leu Leu Val Ile Thr His Glu Lys Glu Lys Val
 50 55 60

Thr Gly Leu Lys Ile Glu Leu Leu Gly Glu Thr Ser
 65 70 75

<210> 1134

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1134

His Glu Met Arg Thr Pro Met His Ala Val Val Ala Leu Ser Ser Leu
 1 5 10 15

Leu Gln Glu Ser Glu Leu Ile Pro Glu Gln Arg Leu Met Val Glu Thr
 20 25 30

Ile Leu Lys Ser Ser Asn Leu Leu Ala Thr Leu Ile Asn Asp Val Leu
 35 40 45

Asp Leu Ser Arg Leu Glu Asp Gly Ser Leu Gln Leu Asp Val Gly Thr
 50 55 60

Phe Asn Leu His Ala Leu Phe Arg Glu Val Leu Asn
 65 70 75

<210> 1135

<211> 76

<212> PRT

<213> Zea mays

<400> 1135

Leu Gln Asn Ser Asn Val Asn Asn Leu Thr Pro Leu Leu Ser Asn Glu
 1 5 10 15

Arg Phe His Arg Cys Leu Ile Ala Cys Ser Ala Asp Val Val Leu Ala
 20 25 30

Thr His Lys Thr Val Ile Met Met Phe Pro Ala Val Leu Glu Ser Ala
 35 40 45

Gly Leu Thr Ser Phe Asp Leu Ser Lys Ile Ile Glu Asn Phe Val Arg
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50

55

60

His Glu Glu Thr Leu Pro Arg Glu Leu Lys Arg His
 65 70 75

<210> 1136

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1136

Gln Ser Val Ser Lys Gln Lys Ser Arg Phe Gln Val Val Phe Asp Arg
 1 5 10 15

Leu Arg Ile Asn Gln Tyr Ser Ile Asp Trp Ser Glu Val Ile Asp Lys
 20 25 30

Lys Asp Leu Ser Lys Ser Leu Arg Phe Phe Leu Ser Lys Ser Leu Leu
 35 40 45

Phe Leu Ser Lys Leu Leu Leu Phe Leu Ser Asn Ser Leu Pro Phe Phe
 50 55 60

Cys Val Ser Phe Gly Asn Ile Pro Ile His Arg Ser
 65 70 75

<210> 1137

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1137

Val Glu Asp Leu Val Leu Ile Ser Asp Arg Ala Tyr Thr Lys Gly Gln
 1 5 10 15

Ile Leu Glu Met Glu Lys Leu Ile Leu Asn Thr Leu Gln Phe Asn Met
 20 25 30

Ser Val Pro Thr Pro Tyr Val Phe Met Arg Arg Phe Leu Lys Ala Ala
 35 40 45

Gln Ser Asp Lys Gln Leu Gln Leu Leu Ser Phe Phe Ile Leu Glu Leu
 50 55 60

Ser Leu Val Glu Tyr Gln Met Leu Lys Tyr Arg Pro
 65 70 75

<210> 1138

<211> 76

<212> PRT

<213> Zea mays

<400> 1138

Leu Leu Asp Trp Glu Gly Arg Phe Asn Ile Ala Leu Gly Val Ala Lys
 1 5 10 15

Gly Leu Ala Tyr Leu His His Glu Cys Leu Glu Trp Val Ile His Cys
 20 25 30

Asp Val Lys Pro Glu Asn Ile Leu Leu Asp Gln Ala Phe Glu Pro Lys
35 40 45

Ile Thr Asp Phe Gly Leu Val Lys Leu Leu Asn Arg Gly Gly Ser Thr
50 55 60

Gln Asn Val Ser His Val Arg Gly Thr Leu Gly Tyr
65 70 75

<210> 1139

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1139

Val Lys Pro Val Leu Pro Leu Val Ile Ala Lys Pro Gly Cys Val Glu
1 5 10 15

Ser Ala Leu Arg Thr Leu His Asp Asp Val Met Asp Ile Leu Arg Pro
20 25 30

Gln Gly Arg Lys Leu Asp Leu Leu Ile Val Ile Leu Pro Asn Asn Asn
35 40 45

Gly Ser Leu Tyr Gly Asp Val Lys Arg Ile Cys Glu Thr Asp Ile Gly
50 55 60

Leu Ile Ser Gln Cys Cys Leu Ala Lys His Val Leu
65 70 75

<210> 1140

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1140

Leu Pro Asp Asn Asn Gly Ser Leu Tyr Gly Asp Leu Lys Arg Ile Cys
1 5 10 15

Glu Thr Asp Leu Gly Leu Val Ser Gln Cys Cys Leu Thr Lys His Val
20 25 30

Phe Lys Met Ser Lys Gln Tyr Leu Ala Asn Val Ala Leu Lys Ile Asn
35 40 45

Val Lys Val Gly Gly Arg Asn Thr Val Leu Val Asp Ala Leu Thr Arg
50 55 60

Arg Ile Pro Leu Val Ser Asp Arg Pro Thr Ile Ile
65 70 75

<210> 1141

<211> 76

<212> PRT

<213> Zea mays

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<400> 1141

Glu Leu His Leu Ser Phe Leu Arg Leu Gln Gly Gln Ala Asn Asp Phe
1 5 10 15

Lys Ile Gln Tyr Ser Ser Ile Val Arg Leu Phe Leu Leu Pro Lys Ser
20 25 30

Asn Asn Pro His Thr Phe Val Val Ile Thr Leu Asp Pro Pro Ile Arg
35 40 45

Lys Gly Gln Thr Leu Tyr Pro His Ile Val Ile Gln Phe Glu Thr Glu
50 55 60

Ala Val Val Glu Arg Asp Leu Ala Leu Ser Lys Glu
65 70 75

<210> 1142

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1142

Ser Gly Ser Thr Pro Gly Asn Glu His Asp Ile Val Lys Asn Ser Ala
1 5 10 15

Pro Thr Leu Gln Ile Leu Val Lys Val Leu Asp Phe Gln Ile Val Pro
20 25 30

Leu Thr Met Lys Leu Lys Ser Ser Ala Glu Asp Ile Val Ala Leu Ala
35 40 45

Leu Ser Lys His Arg Val Ser Leu His Asp Val Tyr Val Tyr His Gly
50 55 60

Arg Arg Val Ile Ala Lys Ser Leu Thr Leu Glu Ser
65 70 75

<210> 1143

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1143

Pro Val Leu Ile Ser Arg Leu Gln Glu Phe Pro Pro Lys Ser Lys Leu
1 5 10 15

Asp Pro Thr Ile Tyr Gly Asn Gln Asn Ser Thr Ile Thr Thr Glu His
20 25 30

Val Gln Asp Lys Leu Asn Gly Leu Thr Val Asn Glu Ala Ile Lys Ser
35 40 45

Asn Arg Leu Phe Ile Leu Asn His His Asp Ile Val Met Pro Leu Leu
50 55 60

Arg Lys Ile Asn Met Ser Ala Asn Thr Lys Ala Tyr Ala Ser Arg Thr
65 70 75 80

Leu Leu Phe Leu Gln Asp Asp Arg Thr Leu Lys Pro Leu Ala Ile Glu
85 90 95

Leu Ser Leu Pro His
100

<210> 1144
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1144
Glu Val Thr Thr Leu Phe His Leu Asp Arg Gln Met Tyr Leu Leu Gly
1 5 10 15

Tyr Leu Ala Asn Gln Ser Arg Val Tyr Leu Ile Asp Lys Gln Phe Asn
20 25 30

Val Val Gly Tyr Thr Leu Leu Leu Thr Met Ile Glu Tyr Lys Thr Leu
35 40 45

Val Met Arg Gly Asp Phe Asp Arg Ala Asn Ala Leu Leu Pro Ser Ile
50 55 60

Pro Lys Glu Gln His Asp Ser Val Ala Arg Phe Leu
65 70 75

<210> 1145
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1145
Glu Val Thr Thr Leu Phe His Leu Asp Arg Gln Met Tyr Leu Leu Gly
1 5 10 15

Tyr Leu Ala Asn Gln Ser Arg Val Tyr Leu Ile Asp Lys Gln Phe Asn
20 25 30

Val Val Gly Tyr Thr Leu Leu Leu Thr Met Ile Glu Tyr Lys Thr Leu
35 40 45

Val Met Arg Gly Asp Phe Asp Arg Ala Asn Ala Leu Leu Pro Ser Ile
50 55 60

Pro Lys Glu Gln His Asp Ser Val Ala Arg Phe Leu
65 70 75

<210> 1146
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1146
Asp Met Thr Leu Leu Leu Ala Phe Cys Ala Ala Val Ser Val Ala
1 5 10 15

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Ile Gly Leu Ala Thr Glu Gly Trp Pro Ser Gly Met Tyr Asp Gly Val
20 25 30

Gly Ile Met Leu Thr Ile Leu Leu Val Val Met Ile Thr Ala Ala Ser
35 40 45

Asp Tyr Lys Gln Ser Leu Gln Phe Arg Asp Leu Asp Lys Glu Lys Lys
50 55 60

Lys Ile Asp Val Gln Val Thr Arg Asp Gly Tyr Arg
65 70 75

<210> 1147

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1147

Leu Ile Tyr Met Glu Arg Tyr Leu Gln Gln Pro His Val Tyr Met Thr
1 5 10 15

Ser Leu Ser Val His Arg Leu Leu Ile Thr Ser Val Val Val Ala Ala
20 25 30

Lys Phe Thr Asp Asp Ala Phe Phe Asn Asn Ala Phe Tyr Ala Arg Val
35 40 45

Gly Gly Ile Ser Thr Val Glu Met Asn Arg Leu Glu Leu Asp Leu Leu
50 55 60

Phe Asn Leu Asp Phe Arg Leu Lys Val Asp Leu Glu
65 70 75

<210> 1148

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1148

His Pro Asn Leu Lys Leu Leu Leu Val Thr Leu Gly Glu Lys Gly Cys
1 5 10 15

Asn Tyr Tyr Thr Lys Lys Phe His Gly Thr Val Gly Gly Phe His Val
20 25 30

Lys Thr Val Asp Thr Thr Gly Ala Gly Asp Ser Phe Val Gly Ala Leu
35 40 45

Leu Thr Lys Ile Val Asp Asp Gln Thr Ile Leu Glu Asp Glu Ala Arg
50 55 60

Leu Lys Glu Val Leu Arg Phe Ser Cys Ala Cys Gly Ala Ile Thr Thr
65 70 75 80

Thr Lys Lys Gly Ala Ile Pro Ala Leu Pro Thr Ala Ser Glu Ala Leu
85 90 95

Thr Leu Leu Lys Gly
100

<210> 1149
<211> 76
<212> PRT
<213> Zea mays

<400> 1149
Met Pro Gly Lys Met Val Gln Cys Leu Lys Ser Val Gly Thr Ala Asn
1 5 10 15

Pro Leu Val Leu Ile Asp Glu Ile Asp Lys Leu Gly Lys Gly His Ser
20 25 30

Gly Asp Pro Ala Ser Ala Leu Leu Glu Leu Leu Asp Pro Glu Gln Asn
35 40 45

Val Asn Phe Leu Asp His Tyr Leu Asp Val Pro Ile Asp Leu Ser Lys
50 55 60

Val Leu Phe Val Cys Thr Ala Asn Val Ile Glu Met
65 70 75

<210> 1150
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1150
Lys Gly Pro Asn Pro Arg Pro Leu Pro Thr Asn Val Ile Lys Ser Phe
1 5 10 15

Leu Tyr Gln Leu Cys Lys Gly Val Ala His Cys His Gly His Gly Val
20 25 30

Leu His Arg Asp Leu Lys Pro Gln Asn Leu Leu Val Asp Lys Glu Lys
35 40 45

Gly Ile Leu Lys Ile Ala Asp Leu Gly Leu Gly Arg Ala Phe Thr Val
50 55 60

Pro Met Lys Ser Tyr Thr His Glu Ile Val Thr Leu
65 70 75

<210> 1151
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1151
Met Ser Leu Gly Gly Ile Val Asp Ala Ile Leu Gly Lys Asp Asp Arg
1 5 10 15

Pro Lys Val Lys Gly Arg Val Ile Leu Met Lys Lys Asn Val Leu Asp
20 25 30

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Phe Ile Asn Ile Gly Ala Ser Val Val Asp Gly Ile Ser Asp Leu Leu
35 40 45

Gly Gln Lys Val Ser Ile Gln Leu Ile Ser Gly Ser Val Asn Tyr Asp
50 55 60

Gly Leu Glu Gly Lys Leu Ser Asn Pro Ala Tyr Leu
65 70 75

<210> 1152

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1152

Asp Asn Ile Leu Ser Asn Leu His Leu Ala Phe Gly Ala Tyr Gly Thr
1 5 10 15

Glu His Ala Ile Arg Ala Arg Lys Val Glu Glu Tyr Leu Thr Gly Lys
20 25 30

Ile Leu Ser Ala Ser Val Val Leu Glu Ala Ile Arg Leu Leu Arg Glu
35 40 45

Thr Ile Val Pro Val Glu Gly Thr Thr His Pro Glu Tyr Arg Val Ser
50 55 60

Val Ala Val Gly Phe Leu Phe Ser Phe Leu Ser Pro Leu Cys Lys Gly
65 70 75 80

Val Ile Glu Pro Gly Lys Thr Leu Ser Ile Ser Glu Asp Leu Val His
85 90 95

Thr Asp Asn Val His
100

<210> 1153

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1153

Pro Ile Ile Asp Glu Leu Phe Thr Gly Ile Asp Gly Lys Gly Ala Phe
1 5 10 15

Leu Asn Gly Lys Pro Ile Lys Val Ser Ser Gln Ser Glu Leu Val Lys
20 25 30

Ala Leu Leu Ala Thr Glu Ala Gly Thr Asn Arg Asp Lys Leu Val Val
35 40 45

Asp Ala Thr Thr Gly Arg Ile Asn Ser Leu Leu Phe Lys Val Arg Ser
50 55 60

Leu Arg Met Cys Gly Ser Cys Ala Leu Asn Leu Cys
65 70 75

<210> 1154
 <211> 101
 <212> PRT
 <213> Oryza sativa

<400> 1154
 Leu Glu His Leu Asn Val Thr Lys Asp Ile Ser Asp Tyr Leu Trp Tyr
 1 5 10 15
 Thr Thr Arg Val Asn Ile Ser Asp Ala Asp Val Ala Phe Trp Ser Ser
 20 25 30
 Lys Gly Val Leu Pro Ser Leu Thr Ile Asp Lys Ile Arg Asp Val Ala
 35 40 45
 Arg Val Phe Val Asn Gly Lys Leu Ala Gly Ser Gln Val Gly His Trp
 50 55 60
 Val Ser Leu Lys Gln Pro Ile Gln Leu Val Glu Gly Leu Asn Glu Leu
 65 70 75 80
 Thr Leu Leu Ser Glu Ile Val Gly Leu Gln Asn Tyr Gly Ala Phe Leu
 85 90 95
 Glu Lys Asp Gly Ala
 100

<210> 1155
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1155
 Gly Ser Ser Met Val Val Tyr Phe His Asn Leu Ser Gln Phe Asp Gly
 1 5 10 15
 Ile Met Ile Leu Ser Phe Leu Thr Lys Ser Tyr Lys Asn Cys His Ile
 20 25 30
 Glu Pro Ile Met Arg Asn Asp Cys Ile Tyr Ser Ile Lys Leu Tyr Lys
 35 40 45
 Val Ser Lys Asn Gly Asp Lys Arg Leu Val Leu Thr Phe Met Asp Ser
 50 55 60
 Tyr Leu Leu Leu Lys Val Lys Leu Ala Asp Leu Ala
 65 70 75

<210> 1156
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1156
 Glu Asp Met Glu Ser Asp Pro Ala Ala Ala Arg Glu Lys Glu Leu Glu
 1 5 10 15

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Leu Glu Arg Val Gln Ser Trp Arg Glu Gln Val Thr Leu Arg Gly Val
20 25 30

Val Ala Ala Leu Leu Ile Gly Phe Met Tyr Ser Val Ile Val Met Lys
35 40 45

Ile Ala Leu Thr Thr Gly Leu Val Pro Thr Leu Asn Val Ser Ala Ala
50 55 60

Leu Met Ala Phe Leu Ala Leu Arg Gly Trp Thr Arg
65 70 75

<210> 1157

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1157

Leu Tyr Thr Leu Val Leu Gly Thr Ile Ser Leu Pro Ile Asn Leu Pro
1 5 10 15

Gly Thr Asn Tyr Tyr Gln Gly Phe Lys Ala Arg Lys Lys Leu Val Ala
20 25 30

Met Leu Glu Gln Met Ile Ala Glu Arg Arg Ser Ser Gly Gln Val His
35 40 45

Asp Asp Met Leu Asp Ala Leu Leu Thr Gly Val Glu Gly Thr Arg Glu
50 55 60

Lys Leu Thr Asp Glu Gln Ile Ile Asp Leu Ile Ile Thr Leu Ile Tyr
65 70 75 80

Ser Gly Tyr Glu Thr Met Ser Thr Thr Ser Met Met Ala Val Lys Tyr
85 90 95

Leu Ser Asp His Pro
100

<210> 1158

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1158

Ala Arg Phe His Asp Ala Met Asn Ile Leu Gly Pro Gln His Lys Glu
1 5 10 15

Leu Asp Leu Leu Ile Gly Leu Leu Pro Asp Asn Asn Gly Ser Leu Tyr
20 25 30

Gly Asp Leu Lys Arg Ile Cys Glu Ile Asp Leu Gly Leu Val Ser Gln
35 40 45

Cys Cys Cys Thr Lys Gln Val Phe Lys Met Asn Lys Gln Ile Leu Ala
50 55 60

Asn Leu Ala Leu Lys Ile Asn Val Lys Val Gly Gly
65 70 75

<210> 1159
<211> 101
<212> PRT
<213> Zea mays

<400> 1159
Leu Ser Glu Leu Ala Ser Lys Gly Val Leu Ser Cys Ala Ser Gln Glu
1 5 10 15

Val Arg Asp Leu Tyr Asn Leu Leu Glu His Arg Phe Leu Pro Leu Asp
20 25 30

Leu Ala Ser Lys Val Gln Pro Leu Leu Leu Lys Ile Ser Lys Ile Gly
35 40 45

Gly Lys Leu Ser Ser Ala Ser Ser Val Pro Glu Val Lys Leu Ser Gln
50 55 60

Tyr Ile Ser Ala Leu Glu Lys Leu Thr Thr Leu Arg Val Leu Gln Gln
65 70 75 80

Ala Ser Cys Ile Phe Lys Ser Ile Lys Ile Asp Met Leu Ser Arg Met
85 90 95

Ile Pro Phe Phe Asp
100

<210> 1160
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1160
Phe Val Leu Leu Ala Val Leu Phe Ile Ile Leu Lys Val Ala Ala His
1 5 10 15

Phe Val Pro Ile Val Val Ser His Leu Lys Thr Phe Leu Val Val Arg
20 25 30

Val Gln Asn Leu Asn Leu Gly Ile Arg Arg Gly Ser Ser Gln Leu Leu
35 40 45

Glu Arg Ala Leu Asn Val Leu Asp Val Lys Arg Leu Cys Ser Lys Leu
50 55 60

Arg Leu Ser Asn Lys Thr Arg Asp Leu Arg Lys Gly
65 70 75

<210> 1161
<211> 76
<212> PRT
<213> Oryza sativa

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<400> 1161

Phe Val Leu Thr Asn Glu Arg Phe Leu Val Pro Glu Met Leu Phe His
1 5 10 15

Pro Ile Asp Leu Gly Met Asn Gln Ala Gly Leu Ala Glu Cys Ile Val
20 25 30

Arg Ala Ile Gln Ala Cys His Pro His Leu Gln Pro Val Leu Phe Glu
35 40 45

Arg Ile Ile Leu Thr Gly Gly Ser Thr Leu Phe Pro Arg Phe Thr Glu
50 55 60

Arg Leu Glu Lys Glu Leu Arg Pro Leu Val Pro Asp
65 70 75

<210> 1162

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1162

Thr Val Asp Gly Ala Phe Asp Gly Cys Val Glu Phe Arg Glu Val Leu
1 5 10 15

Ala Ala Glu Glu Leu Asp Ala Asp Ala Asp Val His Pro Asp Asp Val
20 25 30

Val Ala Leu Pro Tyr Ser Ser Gly Thr Thr Gly Leu Pro Lys Gly Val
35 40 45

Met Leu Thr His Arg Ser Leu Ile Thr Ser Val Ala Gln Gln Val Asp
50 55 60

Gly Glu Asn Pro Asn Leu Tyr Phe Ser Lys Asp Asp Val Ile Leu Cys
65 70 75 80

Leu Leu Pro Leu Phe His Ile Tyr Ser Leu Asn Ser Val Leu Leu Ala
85 90 95

Gly Leu Arg Ala Gly Ser Thr Ile Val Ile Met Arg Lys Phe Asp Leu
100 105 110

Gly Ala Leu Val Asp Leu Val Arg Lys His Asn Ile Thr Ile
115 120 125

<210> 1163

<211> 76

<212> PRT

<213> Zea mays

<400> 1163

Ser Asn Leu Phe Arg Leu Met Lys Lys Val Gly Ala Asp Asn Asn Leu
1 5 10 15

Leu Val Lys Glu His Thr His Thr Phe Val Asn Lys Gly Gly Thr Ile
20 25 30

Gly Glu Leu Asp Phe Arg Phe Pro Val Gly Ala Pro Leu His Gly Ile
35 40 45

Gln Ala Phe Leu Arg Thr Asn Gln Leu Lys Val Tyr Asp Lys Ala Arg
50 55 60

Asn Ala Val Ala Leu Ala Leu Ser Pro Val Val Arg
65 70 75

<210> 1164

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1164

Val Leu Glu Lys Gln Lys Glu Leu Ile Leu Val Gly Glu Thr Leu Leu
1 5 10 15

Leu Ser Thr Ile Arg Phe Asp Phe Asn Ile Gln His Pro Tyr Glu Pro
20 25 30

Leu Lys Leu Ala Leu Lys Lys Leu Gly Ile Phe Gln Met Glu Val Lys
35 40 45

Gln Val Ala Val Asn Leu Ile Asn Asp Ala Ile Arg Thr Thr Leu Val
50 55 60

Val Gln Phe Lys Pro His Tyr Ile Ala Ala Gly Ser
65 70 75

<210> 1165

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1165

Lys Pro Gln Gly Gly Glu Leu Asp Leu Leu Ile Ala Ile Leu Pro Asp
1 5 10 15

Asn Asn Gly Ser Leu Tyr Gly Asp Leu Lys Arg Ile Cys Glu Thr Asp
20 25 30

Leu Gly Leu Val Ser Gln Cys Cys Leu Thr Lys His Val Phe Lys Met
35 40 45

Ser Lys Gln Tyr Leu Ala Asn Val Ala Leu Lys Ile Asn Val Lys Val
50 55 60

Gly Gly Arg Asn Thr Val Leu Val Asp Ala Leu Thr
65 70 75

<210> 1166

<211> 76

<212> PRT

<213> Oryza sativa

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<400> 1166

Leu Ser Ser Phe Pro Asp Ser Ser Leu Leu His Val Gln His Leu Ala
1 5 10 15

Lys Ser Val Val Phe Glu Ile Leu Val Arg Gly Leu Ile Gly Leu Glu
20 25 30

Ala Gly Glu Glu Met Gln Gln Leu Lys Gln Gln Phe Gln Glu Phe Ile
35 40 45

Val Gly Leu Met Ser Leu Pro Ile Lys Leu Pro Gly Thr Arg Leu Tyr
50 55 60

Arg Ser Leu Gln Ala Lys Lys Lys Met Ala Arg Leu
65 70 75

<210> 1167

<211> 76

<212> PRT

<213> Zea mays

<400> 1167

Ile Thr Phe Ser Glu Ala Pro Val Phe Val Asp Pro His Gly Arg Gly
1 5 10 15

Leu Arg Ala Leu Ser Arg Ala Gln Ile Asp Ser Val Leu Asp Leu Ala
20 25 30

Arg Cys Thr Ile Val Ser Glu Leu Ser Asn Lys Asp Phe Asp Ser Tyr
35 40 45

Val Leu Ser Glu Ser Ser Leu Phe Ile Tyr Pro Leu Lys Ile Val Ile
50 55 60

Lys Thr Cys Gly Thr Thr Lys Leu Leu Leu Thr Ile
65 70 75

<210> 1168

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1168

Arg Gly Gly Gly Leu Glu Leu Val Gly Arg Arg Leu Ser His Ile Ala
1 5 10 15

Ser Leu Cys Lys Val Pro Phe Glu Phe His Pro Leu Ala Ile Ser Gly
20 25 30

Ser Lys Val Glu Ala Ala His Leu Gly Val Ile Pro Gly Glu Ala Leu
35 40 45

Ala Val Asn Phe Thr Leu Glu Leu His His Ile Pro Asp Glu Ser Val
50 55 60

Ser Thr Ala Asn His Arg Asp Arg Leu Leu Arg Met Val Lys Ser Leu
65 70 75 80

Ser Pro Lys Val Leu Thr Leu Val Glu Met Glu Ser Asn Thr Asn Thr
85 90 95

Ala Pro Phe Pro Gln
100

<210> 1169

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1169

Val Arg Asp Asn Leu Tyr Asp Tyr Leu Ser Ser Arg Leu Leu Thr His
1 5 10 15

Pro Val Val Ile Ser Glu Phe Ala Glu Ser Val Leu Gly Val Lys Thr
20 25 30

Glu Glu Leu Ile Arg Arg Met Val Pro Ser Ile Ile Pro Lys Leu Ile
35 40 45

Val Ser His Gln Asn Asn Asp Gln Ala Val Val Thr Leu Asn Glu Leu
50 55 60

Ala Ser His Leu Asn Ser Glu Leu Val Pro Leu Ile Val Asn Ser Leu
65 70 75 80

Pro Lys Val Leu Ser Phe Ala Leu Phe Tyr Glu Asp Gly Gln His Leu
85 90 95

Ser Ser Val Leu Gln Phe Tyr His Thr Glu Thr Gly Thr Asp Ser Lys
100 105 110

Glu Ile Phe Ser Ala Ala Leu Pro Thr Leu Leu Asp Glu Ile
115 120 125

<210> 1170

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1170

Glu Met Leu Arg Ala Leu Pro Ser Leu Val Asp Ile Val Val Pro Glu
1 5 10 15

Gly Lys His Phe Thr Val Cys Gly Asp Val His Gly Gln Phe Tyr Asp
20 25 30

Leu Leu Asn Ile Phe Glu Leu Asn Gly Leu Pro Ser Glu Asp Asn Pro
35 40 45

Tyr Leu Phe Asn Gly Asp Phe Val Asp Arg Gly Ser Phe Ser Leu Glu
50 55 60

Val Ile Leu Thr Leu Phe Ala Phe Lys Cys Met Cys
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65 70 75

<210> 1171
<211> 101
<212> PRT
<213> Solanum lycopersicum

<400> 1171
Gly Asn His Ile Glu Met Gly Leu His Val Phe Phe Gly Cys Tyr Asn
1 5 10 15
Asn Leu Phe Arg Leu Leu Lys Lys Val Gly Ala Glu Lys Asn Leu Leu
20 25
Val Lys Glu His Thr His Thr Phe Val Asn Lys Gly Gly Glu Ile Gly
35 40 45
Glu Leu Asp Phe Arg Phe Pro Val Gly Ala Pro Leu His Gly Ile Asn
50 55 60
Ala Phe Leu Ser Thr Asn Gln Leu Lys Ile Tyr Asp Lys Ala Arg Asn
65 70 75 80
Ala Val Ala Leu Ala Leu Ser Pro Val Val Arg Ala Leu Val Asp Pro
85 90 95
Asp Gly Ala Leu Gln
100

1005_005_PCT_SL17083606

<210> 1173
 <211> 101
 <212> PRT
 <213> Zea mays

<400> 1173

Met Thr Lys Asp Glu Thr Leu Leu Val Phe Thr Leu Val Val Ser Ser
 1 5 10 15

Val Ser Ile Phe Leu Phe Gly Ile Leu Leu Phe Met Val Leu Ile Ser
 20 25 30

Ala Thr Arg Asp Phe Arg Glu Arg Thr Lys Ser Lys Leu Val Lys Ile
 35 40 45

Met Ile Trp Ala Gly Ile Val Val Ile Thr Phe Ala Ile Ala Val Arg
 50 55 60

Ile Tyr Pro Ile Phe Ile Phe Leu Leu Lys Glu Arg Ile Lys Pro Leu
 65 70 75 80

Val Glu Ala Leu Tyr Asp Lys Leu Pro Trp Ile Trp Glu Val Ser Leu
 85 90 95

Ser Arg Tyr Trp Asp
 100

<210> 1174
 <211> 126
 <212> PRT
 <213> Zea mays

<400> 1174

Leu Val Gln Ala Leu Phe Met Asp Gly Arg Ala Ser Asp Ala Tyr Val
 1 5 10 15

Val Leu Glu Glu Met Gln Asn Asn Gly Pro Phe Pro Asp Val Phe Thr
 20 25 30

Tyr Thr Leu Lys Val Leu Lys Asn Gly Gln Trp Ala Glu Glu Glu Ser
 35 40 45

Thr Ile Leu Val Pro Gly Asp Ile Ile Gly Val Lys Leu Gly Asp Ile
 50 55 60

Ile Ser Ala Asp Thr Arg Leu Leu Glu Gly Asp Pro Leu Lys Ile Asp
 65 70 75 80

Gln Ser Ala Leu Thr Gly Asn Phe Cys Ile Cys Ser Ile Val Ala Gly
 85 90 95

Met Leu Val Glu Phe Ile Val Met Tyr Pro Ile Gln Asp Met Val Tyr
 100 105 110

Arg Pro Arg Ile Asp Lys Leu Leu Val Leu Leu Ile Gly Gly
 115 120 125

<210> 1175
 <211> 76
 <212> PRT
 <213> Solanum lycopersicum

<400> 1175
 Lys Ile Ile Glu Ala Ala Ser Lys Leu Val Pro Leu Gly Phe Thr Ser
 1 5 10 15
 Ala Ser Gln Leu His Ala Gln Arg Leu Glu Ile Ile Gln Ile Thr Ser
 20 25 30
 Gly Ser Lys Glu Leu Asp Lys Ile Leu Glu Gly Gly Ile Glu Thr Gly
 35 40 45
 Ser Ile Thr Glu Ile Tyr Gly Glu Phe Arg Cys Gly Lys Thr Gln Leu
 50 55 60
 Cys His Thr Leu Cys Val Thr Cys Gln Leu Pro Leu
 65 70 75

<210> 1176
 <211> 76
 <212> PRT
 <213> Oryza sativa

<400> 1176
 Thr Gly Ile Cys Cys Ala Thr Leu Arg His Lys Gly Thr Val Val Val
 1 5 10 15
 Met Asp Arg Phe Asp Leu Arg Thr Phe Leu Arg Ala Leu Val Asp His
 20 25 30
 Arg Val Met Phe Ala Pro Leu Val Pro Pro Val Met Leu Ala Met Val
 35 40 45
 Lys Ser Pro Val Ala Asp Glu Phe Asp Leu Ser Asp Leu Ala Leu Lys
 50 55 60
 Ser Val Met Thr Ala Ala Ala Pro Leu Ala Pro Asp
 65 70 75

<210> 1177
 <211> 76
 <212> PRT
 <213> Oryza sativa

<400> 1177
 Val Ser Tyr Val Asn Ser Ala Phe Leu Gly His Val Ser Leu Asp Lys
 1 5 10 15
 Ser Ser Gly Asp Asn Ile Leu Ser Asn Leu His Leu Ala Phe Gly Ala
 20 25 30
 Tyr Gly Thr Lys His Ala Ile Arg Ala Arg Lys Val Glu Glu Tyr Leu
 35 40 45

1005_005_PCT_SL17083606
 Thr Gly Lys Ile Leu Ser Ala Ser Val Val Leu Glu Ala Ile Arg Leu
 50 55 60

Leu Arg Glu Thr Ile Val Pro Val Glu Gly Thr Thr
 65 70 75

<210> 1178
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1178
 Ala Leu Lys Leu Tyr Tyr Arg Val Leu Glu Ser Met Cys Arg Ala Glu
 1 5 10 15

Ser Gln Ile Leu Ser Gly Asn Asn Leu Thr Ser Leu Leu Ser Asn Glu
 20 25 30

Arg Phe His Arg Cys Met Ile Ala Cys Ser Ala Glu Leu Val Leu Ala
 35 40 45

Thr His Lys Thr Val Thr Met Met Phe Pro Ala Val Leu Glu Lys Thr
 50 55 60

Gly Ile Thr Ala Phe Asp Leu Ser Lys Val Ile Glu
 65 70 75

<210> 1179
 <211> 101
 <212> PRT
 <213> Oryza sativa

<400> 1179
 Ser Asp Gly Thr Gly Met Ser Gly Gly Thr Ser Arg Val Lys Phe Met
 1 5 10 15

Asp Lys Ile Lys Ser Ala Phe Thr Glu Ala Glu Asp Pro Gln Ile Leu
 20 25 30

Leu Thr Leu Leu Glu Ser Thr Ala Ala Ile Val Lys Ala Ser Asp Ile
 35 40 45

His Gly Glu Val Phe Phe Cys Ser Phe Val Leu Leu Ile Gly Gln Leu
 50 55 60

Gly Asn His Asp Tyr Ile Val Arg Val Thr Ala Leu Arg Leu Leu Gln
 65 70 75 80

Arg Cys Cys Thr Tyr Cys Phe Lys Gly Gly Leu Glu Leu Phe Leu Ser
 85 90 95

Lys Tyr Phe His Val
 100

<210> 1180
 <211> 76
 <212> PRT

<213> Zea mays

<400> 1180

Asn Leu Met Thr Thr Ser Ala Asp Glu Gly Gln Phe Leu Asn Met Leu
 1 5 10 15

Ile Lys Leu Ile Gly Ala Lys Lys Thr Met Glu Ile Gly Val Tyr Thr
 20 25 30

Gly Tyr Ser Leu Leu Ala Thr Ala Leu Ala Leu Pro Glu Asp Gly Thr
 35 40 45

Ile Leu Ala Met Asp Ile Asn Arg Glu Asn Tyr Glu Leu Gly Leu Pro
 50 55 60

Cys Ile Asn Lys Ala Gly Val Gly His Lys Ile Asp
 65 70 75

<210> 1181

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1181

Ser Asp Gly Thr Gly Met Ser Gly Gly Thr Ser Arg Val Lys Phe Met
 1 5 10 15

Asp Lys Ile Lys Ser Ala Phe Thr Glu Ala Glu Asp Pro Gln Ile Leu
 20 25 30

Leu Thr Leu Leu Glu Ser Thr Ala Ala Ile Val Lys Ala Ser Asp Ile
 35 40 45

His Gly Glu Val Phe Phe Cys Ser Phe Val Leu Leu Ile Gly Gln Leu
 50 55 60

Gly Asn His Asp Tyr Ile Val Arg Val Thr Ala Leu Arg Leu Leu Gln
 65 70 75 80

Arg Cys Cys Thr Tyr Cys Phe Lys Gly Gly Leu Glu Leu Phe Leu Ser
 85 90 95

Lys Tyr Phe His Val Arg Asp Asn Leu Tyr Asp Tyr Leu Ser Ser Arg
 100 105 110

Leu Leu Thr His Pro Val Val Ile Ser Glu Phe Ala Glu Ser Val Leu
 115 120 125

Gly Val Lys Thr Glu Glu Leu Ile Arg Arg Met Val Pro Ser Ile Ile
 130 135 140

Pro Lys Leu Ile Val Ser His Gln Asn Asn Asp Gln Ala Val Val Thr
 145 150 155 160

Leu Asn Glu Leu Ala Ser His Leu Asn Ser Glu Leu Val Pro Leu Ile
 165 170 175

Val Asn Ser Leu Pro Lys Val Leu Ser Phe Ala Leu Phe Tyr Glu Asp
180 185 190

Gly Gln His Leu Ser Ser Val Leu Gln
195 200

<210> 1182
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1182
Leu Asp Ile Gly Thr Phe Asn Leu His Ala Leu Phe Arg Glu Val His
1 5 10 15

Ser Leu Ile Lys Pro Ile Ala Ser Val Lys Lys Leu Phe Val Thr Leu
20 25 30

Ser Leu Ser Ser Asp Leu Pro Glu Tyr Val Ile Gly Asp Glu Lys Arg
35 40 45

Leu Met Gln Ile Leu Leu Asn Val Val Gly Asn Ala Val Lys Phe Ser
50 55 60

Lys Glu Gly Asn Val Ser Ile Ser Ala Phe Val Ala
65 70 75

<210> 1183
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1183
Val Thr Leu Leu Pro Ile Pro Leu Phe His Val Phe Gly Phe Met Met
1 5 10 15

Val Leu Arg Ser Val Ser Met Gly Glu Thr Ser Val Leu Met Glu Arg
20 25 30

Phe Asp Phe Ile Ala Ala Leu Arg Ala Ile Glu Arg Tyr Arg Val Thr
35 40 45

Leu Leu Pro Ala Ala Pro Pro Val Leu Val Ala Met Val Lys Tyr Glu
50 55 60

Glu Ala Arg Arg Arg Asp Leu Ser Ser Leu Leu Val
65 70 75

<210> 1184
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1184
Lys Pro Leu Trp Arg Leu Val Leu Glu Gln Phe Asp Asp Thr Leu Val
1 5 10 15

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Lys Ile Leu Leu Gly Ala Ala Phe Ile Ser Phe Val Leu Ala Tyr Val
20 25 30

Asn Gln Asp Glu Thr Gly Glu Ser Gly Phe Glu Ala Tyr Val Glu Pro
35 40 45

Leu Val Ile Leu Trp Ile Leu Val Leu Asn Ala Ile Val Gly Val Trp
50 55 60

Gln Glu Ser Asn Ala Glu Lys Ala Leu Glu Ala Leu
65 70 75

<210> 1185
<211> 126
<212> PRT
<213> Solanum lycopersicum

<220>
<221> MOD_RES
<222> (84)..(84)
<223> Any amino acid

<400> 1185
Met Ala Gln Ile Ser Ser Met Ala Gln Gly Ile Gln Thr Leu Ser Leu
1 5 10 15

Asn Ser Ser Asn Leu Ser Lys Thr Gln Lys Gly Pro Leu Val Ser Asn
20 25 30

Ser Leu Phe Phe Gly Ser Lys Lys Leu Thr Gln Ile Ser Ala Lys Ser
35 40 45

Leu Gly Val Phe Lys Lys Asp Ser Val Leu Arg Val Val Arg Lys Ser
50 55 60

Ser Phe Arg Ile Ser Ala Ser Val Ala Thr Ala Glu Lys Pro His Glu
65 70 75 80

Ile Val Leu Xaa Pro Ile Lys Asp Ile Ser Gly Thr Val Lys Leu Pro
85 90 95

Gly Ser Lys Ser Leu Ser Asn Arg Ile Leu Leu Leu Ala Ala Leu Ser
100 105 110

Glu Gly Arg Thr Val Val Asp Asn Leu Leu Ser Ser Asp Asp
115 120 125

<210> 1186
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1186
Val Arg Thr Arg Ser Leu Cys Gln Leu Leu Arg Leu Asn Arg Thr Ala
1 5 10 15

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Phe Leu Ser Ile Val Gln Ser Asn Val Gly Asp Gly Thr Ile Ile Met
20 25 30

Asn Asn Leu Ile Gln Phe Leu Lys Glu Gln Lys Glu Asn Ser Val Met
35 40 45

Ala Gly Val Val Lys Glu Ile Glu Ser Met Leu Ala Arg Gly Asn Leu
50 55 60

Asp Leu Pro Ile Thr Leu Cys Phe Ala Val Thr Arg
65 70 75

<210> 1187

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1187

Thr Gln Met Gly Leu Gln Leu Asn Ile Asp Val Ser Ser Ser Val Phe
1 5 10 15

Ile Lys Pro Val Pro Val Val Asp Tyr Val Ala Gln Leu Leu Asn Glu
20 25 30

Asp Ile Leu Leu Asp Arg Pro Leu Cys Ser Thr Glu Phe Leu Lys Ile
35 40 45

Lys Glu Ala Leu Glu Gly Leu Lys Val Gln Ile Asn Gly Ile Leu Phe
50 55 60

Asn Thr Tyr His Val Gln Asp Leu Val His Gln Ala
65 70 75

<210> 1188

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1188

Lys Ser His Asn Leu Arg Ser Ile His Ser Thr Phe Pro Phe Leu Glu
1 5 10 15

Asp Asn Phe Ser His Leu Asn Tyr Val Leu Asp Ile Leu Ile Pro Tyr
20 25 30

Pro Val His Leu Glu Ile Leu Val Gln Thr Leu Arg Tyr Trp Val Lys
35 40 45

Asp Ala Ser Ser Leu His Leu Leu Arg Phe Phe Leu His Glu Tyr Cys
50 55 60

Asn Leu Asn Ser Leu Ile Thr Ser Lys Lys Pro Gly
65 70 75

<210> 1189

<211> 76

<212> PRT

<213> Zea mays

<400> 1189

His Ser Glu Lys Val Pro Glu Asn Leu Ile Pro His Lys Thr Phe Lys
 1 5 10 15

Gly Asn Arg Pro Ser Leu Ser Leu Leu Leu Pro Thr Leu Ser Ala Tyr
 20 25 30

Glu Val Gly Gln Leu Leu Ser Ile Tyr Glu His Arg Ile Ala Val Gln
 35 40 45

Gly Phe Ile Trp Gly Ile Asn Ser Phe Asp Gln Trp Gly Val Glu Leu
 50 55 60

Gly Lys Ser Leu Ala Ser Gln Val Arg Lys Gln Leu
 65 70 75

<210> 1190

<211> 76

<212> PRT

<213> Zea mays

<400> 1190

Arg Tyr Pro Pro Gly Asp Pro Ser Lys Arg Ala Phe Ala Tyr Phe Val
 1 5 10 15

Leu Ser Gly Gly Arg Phe Ile Tyr Ala Ser Leu Leu Arg Leu Leu Val
 20 25 30

Leu Lys Phe Val Leu Ser Met Ser Ala Ser Lys Asp Val Leu Ala Leu
 35 40 45

Ala Ser Leu Glu Val Asp Leu Ser Ser Ile Glu Pro Gly Thr Thr Val
 50 55 60

Thr Val Lys Trp Arg Gly Lys Pro Val Phe Ile Arg
 65 70 75

<210> 1191

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 1191

Met Val Cys Pro Asn Ser Asn Pro Val Val Glu Lys Val Cys Glu Leu
 1 5 10 15

Tyr Glu Gln Ile Ser Arg Leu Glu Asn Leu Ser Pro Ser Lys Asp Val
 20 25 30

Asn Val Leu Phe Thr Asp Leu Val His Thr Cys Met Pro Pro Asn Pro
 35 40 45

Ile Asp Val Ser Lys Leu Cys Gln Lys Ile Gln Glu Ile Arg Ser His
 50 55 60

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Leu Ile Lys Leu Cys Gly Gln Ala Glu Gly Leu Leu Glu Ser His Phe
65 70 75 80

Ser Lys Ile Leu Ser Ser Tyr Glu Asn Pro Leu Gln His Leu His Ile
85 90 95

Phe Pro Tyr Phe Asp Asn Tyr Ile Lys Leu Ser Leu Leu Glu Tyr Asn
100 105 110

Ile Leu Thr Lys Asn Thr Thr Asn Ile Pro Lys Lys Ile Ala Phe Ile
115 120 125

Gly Ser Gly Pro Leu Pro Leu Thr Ser Leu Val Leu Ala Thr Lys His
130 135 140

Leu Lys Thr Thr Cys Phe His
145 150

<210> 1192

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1192

Gly Leu Ile Leu Thr Asn Pro Ser Asn Pro Leu Gly Thr Thr Leu Asp
1 5 10 15

Lys Asp Thr Leu Lys Ser Val Leu Ser Phe Thr Asn Gln His Asn Ile
20 25 30

His Leu Val Cys Asp Glu Ile Tyr Ala Ala Thr Val Phe Asp Thr Pro
35 40 45

Gln Phe Val Ser Ile Ala Glu Ile Leu Asp Glu Gln Glu Met Thr Tyr
50 55 60

Cys Asn Lys Asp Leu Val His Ile Val Tyr Ser Leu
65 70 75

<210> 1193

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1193

Pro Ser Glu Ser His Leu Asp Ser Leu Val Gly Gln Ala Leu Phe Gly
1 5 10 15

Asp Gly Ala Ala Ala Ile Ile Ile Gly Ser Asp Pro Ile Ile Gly Val
20 25 30

Glu Arg Pro Leu Phe Glu Leu Val Ser Ala Ala Gln Thr Leu Val Pro
35 40 45

Asp Ser Glu Gly Ala Ile Asp Gly His Leu Arg Glu Val Gly Leu Thr
50 55 60

1005_005_PCT_SL17083606

Phe His Leu Leu Lys Asp Val Pro Gly Leu Ile Ser Lys Asn Ile Glu
65 70 75 80

Lys Ser Leu Leu Glu Ala Phe Gln Pro Leu Gly Ile Ser Asp Trp Asn
85 90 95

Ser Leu Phe Trp Ile
100

<210> 1194

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1194

Arg Lys Ile Ala Glu Met Asp Val Thr Ser Arg Glu Leu Ala Pro Ala
1 5 10 15

Ile Thr Val Leu Gln Leu Phe Leu Ser Ser Ser Lys Pro Val Leu Arg
20 25 30

Phe Ala Ala Val Arg Thr Leu Asn Lys Val Ala Met Thr Arg Pro Leu
35 40 45

Ala Val Thr Asn Cys Asn Val Asp Leu Glu Ser Leu Met Ser Asp Gln
50 55 60

Asn Arg Ser Ile Ala Thr Leu Ala Ile Thr Thr Leu
65 70 75

<210> 1195

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1195

Asp Asn Tyr Ile Lys Leu Ser Leu Leu Glu Tyr Asn Ile Leu Thr Lys
1 5 10 15

Asn Thr Thr Asn Ile Pro Lys Lys Ile Ala Phe Ile Gly Ser Gly Pro
20 25 30

Leu Pro Leu Thr Ser Leu Val Leu Ala Thr Lys His Leu Lys Thr Thr
35 40 45

Cys Phe His Asn Tyr Asp Ile Asp Val Asp Ala Asn Phe Met Ala Ser
50 55 60

Ala Leu Val Ala Ala Asp Pro Asp Met Ser Ser Arg
65 70 75

<210> 1196

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1196

1005_005_PCT_SL17083606

Ala Asp Phe Gly Val His Asn Asp Ala Ala Ala Phe Gly Phe Leu Cys
1 5 10 15

Gln Gly Leu Leu Gly Arg Asp Pro Ala Lys Ser Ala Leu Gly Arg Asp
20 25 30

Gly Pro Lys Leu Ile Thr Lys Trp Val Leu Phe Gln Leu Ser Pro Leu
35 40 45

Leu Ser Leu Gly Leu Pro Thr Leu Val Glu Asp Thr Leu Leu His Ser
50 55 60

Leu Arg Leu Pro Pro Ala Leu Val Lys Lys Asp Tyr
65 70 75

<210> 1197

<211> 101

<212> PRT

<213> Zea mays

<400> 1197

Arg Leu His Asn Arg Ile Ser Met Leu Gln Val Val Ser Glu Leu Asp
1 5 10 15

His Ala Ala Asp Gln Asp Ser Thr Phe Gly Ile Pro Ser Gln Val Val
20 25 30

Val Tyr Asp Ala Ala Ala Leu Ala Asp Phe Gly Leu Leu Ala Ala Leu
35 40 45

Arg Phe Pro Leu Ile Ala Lys Pro Leu Val Ala Asp Gly Thr Ala Lys
50 55 60

Ser His Lys Met Ser Leu Val Tyr His Arg Glu Gly Leu Gly Lys Leu
65 70 75 80

Arg Pro Pro Leu Val Leu Gln Glu Phe Val Asn His Gly Gly Val Ile
85 90 95

Phe Lys Val Tyr Val
100

<210> 1198

<211> 76

<212> PRT

<213> Zea mays

<400> 1198

Glu Tyr Thr Ser Glu Ile Phe Met Gly Gly Lys Asn Thr Ile Val Leu
1 5 10 15

His Asn Thr Cys Glu Asp Ser Leu Leu Ala Ala Pro Ile Ile Leu Asp
20 25 30

Leu Val Leu Leu Ala Glu Leu Ser Thr Arg Ile Gln Leu Lys Ala Glu
35 40 45

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Gly Glu Asp Lys Phe His Ser Phe His Pro Val Ala Thr Ile Leu Ser
50 55 60

Tyr Leu Thr Lys Ala Pro Leu Val Pro Pro Gly Thr
65 70 75

<210> 1199
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1199
Gly Phe Lys Cys Ile Pro Leu Glu Gln His Ile Arg Ser Leu Gly Asp
1 5 10 15

Ser Leu Phe Glu Ile Ile Trp Ile Pro Pro Asp Leu Arg Val Ser Gly
20 25 30

Phe Cys Ser Tyr Leu Ile Ile Leu Gly Lys Pro Ala Arg Lys Ile Ile
35 40 45

Cys Gln Leu Leu Lys Leu Leu Glu Ile Ile His Ala Ala Asn Arg Phe
50 55 60

Ala Ser Arg Phe Thr Ile Ala Asp Leu Val Phe Leu
65 70 75

<210> 1200
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1200
Gln Asn Arg Gly Leu Lys Asn Phe Ser Leu Leu Leu Ser Leu Ser Thr
1 5 10 15

Leu Tyr Ala Pro Leu Leu Ile Leu Lys Tyr Met Asp Leu Phe Leu Lys
20 25 30

Leu Arg Ser Ser Gln Asp Ser Glu Glu Glu Val Pro Ile Asn Lys Arg
35 40 45

Leu Ala Tyr Arg Val Asp Ile Phe Leu Ser Leu Gln Pro Tyr Ala Lys
50 55 60

Pro Leu Val Leu Leu Val Ala Thr Leu Leu Leu Ile
65 70 75

<210> 1201
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1201
Met Arg Gly Ala Met Lys Pro Ser Ile Val His Cys Leu Lys Leu Leu
1 5 10 15

1005_005_PCT_SL17083606

Met Leu Leu Ala Leu Gly Gly Val Thr Met His Val Pro Asp Glu Asp
20 25 30

Asp Val Val Ala Ser Leu Gly Ala Leu Arg Leu Asp Gly His Phe Ser
35 40 45

Phe Asp Asp Ala His Ala Ala Ala Arg Asp Phe Gly Asn Arg Cys Ser
50 55 60

Leu Leu Pro Ala Ala Val Leu His Pro Gly Ser Val
65 70 75

<210> 1202
<211> 76
<212> PRT
<213> Zea mays

<400> 1202
Phe Glu Asp Phe Ala Asn His Asn Ala Phe Asp Leu Leu Glu Lys Tyr
1 5 10 15

Ser Lys Ser His Leu Val Phe Asn Asp Asp Ile Gln Gly Thr Ala Ser
20 25 30

Val Val Leu Ala Gly Leu Leu Ala Ala Leu Lys Met Val Gly Gly Thr
35 40 45

Leu Ala Glu Gln Thr Tyr Leu Phe Leu Gly Ala Gly Glu Ala Gly Thr
50 55 60

Gly Ile Ala Glu Leu Ile Ala Leu Glu Ile Ser Lys
65 70 75

<210> 1203
<211> 76
<212> PRT
<213> Zea mays

<400> 1203
Val Val Pro Phe Leu Asn Ser Met Arg Leu Leu Ile Tyr Gly Leu Arg
1 5 10 15

Leu Tyr Thr Asp Glu Ala Leu Val Lys Ser Val Thr Arg Glu Gly Lys
20 25 30

Pro Glu Glu Leu Leu Arg Gly Pro Leu Tyr Tyr Val Leu Val Leu Leu
35 40 45

Phe Ser Val Leu Val Phe Trp Arg Glu Ser Pro Ile Gly Ile Val Ser
50 55 60

Leu Ser Met Met Ser Gly Gly Asp Gly Phe Ala Asp
65 70 75

<210> 1204
<211> 126
<212> PRT

<213> Zea mays

<400> 1204

Ser Ile Phe Gly Glu Leu His Thr Gln Ile Lys Asn Lys Lys Leu Thr
1 5 10 15

Val Asp Val Lys Ala Asn Ser Glu Ser Asp Leu Leu Thr Thr Ile Thr
20 25 30

Val Asp Glu Phe Gly Thr Pro Gly Leu Lys Ser Ile Ile Asn Leu Val
35 40 45

Val Pro Asp Gln Arg Ser Gly Lys Leu Glu Phe Gln Tyr Leu His Glu
50 55 60

Tyr Ala Gly Val Asn Ala Ser Val Gly Leu Asn Ser Asn Pro Met Val
65 70 75 80

Asn Leu Ser Gly Ala Phe Gly Ser Lys Ala Leu Ser Val Gly Val Asp
85 90 95

Val Ser Phe Asp Thr Ala Thr Ser Asp Phe Thr Lys Tyr Asn Ala Ala
100 105 110

Leu Ser Leu Thr Ser Pro Asp Leu Ile Ala Ser Leu His Leu
115 120 125

<210> 1205

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1205

Ala Ala Arg Ala Ile Thr Glu Leu Asn Gly Val Thr Ser Arg Glu Leu
1 5 10 15

Thr Pro Ala Ile Thr Val Leu Gln Leu Phe Leu Ser Ser Ser Lys Pro
20 25 30

Val Leu Arg Phe Ala Ala Val Arg Thr Leu Asn Lys Val Ala Ser Thr
35 40 45

His Pro Leu Ala Val Thr Asn Cys Asn Ile Asp Met Glu Ser Leu Ile
50 55 60

Ser Asp Gln Asn Arg Ser Ile Ala Thr Leu Ala Ile Thr Thr Leu Leu
65 70 75 80

Lys Thr Gly Asn Glu Ser Ser Val Asp Arg Leu Met Lys Gln Met Thr
85 90 95

Asn Phe Met Ser Asp
100

<210> 1206

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1206

Met Ala Gln Thr Met Leu Leu Thr Ala Asn Ala Lys Val Asp Leu Arg
 1 5 10 15

Ser Lys Glu Ser Leu Val Glu Arg Leu Lys Pro Lys Pro Leu Ser Ser
 20 25 30

Leu Phe Leu Pro Ser Leu Pro Leu Arg Phe Ser Ser Ser Ser Thr Asn
 35 40 45

Ala Ser Ser Ser Lys Phe Thr Ser Thr Thr Val Ala Leu Phe Lys Ser
 50 55 60

Lys Ala Lys Ala Pro Pro Lys Lys Val Ala Pro Pro Lys Glu Lys Gln
 65 70 75 80

Lys Val Glu Asp Gly Ile Phe Gly Thr Ser Gly Gly Ile Gly Phe Thr
 85 90 95

Lys Gln Asn Glu Leu Phe Val Gly Arg Val Ala Met Ile Gly Phe Ala
 100 105 110

Ala Ser Leu Leu Gly Glu Ala Ile Thr Gly Lys Gly Ile Leu Ala Gln
 115 120 125

Leu Asn Leu Glu Thr Gly Ile Pro Ile Tyr Glu Ala Glu Pro Leu Leu
 130 135 140

Leu Phe Phe Ile Leu Phe Asn Leu Leu Gly Ala Ile Gly Ala Leu Gly
 145 150 155 160

Asp Arg Gly Lys Phe Val Asp Asp Pro Thr Pro Pro Thr Gly Leu Glu
 165 170 175

Lys Ala Val Ile Pro Pro Gly Lys Ser Phe Lys Ser Ala Leu Gly Leu
 180 185 190

Ser Glu Gly Gly Pro Leu Phe Gly Phe Thr Lys Ala Asn Glu Leu Phe
 195 200 205

Val Gly Arg Leu Ala Gln Leu Gly Ile Ala Phe Ser Ile Ile Gly Glu
 210 215 220

Ile Ile
 225

<210> 1207

<211> 76

<212> PRT

<213> Zea mays

<400> 1207

Thr Ile Tyr Asn Ser Glu Gly Lys Lys Phe Ala Leu His Leu Val Pro
 Page 702

1 5 10 15
 Ser Gly Ile Leu His Glu Gly Thr Leu Cys Val Val Gly Asn Gly Ala
 20 25 30
 Val Ile His Val Pro Gly Phe Phe Gly Glu Ile Asp Gly Leu Glu Ser
 35 40 45
 Asn Gly Val Arg Cys Gly Gly Arg Ile Leu Val Ser Asp Arg Ala His
 50 55 60
 Leu Leu Phe Asp Leu His Gln Ala Val Asp Gly Leu
 65 70 75
 <210> 1208
 <211> 76
 <212> PRT
 <213> Oryza sativa
 <400> 1208
 Leu Pro Glu Arg Lys Asn Cys Asp Ile Tyr Gly Pro Trp Lys Arg Met
 1 5 10 15
 Cys Leu Val Lys Tyr Gly Ile Val Thr Gln Cys Leu Ala Pro Thr Lys
 20 25 30
 Ile Asn Asp Gln Tyr Leu Thr Asn Val Leu Leu Lys Ile Asn Ala Lys
 35 40 45
 Leu Gly Gly Leu Asn Ser Leu Leu Gln Ile Glu Arg Asn Gln Ala Ile
 50 55 60
 Pro Leu Leu Ser Lys Thr Pro Thr Ile Ile Leu Gly
 65 70 75
 <210> 1209
 <211> 76
 <212> PRT
 <213> Oryza sativa
 <400> 1209
 Leu Cys Tyr Lys Pro Pro Gly Gly Asn Val Lys Arg Lys Leu Ala Ile
 1 5 10 15
 Val Gly Lys Gly Leu Thr Phe Asp Arg Phe Tyr Leu Ser Leu Asp Asn
 20 25 30
 Leu Leu Ile Val Thr Lys Phe Val Cys Ile Gly Gly Tyr Asn Ile Lys
 35 40 45
 Ile Gly Ala Val Thr Thr Ile Glu Leu Met Lys Lys Asp Met Gly Gly
 50 55 60
 Ser Ala Ala Leu Phe Gly Ala Ala Lys Ala Leu Gly
 65 70 75

<210> 1210

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1210

Arg Gly Asp Leu Lys Val Thr Asp Phe Gly Leu Ser Ala Leu Asp Gly
 1 5 10 15

Gly Leu Arg Gly Asp Gly Leu Leu His Thr Thr Cys Gly Thr Pro Ala
 20 25 30

Tyr Val Ala Pro Glu Val Leu Leu Lys Arg Gly Tyr Asp Gly Ala Lys
 35 40 45

Ala Asp Ile Trp Ser Cys Gly Val Ile Leu Phe Val Leu Leu Ala Gly
 50 55 60

Tyr Leu Pro Phe Asn Glu Thr Asn Leu Val Ile Leu
 65 70 75

<210> 1211

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1211

Ser Gly Val Gly Ile Asp Asp Trp Trp Arg Asn Glu Gln Phe Trp Val
 1 5 10 15

Ile Gly Gly Val Ser Ser His Leu Phe Ala Leu Phe Gln Gly Leu Leu
 20 25 30

Lys Val Ile Ala Gly Ile Asp Thr Ser Phe Thr Val Thr Ser Lys Gly
 35 40 45

Gly Asp Asp Glu Glu Phe Ser Glu Leu Tyr Thr Phe Lys Trp Thr Thr
 50 55 60

Leu Leu Ile Pro Pro Thr Thr Leu Leu Leu Leu Asn
 65 70 75

<210> 1212

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1212

Leu Ile Phe Val Thr Arg Ser Arg Ser Trp Ser Phe Val Glu Arg Pro
 1 5 10 15

Gly Leu Leu Leu Val Phe Ala Phe Phe Val Ala Gln Leu Val Ala Thr
 20 25 30

Leu Ile Ala Val Tyr Ala Asn Trp Ser Phe Ala Ala Ile Glu Gly Ile
 35 40 45

Gly Trp Gly Trp Ala Gly Val Ile Trp Leu Tyr Asn Ile Val Thr Tyr
 Page 704

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Ser Lys Leu Ser Asn Ile Lys Thr Met Val Leu Ser Phe Asn Lys Phe
 50 55 60

Val Gly Gly Leu Pro Asp Ser Phe Ser Asn Leu Leu
 65 70 75

<210> 1215
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1215
 Met Ile Ile Asp Arg Val Glu Val Glu Thr Ile Asn Ser Phe Ser Lys
 1 5 10 15

Leu Glu Leu Phe Lys Glu Ile Tyr Gly Leu Ile Trp Ile Leu Pro Ile
 20 25 30

Phe Ala Leu Leu Leu Gly Ile Thr Ile Glu Val Leu Val Ile Val Trp
 35 40 45

Leu Glu Arg Glu Ile Ser Ala Ser Ile Gln Gln Arg Ile Gly Pro Glu
 50 55 60

Tyr Ala Gly Pro Leu Gly Leu Leu Gln Ala Ile Ala
 65 70 75

<210> 1216
 <211> 76
 <212> PRT
 <213> Solanum lycopersicum

<400> 1216
 Pro Ala Pro Ala Leu Ser Asn Gly Phe Val Thr Phe Gly Ser Phe Asn
 1 5 10 15

Asn Leu Ala Lys Ile Thr Pro Lys Val Leu Lys Val Trp Ala Arg Ile
 20 25 30

Leu Ser Ala Val Pro His Ser Arg Leu Ile Val Lys Cys Lys Pro Phe
 35 40 45

Cys Cys Asp Ser Val Arg Gln Arg Phe Leu Ser Ile Leu Glu Gln Leu
 50 55 60

Gly Leu Glu Pro Gln Arg Val Asp Leu Leu Pro Leu
 65 70 75

<210> 1217
 <211> 76
 <212> PRT
 <213> Oryza sativa

<400> 1217
 Cys His Val Asn Asn Val Leu His Arg Asp Ile Lys Gly Ala Asn Leu
 1 5 10 15

Leu Ile Ser Gly Gly Gly Lys Leu Leu Lys Leu Ala Asp Phe Gly Leu
 Page 706

20

25

30

Ala Arg Pro Phe Thr Arg Asp Gly Ser Phe Thr Asn His Val Ile Thr
 35 40 45

Leu Trp Tyr Arg Pro Pro Glu Leu Leu Leu Gly Ala Thr Asn Tyr Ala
 50 55 60

Glu Ala Val Asp Ile Trp Ser Val Gly Cys Ile Phe
 65 70 75

<210> 1218

<211> 76

<212> PRT

<213> Zea mays

<400> 1218

Glu Leu Ile Arg Lys Leu Gln Pro Gln Val Val Val Thr Gly Met Ala
 1 5 10 15

Gln Phe Glu Ala Ile Thr Ser Ala Ala Phe Glu Asn Leu Leu Asn Val
 20 25 30

Thr Lys Asp Val Gly Ser Arg Leu Phe Leu Asp Ile Ser Glu His Leu
 35 40 45

Glu Leu Ser Ser Leu Pro Ser Ser Asn Gly Val Leu Lys Tyr Leu Ala
 50 55 60

Gly Lys Thr Leu Pro Ser His Ala Ala Ile Leu Cys
 65 70 75

<210> 1219

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1219

Met Ser Glu Leu Leu Phe Glu Thr Tyr Gly Val Pro Ser Ile Gly Asn
 1 5 10 15

Asp Thr Tyr Leu Phe Val Pro Leu Leu Ser Ile Val His Gly Ser Phe
 20 25 30

Glu Val Arg Ile Val Asp Ala Lys Asp Val Ser Ser Tyr Phe Leu Lys
 35 40 45

Gly Glu Pro Val Leu Gly Ala Cys Cys Arg Thr Asn Val Gly Gly Phe
 50 55 60

His Ile Thr Asp Phe Leu Arg Gln Leu Leu Ser Leu
 65 70 75

<210> 1220

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1220

His Gly Glu Pro Gly Ala Ala Val Ala Asp Leu Gln Pro Val Asp Val
 1 5 10 15

Val Val Ser His Val Leu Lys Glu Ile Leu Ser Pro Glu Thr Asn Tyr
 20 25 30

Val Pro Ile Thr Arg Gly Ser Arg Val Val Leu Leu Ile Asn Gly Leu
 35 40 45

Gly Ala Thr Pro Leu Met Glu Leu Met Ile Ile Ala Gly Lys Ala Val
 50 55 60

Pro Glu Leu Gln Leu Glu His Gly Leu Ala Val Asp
 65 70 75

<210> 1221

<211> 76

<212> PRT

<213> Zea mays

<400> 1221

Glu Asp His Leu His Ile Ile Leu His Phe Ser Thr Asn Ile Ile Cys
 1 5 10 15

Leu Ala Ile Leu Ser Gly Ser Phe Phe Leu Gly Lys Glu Glu Leu Val
 20 25 30

Ile Leu Asn Ser Trp Val Gln Glu Phe Phe Tyr Asn Leu Asn Asp Ser
 35 40 45

Ile Lys Ala Phe Phe Ile Leu Leu Val Thr Asp Phe Phe Val Gly Phe
 50 55 60

His Ser Thr Arg Gly Trp Glu Leu Leu Ile Arg Trp
 65 70 75

<210> 1222

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1222

Ser Cys Gly Glu Asn Ser Phe His Phe Pro Ser His Gly Lys Pro Phe
 1 5 10 15

Ser Leu Arg Leu Ala Leu Ser Pro Ser Arg Gly Ile Leu Val Ile Gly
 20 25 30

Ser Ile Gly Thr Gly Arg Ser Tyr Leu Val Lys Tyr Leu Ala Thr Asn
 35 40 45

Ser Tyr Val Pro Phe Ile Thr Val Phe Leu Asn Lys Phe Leu Asp Asn
 50 55 60

Lys Ser Lys Gly Phe Leu Leu Asp Glu Ile Asp Ile

65

70

75

<210> 1223

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1223

Ser Leu Gly Thr Asn Cys Pro Pro Val Arg Ile Val Ser Lys Gly Gly
 1 5 10 15

Leu Pro Gly Gly Lys Val Lys Leu Ser Gly Ser Ile Ser Ser Gln Tyr
 20 25 30

Leu Thr Ala Leu Leu Met Ala Ala Pro Leu Ala Leu Gly Asp Val Glu
 35 40 45

Ile Glu Ile Ile Asp Lys Leu Ile Ser Val Pro Tyr Val Glu Met Thr
 50 55 60

Leu Lys Leu Met Glu Arg Phe Gly Val Phe Val Glu
 65 70 75

<210> 1224

<211> 76

<212> PRT

<213> Zea mays

<400> 1224

Arg Ile Gly Tyr Ser Met Ile Thr Asp Ala Glu Glu Lys Gly Leu Ile
 1 5 10 15

Thr Pro Gly Val Ser Val Leu Ile Glu Pro Thr Ser Gly Asn Thr Gly
 20 25 30

Ile Gly Leu Ala Phe Met Ala Ala Ala Lys Gly Tyr Lys Leu Thr Leu
 35 40 45

Thr Met Pro Ala Ser Met Ser Met Glu Arg Arg Ile Ile Leu Lys Ala
 50 55 60

Phe Gly Ala Glu Leu Val Leu Thr Asp Pro Leu Leu
 65 70 75

<210> 1225

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1225

Glu Ser Phe Phe Thr Gln Leu Tyr Ser Val Thr Leu Ala Ser Ser Gly
 1 5 10 15

Glu Leu Ile Cys Lys Asp Phe Phe Leu Tyr Met Glu Ser Asn Gln Phe
 20 25 30

Gly Leu Phe Ala Thr Ser Thr Ala Gln Ile His Asp Ala Pro Pro Thr
 35 40 45

Gly Gly Ala Ile Gln Gly Val Pro Ser Val Glu Lys Ile Thr Phe His
50 55 60

Leu Leu Arg Leu Val Asp Gly Ala Ile Leu Asp Glu Arg Val Phe His
65 70 75 80

Asn Asp Tyr Val Asn Leu Ala His Ser Ile Gly Ala Phe Leu Tyr Asp
85 90 95

Asp Leu Leu Ala Ile
100

<210> 1226
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1226
Thr Ala Ile Phe Ile Val Lys Leu Gly Ile Pro Gly Arg Leu Asn Glu
1 5 10 15

Ser Lys Leu Pro Phe Thr Ala Gly Leu Pro Ala Asn His Met Gln Met
20 25 30

Thr Phe Gln Gly Leu Lys Val Leu Val Met Asp Asp Asn Gly Phe Ser
35 40 45

Arg Met Val Thr Lys Ser Leu Leu Val His Leu Gly Cys Asp Val Thr
50 55 60

Thr Ile Gly Ser Gly Asp Glu Cys Leu Arg Ile Leu
65 70 75

<210> 1227
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1227
Leu Leu Met Leu Ala Val Leu Cys His Ser Leu Pro Leu Met Leu Arg
1 5 10 15

Tyr Ala Val Thr Ser Gly Asp His Ala Ile Val Ser Gly Asp Ala Ala
20 25 30

Leu His Leu Ser Arg Ala Cys Ser Ile Leu Met Leu Ile Ala Tyr Leu
35 40 45

Ala Tyr Leu Phe Phe Gln Leu Asn Thr His Arg Gln Leu Phe Glu Pro
50 55 60

Gln Gln Val Glu Asp Asp Asp Asp Asp Asp Leu Val Ile Ala Gln Asp
65 70 75 80

Asp Glu Pro Val Leu Gly Phe Ser Ser Ala Met Ile Trp Leu Ala Leu
Page 710

Met Thr Leu Leu Thr
100

<210> 1228
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1228
Thr Ala Val Gly Met Arg Thr Gln Trp Gly Lys Leu Met Ala Val Leu
1 5 10 15

Thr Asp Gly Gly Asp Asp Glu Thr Pro Leu Gln Thr Arg Leu Asn Gly
20 25 30

Val Ala Asn Thr Ile Gly Lys Ile Gly Leu Phe Phe Ala Val Leu Thr
35 40 45

Phe Ile Val Leu Ser Gln Gly Ile Ile Gly Gln Lys Tyr Leu Asp Gly
50 55 60

Leu Leu Leu Ser Trp Ser Gly Asp Asp Val Leu Glu
65 70 75

<210> 1229
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1229
Met Glu Ala Ser Val Leu Lys Tyr Leu Lys Phe Glu Met Thr Ala Pro
1 5 10 15

Thr Thr Lys Cys Phe Leu Arg Arg Phe Leu Arg Ala Ala Gln Val Cys
20 25 30

His Glu Ala Pro Val Leu His Leu Glu Phe Leu Ala Asn Tyr Ile Ala
35 40 45

Glu Leu Ser Leu Leu Glu Tyr Ser Leu Ile Cys Tyr Val Pro Ser Leu
50 55 60

Ile Ala Ala Ser Ser Ile Phe Leu Ala Lys Phe Ile
65 70 75

<210> 1230
<211> 76
<212> PRT
<213> Zea mays

<400> 1230
Trp Phe His Tyr His Lys Ala Ala Pro Lys Leu Ala Trp Phe Gln Asp
1 5 10 15

Val Glu Ser Met Leu Asn His His Leu Ala Gly Leu Leu Gly Leu Gly
20 25 30

Ser Leu Ser Trp Ala Gly His Gln Ile His Val Ser Leu Pro Ile Asn
35 40 45

Gln Phe Leu Asp Ala Gly Val Asp Pro Lys Glu Ile Pro Leu Pro His
50 55 60

Glu Phe Ile Leu Asn Arg Asp Leu Leu Ala Gln Leu
65 70 75

<210> 1231

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1231

Asn Ala Pro Gly Lys His Leu Gly Val Val Gly Leu Gly Gly Leu Gly
1 5 10 15

His Leu Gly Val Lys Phe Gly Lys Ala Phe Gly Met Lys Val Thr Val
20 25 30

Ile Ser Ser Ser Pro Ala Lys Arg Glu Glu Ala Leu Glu Arg Leu Gly
35 40 45

Ala Asp Ala Phe Leu Ser Ser Arg Asp Gly Glu Gly Met Ala Ala Ala
50 55 60

Ala Ala Thr Met Asp Gly Ile Ile Asp Thr Val Ser Ala Gly His Pro
65 70 75 80

Leu Val Pro Leu Leu Ser Leu Leu Lys Pro Lys Gly Gln Met Val Val
85 90 95

Val Gly Ala Pro Ala
100

<210> 1232

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1232

Ile Asp Asn Leu Leu Val Leu Leu Ile Gly Gly Ile Pro Ile Ala Met
1 5 10 15

Pro Thr Val Leu Ser Val Thr Met Ala Ile Gly Ser His Arg Leu Ala
20 25 30

Gln Gln Gly Ala Ile Thr Lys Arg Met Thr Ala Ile Glu Glu Met Ala
35 40 45

Gly Met Asp Val Leu Cys Ser Asp Lys Thr Gly Thr Leu Thr Leu Asn
50 55 60

Lys Leu Thr Val Asp Lys Asn Leu Val Glu Val Phe

65

70

75

<210> 1233

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1233

Leu Pro Pro Leu Ala Ala Pro Leu Val Leu Val Pro Asp Thr Phe Gln
 1 5 10 15

Gln Gln His Asp Asp Asp Gln Phe Asp Phe Phe Phe His Ala Leu Leu
 20 25 30

Glu Thr Asp Pro Glu Thr Pro Val Glu Met Gly Val Gly Val Gly Gln
 35 40 45

Asp Asp Ala Ala Ala Val Leu Tyr Ser Ser Gly Thr Ser Gly Arg Ser
 50 55 60

Lys Gly Val Val Val Thr His Arg Asn Leu Ile Ala Met Val Glu Leu
 65 70 75 80

Phe Val Arg Phe Glu Ala Ser Gln Tyr Thr Arg Pro Ala Arg Asp Asn
 85 90 95

Val Tyr Leu Ala Ala Leu Pro Met Phe His Val Tyr Gly Leu Ser Leu
 100 105 110

Phe Ala Val Gly Leu Leu Ser Leu Gly Cys Thr Val Val Val Met Arg
 115 120 125

Arg Phe Asn Val Asp Asp Ala Val Lys Ala Ile Arg Lys Tyr Lys Val
 130 135 140

Thr His Leu Pro Leu Val Pro Pro Ile Met Ser Ala Leu Leu Arg Ala
 145 150 155 160

Asn Pro Pro Leu Glu Leu Asp Ser Leu Leu Gln Val Ser Ser Gly Ala
 165 170 175

Ala Pro Leu Asn His Thr Leu Ile His His Phe Leu His Ala Phe Pro
 180 185 190

His Val Asp Phe Ile Gln Gly Tyr Gly
 195 200

<210> 1234

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1234

Pro Gly Ile Asp Asn Leu Leu Val Leu Leu Ile Gly Gly Ile Pro Ile
 1 5 10 15

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Ala Met Pro Thr Val Leu Ser Val Thr Met Ala Ile Gly Ser His Arg
20 25 30

Leu Ala Gln Gln Gly Ala Ile Thr Lys Arg Met Thr Ala Ile Glu Glu
35 40 45

Met Ala Gly Met Asp Val Leu Cys Ser Asp Lys Thr Gly Thr Leu Thr
50 55 60

Leu Asn Lys Leu Thr Val Asp Lys Ala Leu Ile Glu
65 70 75

<210> 1235

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1235

Lys Glu Leu Asp Ser Leu Val Asn Val Tyr Thr Ala Val Thr Gly Gln
1 5 10 15

Glu Pro Ile Ala Tyr Leu Gly Pro Arg Lys Trp Ser Ala Ala Arg Thr
20 25 30

Gly Ser Thr Gln His Val Lys Leu Trp Lys Ser Ser Ile Ile Glu Ala
35 40 45

Leu Lys Ser Glu Pro Tyr Leu Ala Phe Ser Ile Leu Phe Ile Cys Leu
50 55 60

Lys Ile Leu Val Ala Phe Phe Pro Lys Phe Phe Ser Cys Ile Lys Gly
65 70 75 80

Ile Trp Val Gln Tyr Phe Arg His Ala Asn Leu Gly Ile Leu Ala Lys
85 90 95

Leu Thr Gln Leu Leu
100

<210> 1236

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1236

Gly Met Thr Thr Ile Lys Leu Arg Pro His Cys Gly Glu Ala Gly Asp
1 5 10 15

Ile Asp His Leu Ala Ala Ala Phe Leu Thr Ser His Asn Ile Ala His
20 25 30

Gly Val Asn Leu Lys Lys Ser Pro Val Leu Gln Tyr Leu Tyr Tyr Leu
35 40 45

Ala Gln Ile Gly Leu Ala Met Ser Pro Leu Ser Asn Asn Ser Leu Phe
50 55 60

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Ile Asp Tyr His Arg Asn Pro Phe Pro Thr Phe Phe Leu Arg Gly Leu
65 70 75 80

Asn Val Ser Leu Ser Thr Asp Asp Pro Leu Gln Ile His Leu Thr Lys
85 90 95

Glu Pro Leu Val Glu
100

<210> 1237

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1237

Ala Asn Asp Ala Val Ala Leu Pro Tyr Ser Ser Gly Thr Thr Gly Leu
1 5 10 15

Pro Lys Gly Val Met Leu Ser His Arg Gly Leu Val Thr Ser Val Ala
20 25 30

Gln Leu Val Asp Gly Glu Asn Pro Asn Leu His Leu Arg Glu Asp Asp
35 40 45

Val Val Leu Cys Val Leu Pro Met Phe His Val Tyr Ser Leu His Ser
50 55 60

Ile Leu Leu Cys Gly Met Arg Ala Gly Ala Ala Ile Val Val Met Lys
65 70 75 80

Arg Phe Asp Thr Val Lys Met Leu Gln Leu Val Glu Arg His Gly Val
85 90 95

Thr Ile Ala Pro Leu
100

<210> 1238

<211> 76

<212> PRT

<213> Zea mays

<400> 1238

Asn Leu Gln Asp Thr Val Leu Glu Leu Glu Phe Gln Gly Ile Lys Lys
1 5 10 15

Lys Phe Thr Met Leu Gln Thr Trp Pro Val Arg Ser Pro Arg Pro Val
20 25 30

Ala Ser Lys Leu Ala Ala Asp Thr Pro Leu Leu Thr Gly Gln Arg Val
35 40 45

Leu Asp Ala Leu Phe Pro Ser Val Leu Gly Gly Thr Cys Ala Ile Pro
50 55 60

Gly Ala Phe Gly Cys Gly Lys Thr Val Ile Ser Gln
65 70 75

<210> 1239

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1239

Tyr Ile Leu His Pro Arg Gly Ala Ile Ile Gly Asp Thr Ile Val Ser
1 5 10 15

Gly Thr Glu Val Pro Ile Lys Met Gly Asn Ala Leu Pro Leu Thr Asp
20 25 30

Met Pro Leu Gly Thr Ala Ile His Asn Ile Glu Ile Thr Leu Gly Lys
35 40 45

Gly Gly Gln Leu Ala Arg Ala Ala Gly Ala Val Ala Lys Leu Ile Ala
50 55 60

Lys Glu Gly Lys Ser Ala Thr Leu Lys Leu Pro Ser
65 70 75

<210> 1240

<211> 176

<212> PRT

<213> Zea mays

<400> 1240

Val Val Pro Phe Leu Asn Ser Met Arg Leu Leu Ile Tyr Gly Leu Arg
1 5 10 15

Leu Tyr Thr Asp Glu Ala Leu Val Lys Ser Val Thr Arg Glu Gly Lys
20 25 30

Pro Glu Glu Leu Leu Arg Gly Pro Leu Tyr Tyr Val Leu Val Leu Leu
35 40 45

Phe Ser Val Leu Val Phe Trp Arg Glu Ser Pro Ile Gly Ile Val Ser
50 55 60

Leu Ser Met Met Ser Gly Gly Asp Gly Phe Ala Asp Ile Val Gly Arg
65 70 75 80

Arg Tyr Gly Ser Ala Lys Leu Pro Phe Asn Arg Lys Lys Ser Trp Ala
85 90 95

Gly Ser Ile Ser Met Phe Ile Ser Gly Phe Leu Leu Ser Ala Met Met
100 105 110

Met Leu Tyr Phe Ser Ser Leu Gly Tyr Ile Asp Val Ile Trp Glu Glu
115 120 125

Ala Leu Gly Lys Leu Ala Leu Val Ala Leu Ala Ala Thr Val Val Glu
130 135 140

Cys Val Pro Val Thr Glu Val Val Asp Asp Asn Ile Ser Val Pro Leu

<400> 1243

Glu Gly His Leu His Ile Ile Leu His Phe Ser Thr Asn Ile Ile Cys
 1 5 10 15

Leu Ala Ile Leu Ser Gly Ser Phe Phe Leu Gly Lys Glu Glu Leu Val
 20 25 30

Ile Leu Asn Ser Trp Val Gln Glu Phe Phe Tyr Asn Leu Asn Asp Ser
 35 40 45

Val Lys Ala Phe Phe Ile Leu Leu Val Thr Asp Phe Phe Val Gly Phe
 50 55 60

His Ser Thr Arg Gly Trp Glu Leu Leu Ile Arg Trp
 65 70 75

<210> 1244

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1244

Tyr Ala Ser Arg Thr Leu Leu Phe Leu Gln Asp Asn Gly Ser Leu Lys
 1 5 10 15

Pro Leu Ala Ile Glu Leu Ser Leu Pro His Pro Asp Gly Asp Gln Phe
 20 25 30

Gly Val Thr Ser Lys Val Tyr Thr Pro Ser Asp Gln Gly Val Glu Gly
 35 40 45

Ser Ile Trp Gln Leu Ala Lys Ala Tyr Val Ala Val Asn Asp Ser Gly
 50 55 60

Val His Gln Leu Ile Ser His Trp Leu Asn Thr His Ala Val Ile Glu
 65 70 75 80

Pro Phe Val Ile Ala Thr Asn Arg Gln Leu Ser Val Leu His Pro Ile
 85 90 95

His Lys Leu Leu Tyr
 100

<210> 1245

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 1245

Phe Gln Phe Met Gly Gly Ser Met Gly Ser Val Val Gly Glu Lys Ile
 1 5 10 15

Thr Arg Leu Ile Glu His Ala Ala Asn Gln Asn Leu Pro Leu Met Ile
 20 25 30

Val Cys Ala Ser Gly Gly Ala Arg Met Gln Glu Gly Ser Leu Ser Leu
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35

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45

Met Gln Met Ala Lys Ile Ser Ser Ala Leu Tyr Asp Tyr Gln Leu Asn
 50 55 60

Lys Lys Leu Phe Tyr Val Ser Ile Leu Thr Ser Pro Thr Thr Gly Gly
 65 70 75 80

Val Thr Ala Ser Phe Gly Met Leu Gly Asp Ile Ile Ile Ala Glu Pro
 85 90 95

Asn Ala Tyr Ile Ala Phe Ala Gly Lys Arg Val Ile Glu Gln Thr Leu
 100 105 110

Asn Lys Thr Val Pro Glu Gly Ser Gln Ala Ala Glu Tyr Leu Phe Gln
 115 120 125

Lys Gly Leu Phe Asp Leu Ile Val Pro Arg Asn Leu Leu Lys Ser Val
 130 135 140

Leu Ser Glu Leu Phe Lys Leu
 145 150

<210> 1246

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1246

Met Ala Ala Lys Asn Ser Glu Met Lys Phe Ala Ile Phe Phe Val Val
 1 5 10 15

Leu Leu Thr Thr Thr Leu Val Asp Met Ser Gly Ile Ser Lys Met Gln
 20 25 30

Val Met Ala Leu Arg Asp Ile Pro Pro Gln Glu Thr Leu Leu Lys Met
 35 40 45

Lys Leu Leu Pro Thr Asn Ile Leu Gly Leu Cys Asn Glu Pro Cys Ser
 50 55 60

Ser Asn Ser Asp Cys Ile Gly Ile Thr Leu Cys Gln
 65 70 75

<210> 1247

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1247

Thr Thr Gly Leu Pro Lys Gly Val Met Leu Thr His Arg Ser Leu Val
 1 5 10 15

Thr Ser Val Ala Gln Gln Val Asp Gly Glu Asn Pro Asn Leu Tyr Phe
 20 25 30

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Arg Arg Glu Asp Val Val Leu Cys Leu Leu Pro Leu Phe His Ile Tyr
35 40 45

Ser Leu Asn Ser Val Leu Leu Ala Gly Leu Arg Ala Gly Ser Ala Ile
50 55 60

Val Ile Met Arg Lys Phe Asp Leu Gly Ala Leu Val
65 70 75

<210> 1248

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1248

Phe His Tyr His Lys Ala Ala Pro Lys Leu Ala Trp Phe Gln Asp Val
1 5 10 15

Glu Ser Met Leu Asn His His Leu Ala Gly Leu Leu Gly Leu Gly Ser
20 25 30

Leu Ser Trp Ala Gly His Gln Val His Val Ser Leu Pro Ile Asn Gln
35 40 45

Phe Leu Asn Ala Gly Val Asp Pro Lys Glu Ile Pro Leu Pro His Glu
50 55 60

Phe Ile Leu Asn Arg Asp Leu Leu Ala Gln Leu Tyr
65 70 75

<210> 1249

<211> 76

<212> PRT

<213> Zea mays

<400> 1249

Ala Asp Ala Tyr Leu Val Ser Ser Asp Ala Ala Ala Met Ala Ala Ala
1 5 10 15

Ala Asp Ser Leu Asp Tyr Ile Ile Asp Thr Val Pro Val His His Pro
20 25 30

Leu Glu Pro Tyr Leu Ala Leu Leu Lys Leu Asp Gly Lys Leu Val Leu
35 40 45

Leu Gly Val Ile Gly Glu Pro Leu Ser Phe Val Ser Pro Met Val Met
50 55 60

Leu Gly Arg Lys Ala Ile Thr Gly Ser Phe Ile Gly
65 70 75

<210> 1250

<211> 76

<212> PRT

<213> Zea mays

<400> 1250

Phe Arg Gly Gly Leu Asp Pro Ile Thr Gly Gly Leu Trp Leu Ser Asp
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1 5 10 15

Ile Ala His His His Leu Ala Ile Ala Ile Leu Phe Leu Ile Ala Gly
20 25 30

His Met Tyr Arg Thr Asn Trp Gly Ile Gly His Gly Leu Lys Asp Ile
35 40 45

Leu Glu Ala His Lys Gly Pro Phe Thr Gly Gln Gly His Lys Gly Leu
50 55 60

Tyr Glu Ile Leu Thr Thr Ser Trp His Ala Gln Leu
65 70 75

<210> 1251
<211> 76
<212> PRT
<213> Zea mays

<400> 1251
Met Ile Leu Arg Leu Leu Glu Cys Arg Phe Phe Thr Ile Ala Leu Cys
1 5 10 15

Asp Ala Ala Glu Pro Trp Gln Leu Gly Phe Gln Asp Ala Ala Thr Pro
20 25 30

Met Met Gln Gly Ile Ile Asp Leu His His Asp Ile Phe Phe Phe Leu
35 40 45

Ile Leu Ile Leu Val Phe Val Leu Trp Met Leu Val Arg Ala Leu Trp
50 55 60

His Phe Asn Glu Gln Thr Asn Pro Ile Pro Gln Arg
65 70 75

<210> 1252
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1252
Met Ile Ile Asp Thr Thr Glu Ile Glu Thr Ile Asn Ser Phe Ser Lys
1 5 10 15

Leu Glu Ser Leu Lys Glu Val Tyr Gly Ile Ile Trp Met Leu Val Pro
20 25 30

Ile Val Thr Leu Val Leu Gly Ile Thr Ile Gly Val Leu Val Ile Val
35 40 45

Trp Leu Glu Arg Glu Ile Ser Ala Gly Ile Gln Gln Arg Ile Gly Pro
50 55 60

Glu Tyr Ala Gly Pro Leu Gly Ile Leu Gln Ala Leu
65 70 75

<210> 1253
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1253
 Met Leu Glu Phe Ala Pro Ile Cys Ile Tyr Leu Val Ile Ser Leu Leu
 1 5 10 15
 Val Ser Leu Ile Leu Leu Gly Val Pro Phe Leu Phe Ala Ser Asn Ser
 20 25 30
 Ser Thr Tyr Pro Glu Lys Leu Ser Ala Tyr Glu Cys Gly Phe Asp Pro
 35 40 45
 Phe Gly Asp Ala Arg Ser Arg Phe Asp Ile Arg Phe Tyr Leu Val Ser
 50 55 60
 Ile Leu Phe Ile Ile Phe Asp Leu Glu Val Thr Phe
 65 70 75

<210> 1254
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1254
 Met Ala Lys Leu Met Asn Lys Leu Val Asp Ser Phe Glu His Asp Glu
 1 5 10 15
 Ile Pro Asp Val Gly Cys Val Arg Ala Val Leu Ala Glu Leu Val Leu
 20 25 30
 Thr Phe Leu Phe Val Phe Thr Gly Val Ser Ala Ala Met Ala Ala Gly
 35 40 45
 Ser Asp Gly Lys Pro Gly Asp Ala Met Pro Met Ala Thr Leu Ala Ala
 50 55 60
 Val Ala Ile Ala His Ala Leu Ala Ala Gly Val Leu
 65 70 75

<210> 1255
 <211> 101
 <212> PRT
 <213> Oryza sativa

<400> 1255
 Val Ala Leu Val Ile Asn Phe Val Ser Ala Cys Ile Ile Gly Ser Ala
 1 5 10 15
 Pro Leu Thr Ala Val Gln Leu Leu Trp Val Asn Met Ile Met Asp Thr
 20 25 30
 Leu Gly Ala Leu Ala Leu Ala Thr Glu Pro Pro Asn Asp Glu Met Met
 35 40 45
 Lys Arg Pro Pro Val Arg Lys Gly Glu Ser Phe Ile Thr Lys Phe Met
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50 55 60

Trp Arg Asn Ile Met Gly Gln Ser Leu Tyr Gln Leu Phe Val Leu Gly
65 70 75 80

Ala Leu Met Phe Gly Gly Glu Arg Leu Leu Asn Ile Lys Gly Ala Asp
85 90 95

Ser Lys Ser Ile Ile
100

<210> 1256
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1256
Met Thr Gln Ile Met Phe Glu Thr Phe Asn Thr Pro Ala Met Tyr Val
1 5 10 15

Ala Ile Gln Ala Val Leu Ser Leu Tyr Ala Ser Gly Arg Ser Thr Gly
20 25 30

Ile Val Leu Asp Ser Gly Asp Gly Leu Ser His Thr Val Pro Ile Tyr
35 40 45

Glu Gly Tyr Ala Leu Pro His Ala Ile Leu Arg Leu Asp Leu Ala Gly
50 55 60

Arg Asp Leu Thr Asp Ser Leu Met Lys Ile Leu Thr
65 70 75

<210> 1257
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1257
Met Thr Gln Ile Met Phe Glu Thr Phe Asn Val Pro Ala Met Tyr Val
1 5 10 15

Ala Ile Gln Ala Val Leu Ser Leu Tyr Ala Ser Gly Arg Thr Thr Gly
20 25 30

Ile Val Leu Asp Ser Gly Asp Gly Val Ser His Thr Val Pro Ile Tyr
35 40 45

Glu Gly Tyr Ala Leu Pro His Ala Ile Leu Arg Leu Asp Leu Ala Gly
50 55 60

Arg Asp Leu Thr Asp Asn Leu Met Lys Ile Leu Thr
65 70 75

<210> 1258
<211> 76
<212> PRT
<213> Oryza sativa

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<400> 1258

Met Ala Ala Ala Thr Val Gly Val Leu Leu Arg Leu Leu Leu Leu Pro
1 5 10 15

Val Val Val Val Val Ser Leu Leu Val Gly Ala Ser Arg Ala Ala Asn
20 25 30

Val Thr Tyr Asp His Arg Ala Val Val Ile Asp Gly Val Arg Arg Val
35 40 45

Leu Val Ser Gly Ser Ile His Tyr Pro Arg Ser Thr Pro Asp Met Trp
50 55 60

Pro Gly Leu Ile Gln Lys Ser Lys Asp Gly Gly Leu
65 70 75

<210> 1259

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1259

Asn Val Gly Lys Val Ile Ala Ala Leu Val Leu Thr Thr Leu Cys Ile
1 5 10 15

Phe Ile Leu Lys Gln Ser Pro Gly Phe Gly Gly Ser Ser Val Phe Ser
20 25 30

Arg His Glu Pro Gly Val Thr His Val Leu Val Thr Gly Gly Ala Gly
35 40 45

Tyr Ile Gly Ser His Ala Ser Leu Arg Leu Leu Lys Asp Asn Tyr Arg
50 55 60

Val Thr Ile Val Asp Asn Leu Ser Arg Gly Asn Met Gly Ala Val Lys
65 70 75 80

Val Leu Gln Glu Leu Phe Pro Gln Pro Gly Arg Leu Gln Phe Ile Tyr
85 90 95

Ala Asp Leu Gly Asp
100

<210> 1260

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1260

Ser Leu Ile Gly Leu Val Pro Leu Ala Glu Arg Leu Ser Phe Leu Thr
1 5 10 15

Glu Gln Ile Ala Phe Tyr Thr Gly Pro Thr Val Gly Gly Leu Leu Asn
20 25 30

Ala Thr Phe Gly Asn Val Thr Glu Val Ile Ile Ala Leu Leu Ala Leu

35

40

45

Arg Glu Gly Lys Ile Glu Val Val Lys Cys Ser Leu Leu Gly Ser Ile
 50 55 60

Leu Ser Asn Leu Leu Leu Val Leu Gly Thr Ser Leu Phe Leu Ala Gly
 65 70 75 80

Ile Ala Asn Leu Arg Ala His Gln Pro Tyr Asp Thr Lys Gln Ala His
 85 90 95

Val Asn Thr Ala Leu Leu Met Leu Ala Val Leu Cys His Ser Leu Pro
 100 105 110

Leu Met Leu Arg Tyr Ala Val Thr Ser Gly Asp His Ala Ile Val Ser
 115 120 125

Gly Asp Ala Ala Leu His Leu Ser Arg Ala Cys Ser Ile Leu Met Leu
 130 135 140

Ile Ala Tyr Leu Ala Tyr Leu Phe Phe Gln Leu Asn Thr His Arg Gln
 145 150 155 160

Leu Phe Glu Pro Gln Gln Val Glu Asp Asp Asp Asp Asp Asp Leu Val
 165 170 175

<210> 1261

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1261

Asn Gly Pro Gly Lys His Leu Gly Val Val Gly Leu Gly Gly Leu Gly
 1 5 10 15

His Leu Gly Val Lys Phe Gly Lys Ala Phe Gly Met Lys Val Thr Val
 20 25 30

Ile Ser Ser Ser Pro Ala Lys Arg Gly Glu Ala Leu Gly Arg Leu Gly
 35 40 45

Ala Asp Ala Phe Leu Ser Ser Arg Asp Gly Glu Gly Met Ala Ala Ala
 50 55 60

Ala Ala Thr Met Asp Gly Ile Ile Asp Thr Val Ser Ala Gly His Pro
 65 70 75 80

Leu Val Pro Leu Leu Ser Leu Leu Lys Pro Lys Gly Gln Met Val Val
 85 90 95

Val Gly Ala Pro Ala
 100

<210> 1262

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1262

Asp Asn Phe Glu Thr Ile Val Asn Val Ala Arg Trp Gly Arg Ala Val
 1 5 10 15

Tyr Leu Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val Asn Ile
 20 25 30

Val Ala Leu Ile Val Asn Phe Val Ser Ala Cys Ile Ile Gly Ser Ala
 35 40 45

Pro Leu Thr Ala Val Gln Leu Leu Trp Val Asn Met Ile Met Asp Thr
 50 55 60

Leu Gly Ala Leu Ala Leu Ala Thr Glu Pro Pro Asn Asp Glu Met Met
 65 70 75 80

Lys Arg Pro Pro Val Arg Arg Gly Asp Asn Phe Ile Thr Arg Ile Met
 85 90 95

Trp Arg Asn Ile Leu Gly Gln Gly Leu Tyr Gln Leu Leu Val Leu Ala
 100 105 110

Thr Leu Met Val Ile Gly Lys Lys Leu Leu Ser Ile Glu Gly
 115 120 125

<210> 1263

<211> 76

<212> PRT

<213> Zea mays

<400> 1263

Met Ala Ala Ala Ala Arg Val Ser Glu Val Lys Ala Glu Gly Leu Leu
 1 5 10 15

Arg Gly Ala Cys Thr Ala Leu Ala Ala Ala Ala Leu Leu Val Gly
 20 25 30

Leu Ser Thr Gln Thr Glu Thr Val Leu Leu Val Arg Lys Lys Ala Thr
 35 40 45

Val Lys Asp Val Gln Ala Leu Trp Val Leu Ala Met Ala Ala Ala Ala
 50 55 60

Ala Ala Gly Tyr His Leu Leu Gln Leu Leu Lys Cys
 65 70 75

<210> 1264

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1264

Leu Gly Gln Gly Leu Tyr Gln Leu Leu Val Leu Ala Thr Leu Met Val
 1 5 10 15

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Ile Gly Lys Lys Leu Leu Ser Ile Glu Gly Pro Gln Ser Asp Lys Thr
20 25 30

Ile Asn Thr Leu Ile Phe Asn Ser Phe Val Phe Cys Gln Val Phe Asn
35 40 45

Glu Ile Asn Cys Arg Glu Met Glu Lys Ile Asn Val Leu Gln Gly Ile
50 55 60

Phe Arg Asn Trp Ile Phe Val Gly Ile Leu Thr Ala
65 70 75

<210> 1265

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1265

Leu Phe Val Gly Arg Val Ala Met Ile Gly Phe Ala Ala Ser Leu Leu
1 5 10 15

Gly Glu Ala Ile Thr Gly Lys Gly Ile Leu Ala Gln Leu Asn Leu Glu
20 25 30

Thr Gly Ile Pro Ile Tyr Glu Ala Glu Pro Leu Leu Leu Phe Phe Ile
35 40 45

Leu Phe Asn Leu Leu Gly Ala Ile Gly Ala Leu Gly Asp Arg Gly Lys
50 55 60

Phe Val Asp Asp Pro Thr Pro Pro Thr Gly Leu Glu
65 70 75

<210> 1266

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1266

Met Ala Asn Pro Gln Gln Pro Leu Leu Ile Lys Thr His Lys Gln Asn
1 5 10 15

Pro Ile Ile Ser Phe Lys Ile Leu Ser Phe Val Ile Thr Leu Phe Val
20 25 30

Ala Leu Phe Leu Val Ala Pro Tyr Gln Val Glu Ile Lys His Ser Asn
35 40 45

Leu Cys Lys Thr Ala Gln Asp Ser Gln Leu Cys Leu Ser Tyr Val Ser
50 55 60

Asp Leu Ile Ser Asn Glu Ile Val Thr Thr Glu Ser
65 70 75

<210> 1267

<211> 76

<212> PRT

<213> Zea mays

<400> 1267

Met Ala Ala Ala Ala Arg Val Ser Glu Val Lys Ala Glu Gly Leu Leu
 1 5 10 15

Arg Gly Ala Cys Ala Ala Leu Ala Ala Ala Ala Leu Leu Val Gly
 20 25 30

Leu Ser Thr Gln Thr Glu Thr Val Leu Leu Val Arg Lys Lys Ala Thr
 35 40 45

Val Lys Asp Val Gln Ala Leu Trp Val Leu Ala Met Ala Ala Ala Ala
 50 55 60

Ala Ala Gly Tyr His Leu Leu Gln Leu Leu Lys Cys
 65 70 75

<210> 1268

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1268

Ala Val Lys Gln Asn Tyr Gly Glu Lys Val Leu Ile Gln Phe Glu Asp
 1 5 10 15

Phe Ala Asn His Asn Ala Phe Asn Leu Leu Ala Lys Tyr Gly Thr Ser
 20 25 30

His Leu Val Phe Asn Asp Asp Ile Gln Gly Thr Ala Ser Val Val Leu
 35 40 45

Ala Gly Leu Met Ala Ala Leu Asn Leu Val Gly Gly Ser Leu Ser Glu
 50 55 60

His Thr Phe Leu Phe Leu Gly Ala Gly Glu Ala Gly
 65 70 75

<210> 1269

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1269

Trp Val Ile Gly Gly Val Ser Ala His Leu Phe Ala Val Val Gln Gly
 1 5 10 15

Leu Leu Lys Val Leu Ala Gly Ile Asp Thr Asn Phe Thr Val Thr Ser
 20 25 30

Lys Ala Thr Gly Asp Glu Asp Asp Glu Phe Ala Glu Leu Tyr Ala Phe
 35 40 45

Lys Trp Thr Thr Leu Leu Ile Pro Pro Thr Thr Leu Leu Ile Leu Asn
 50 55 60

Ile Ile Gly Val Val Ala Gly Val Ser Asp Ala Ile
65 70 75

<210> 1270
<211> 76
<212> PRT
<213> Zea mays

<400> 1270
Ile Val Ala Tyr Leu Lys Pro Lys Tyr Val Leu Met Glu Asn Val Val
1 5 10 15

Asp Ile Leu Lys Phe Ala Asp Gly Tyr Leu Gly Lys Tyr Ala Leu Ser
20 25 30

Cys Leu Val Ala Met Lys Tyr Gln Ala Arg Leu Gly Met Met Val Ala
35 40 45

Gly Cys Tyr Gly Leu Pro Gln Phe Arg Met Arg Val Phe Leu Trp Gly
50 55 60

Ala Leu Ser Ser Met Val Leu Pro Lys Tyr Pro Leu
65 70 75

<210> 1271
<211> 76
<212> PRT
<213> Zea mays

<400> 1271
Ile Val Ala Tyr Leu Lys Pro Lys Tyr Val Leu Met Glu Asn Val Val
1 5 10 15

Asp Ile Leu Lys Phe Ala Asp Gly Tyr Leu Gly Lys Tyr Ala Leu Ser
20 25 30

Cys Leu Val Ala Met Lys Tyr Gln Ala Arg Leu Gly Met Met Val Ala
35 40 45

Gly Cys Tyr Gly Leu Pro Gln Phe Arg Met Arg Val Phe Leu Trp Gly
50 55 60

Ala Leu Ser Ser Met Val Leu Pro Lys Tyr Pro Leu
65 70 75

<210> 1272
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1272
Ala Asp Ala Tyr Leu Val Ser Ser Asp Ala Ala Ala Met Ala Ala Ala
1 5 10 15

Gly Asp Ser Leu Asp Tyr Ile Ile Asp Thr Val Pro Val His His Pro
20 25 30

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Leu Glu Pro Tyr Leu Ala Leu Leu Lys Leu Asp Gly Lys Leu Ile Leu
35 40 45

Met Gly Val Ile Asn Gln Pro Leu Ser Phe Ile Ser Pro Met Val Met
50 55 60

Leu Gly Arg Lys Ala Ile Thr Gly Ser Phe Ile Gly
65 70 75

<210> 1273

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1273

Val Asn Ile Val Ala Leu Val Ile Asn Phe Val Ser Ala Cys Ile Thr
1 5 10 15

Gly Ser Ala Pro Leu Thr Ala Val Gln Leu Leu Trp Val Asn Met Ile
20 25 30

Met Asp Thr Leu Gly Ala Leu Ala Leu Ala Thr Glu Pro Pro Asn Asp
35 40 45

Glu Met Met Lys Arg Pro Pro Val Arg Lys Gly Glu Ser Phe Ile Thr
50 55 60

Lys Val Met Trp Arg Asn Ile Met Gly Gln Ser Leu Tyr Gln Leu Phe
65 70 75 80

Val Leu Gly Ala Leu Met Phe Gly Gly Glu Ser Leu Leu Asn Ile Lys
85 90 95

Gly Ala Asp Ser Lys
100

<210> 1274

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1274

Met Arg Pro Ser Leu Leu Gln Tyr Leu Lys Leu Leu Leu Leu Ala
1 5 10 15

Leu Gly Gly Val Thr Thr Met His Val Pro Lys Gln Asp Val Pro Ser
20 25 30

Ser Leu Glu Glu Leu Thr Leu Asp Gly His Phe Ser Phe His Asp Val
35 40 45

Ser Ala Ala Ala Gln Asp Phe Gly Asn Leu Ser Ser Phe Pro Pro Val
50 55 60

Ala Val Leu His Pro Gly Ser Val Ala Asp Ile Ala
65 70 75

<210> 1275
 <211> 276
 <212> PRT
 <213> Zea mays

<400> 1275

Met Ile Ile Asp Arg Val Glu Val Glu Thr Ile Asn Ser Phe Ser Lys
 1 5 10 15

Leu Glu Leu Phe Lys Glu Ile Tyr Gly Leu Ile Trp Ile Leu Pro Ile
 20 25 30

Phe Ala Leu Leu Leu Gly Ile Thr Ile Glu Val Leu Val Ile Val Trp
 35 40 45

Leu Glu Arg Glu Ile Ser Ala Ser Ile Gln Gln Arg Ile Gly Pro Glu
 50 55 60

Tyr Ala Gly Pro Leu Gly Leu Leu Gln Ala Ile Ala Asp Gly Thr Lys
 65 70 75 80

Leu Leu Leu Lys Glu Asp Ile Leu Pro Ser Arg Gly Asp Ile Pro Leu
 85 90 95

Phe Ser Ile Gly Pro Ser Ile Ala Val Ile Ser Ile Leu Leu Ser Phe
 100 105 110

Leu Val Ile Pro Leu Gly Tyr Arg Phe Val Leu Ala Asp Leu Ser Ile
 115 120 125

Gly Val Phe Leu Trp Ile Ala Ile Ser Ser Ile Ala Pro Ile Gly Leu
 130 135 140

Leu Met Ala Gly Tyr Ser Ser Asn Asn Lys Tyr Ser Phe Leu Gly Gly
 145 150 155 160

Leu Arg Ala Ala Ala Gln Ser Ile Ser Tyr Glu Ile Pro Leu Thr Phe
 165 170 175

Cys Val Leu Ala Ile Ser Leu Leu Ser Asn Ser Leu Ser Thr Val Asp
 180 185 190

Ile Val Glu Ala Gln Ser Lys Tyr Gly Phe Phe Gly Trp Asn Leu Trp
 195 200 205

Arg Gln Pro Ile Gly Phe Leu Val Phe Leu Ile Ser Ser Leu Ala Glu
 210 215 220

Cys Glu Arg Leu Pro Phe Asp Leu Pro Glu Ala Glu Glu Glu Leu Val
 225 230 235 240

Ala Gly Tyr Gln Thr Glu Tyr Ser Gly Ile Lys Tyr Gly Leu Phe Tyr
 245 250 255

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Leu Val Ser Tyr Leu Asn Leu Leu Val Ser Ser Leu Phe Val Thr Val
260 265 270

Leu Tyr Leu Gly
275

<210> 1276

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1276

Gly Val Asn Arg Tyr Ala Glu Lys Pro Ser Arg Ser Phe Trp Met Phe
1 5 10 15

Val Trp Asp Ala Leu Gln Asp Met Thr Leu Ile Ile Leu Met Val Cys
20 25 30

Ala Leu Leu Ser Val Ala Val Gly Leu Ala Thr Glu Gly Trp Pro Lys
35 40 45

Gly Met Tyr Asp Gly Leu Gly Ile Ile Leu Ser Ile Phe Leu Val Val
50 55 60

Met Val Thr Ala Val Ser Asp Tyr Lys Gln Ser Leu
65 70 75

<210> 1277

<211> 176

<212> PRT

<213> Zea mays

<400> 1277

Met Ile Ile Asp Arg Val Glu Val Glu Thr Ile Asn Ser Phe Ser Lys
1 5 10 15

Leu Glu Leu Phe Lys Glu Ile Tyr Gly Leu Ile Trp Ile Leu Pro Ile
20 25 30

Phe Ala Leu Leu Leu Gly Ile Thr Ile Glu Val Leu Val Ile Val Trp
35 40 45

Leu Glu Arg Glu Ile Ser Ala Ser Ile Gln Gln Arg Ile Gly Pro Glu
50 55 60

Tyr Ala Gly Pro Leu Gly Leu Leu Gln Ala Ile Ala Asp Gly Thr Lys
65 70 75 80

Leu Leu Leu Lys Glu Asp Ile Leu Pro Ser Arg Gly Asp Ile Pro Leu
85 90 95

Phe Ser Ile Gly Pro Ser Ile Ala Val Ile Ser Ile Leu Leu Ser Phe
100 105 110

Leu Val Ile Pro Leu Gly Tyr Arg Phe Val Leu Ala Asp Leu Ser Ile
115 120 125

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Gly Val Phe Leu Trp Ile Ala Ile Ser Ser Ile Ala Pro Ile Gly Leu
130 135 140

Leu Met Ala Gly Tyr Ser Ser Asn Asn Lys Tyr Ser Phe Leu Gly Gly
145 150 155 160

Leu Arg Ala Ala Ala Gln Ser Ile Ser Tyr Glu Ile Pro Leu Thr Phe
165 170 175

<210> 1278

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1278

Phe Thr Gly Leu Phe Ala Lys Glu Glu Phe Val Leu Gln Ala Tyr Asn
1 5 10 15

Ser Gly Lys Thr Gln Ile Ile Arg Pro Ser Gly Leu Ile Leu Gly Gly
20 25 30

Gly Trp Gly Leu Phe Gly Ala Gln Ile Val Glu Leu Leu Ser Ile Val
35 40 45

Val Trp Val Ser Leu Thr Met Gly Pro Leu Phe Tyr Leu Leu Gln Lys
50 55 60

Leu Gly Ile Leu Arg Ile Ser Ser Asp Glu Glu Val
65 70 75

<210> 1279

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1279

Ala Leu Pro Met Phe His Val Tyr Gly Leu Ser Leu Phe Ala Val Gly
1 5 10 15

Leu Leu Ser Leu Gly Cys Thr Val Val Val Met Arg Arg Phe Asn Val
20 25 30

Asp Asp Ala Val Lys Ala Ile Arg Lys Tyr Lys Val Thr His Leu Pro
35 40 45

Leu Val Pro Pro Ile Met Ser Ala Leu Leu Arg Ala Asn Pro Pro Leu
50 55 60

Glu Leu Asp Ser Leu Leu Gln Val Ser Ser Gly Ala
65 70 75

<210> 1280

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1280

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Tyr Pro Leu Ala Ser Leu Pro Leu Thr Val Tyr Cys Ala Leu Pro Ala
1 5 10 15

Val Cys Leu Leu Thr Gly Lys Ser Thr Phe Pro Ser Asp Val Ser Tyr
20 25 30

Tyr Asp Gly Val Leu Leu Ile Leu Leu Leu Phe Ser Val Ala Ala Ser
35 40 45

Val Ala Leu Glu Leu Arg Trp Ser Arg Val Pro Leu Arg Ala Trp Trp
50 55 60

Arg Asp Glu Lys Leu Trp Met Val Thr Ala Thr Ser
65 70 75

<210> 1281

<211> 76

<212> PRT

<213> Zea mays

<400> 1281

Met Met Phe Glu Arg Val Leu Phe Leu Ser Val Tyr Leu Phe Ser Ile
1 5 10 15

Gly Ile Tyr Gly Leu Ile Thr Ser Arg Asn Met Val Arg Ala Leu Ile
20 25 30

Cys Leu Glu Leu Ile Leu Asn Ser Ile Asn Leu Asn Leu Val Thr Phe
35 40 45

Ser Asp Leu Phe Asp Ser Arg Gln Leu Lys Gly Asp Ile Phe Ala Ile
50 55 60

Phe Val Ile Ala Leu Ala Ala Ala Glu Ala Ala Ile
65 70 75

<210> 1282

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1282

Met Thr Gln Ile Met Phe Glu Thr Phe Asn Val Pro Ala Met Tyr Ile
1 5 10 15

Ala Ile Gln Ala Val Leu Ser Leu Tyr Ala Ser Gly Arg Thr Thr Gly
20 25 30

Ile Val Leu Asp Ser Gly Asp Gly Val Thr His Thr Val Pro Ile Tyr
35 40 45

Glu Gly Tyr Ala Leu Pro His Ala Ile Leu Arg Leu Asp Leu Ala Gly
50 55 60

Arg Asp Leu Thr Asp Tyr Leu Met Met Ile Leu Thr
65 70 75

<210> 1283
 <211> 226
 <212> PRT
 <213> Zea mays

<400> 1283
 Glu Asp Ser Ser Ile Asp Ile Gly Asp Phe Phe Lys Gly Pro Leu Pro
 1 5 10 15
 Gly Lys Phe Leu Lys Leu Leu Gly Phe Leu Ala Leu Ser Arg Leu Gly
 20 25 30
 Val Tyr Ile Pro Leu Gly Gly Val Asn Arg Glu Ala Phe Ala Gly Asn
 35 40 45
 Leu Asp Gln Asn Ser Leu Leu Gly Thr Leu Asp Ser Phe Ser Gly Gly
 50 55 60
 Gly Ile Gly Arg Leu Gly Ile Cys Ser Leu Gly Ile Val Pro Phe Ile
 65 70 75 80
 Asn Ala Gln Ile Val Phe Gln Leu Leu Ala Gln Leu Tyr Pro Lys Leu
 85 90 95
 Gln Asp Leu Gln Arg Lys Glu Gly Glu Ala Gly Arg Lys Lys Val Leu
 100 105 110
 Gln Tyr Thr Arg Tyr Ala Ser Val Gly Phe Ala Ile Val Gln Ala Ile
 115 120 125
 Gly Gln Val Leu Tyr Leu Arg Pro Tyr Val Asn Asp Phe Ser Thr Glu
 130 135 140
 Trp Val Leu Thr Ser Val Thr Leu Leu Thr Leu Gly Ser Val Phe Thr
 145 150 155 160
 Thr Phe Ile Gly Glu Arg Ile Ser Asp Leu Lys Leu Gly Asn Gly Thr
 165 170 175
 Ser Leu Leu Ile Phe Thr Ser Ile Ile Ser Tyr Leu Pro Ala Ser Phe
 180 185 190
 Gly Arg Thr Val Ala Gln Ala Phe Gln Asp Gly Asn Tyr Val Gly Leu
 195 200 205
 Leu Thr Ile Ile Leu Ser Phe Leu Leu Leu Val Leu Gly Ile Val Tyr
 210 215 220
 Val Gln
 225

<210> 1284
 <211> 101
 <212> PRT
 <213> Solanum lycopersicum

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<400> 1284

Tyr Gly Phe Trp Gly Trp Asn Leu Trp Arg Gln Pro Ile Gly Phe Ile
1 5 10 15

Val Phe Leu Ile Ser Ser Leu Ala Glu Cys Glu Arg Leu Pro Phe Asp
20 25 30

Leu Pro Glu Ala Glu Glu Glu Leu Val Ala Gly Tyr Gln Thr Glu Tyr
35 40 45

Ser Gly Ile Lys Phe Gly Leu Phe Tyr Ile Ala Ser Tyr Leu Asn Leu
50 55 60

Leu Val Ser Ser Leu Phe Val Thr Val Leu Tyr Leu Gly Gly Trp Asn
65 70 75 80

Leu Ser Ile Pro Tyr Ile Phe Val Pro Asp Ile Phe Gly Ile Asn Lys
85 90 95

Gly Gly Lys Val Phe
100

<210> 1285

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1285

Asn Leu Thr Leu Ser Pro Ser Ile Ile Phe Gly Tyr Leu Leu Lys Ser
1 5 10 15

Pro Phe Gly Gly Glu Gly Trp Ile Val Ser Val Asp Asp Leu Glu Asp
20 25 30

Ile Ile Gly Gly His Val Trp Leu Gly Ser Ile Cys Ile Leu Gly Gly
35 40 45

Ile Trp His Ile Leu Thr Lys Pro Phe Ala Trp Ala Arg Arg Ala Leu
50 55 60

Val Trp Ser Gly Glu Ala Tyr Leu Ser Tyr Ser Leu
65 70 75

<210> 1286

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1286

Ser Thr Val Met Leu Leu Leu Pro Asn Ser Val Glu Phe Ala Val Ala
1 5 10 15

Phe Leu Ala Ser Ser Arg Leu Gly Ala Val Thr Thr Thr Ala Asn Pro
20 25 30

Leu His Thr Pro Pro Glu Ile Ala Lys Gln Val Ala Ala Ser Gly Ala

35

40

45

Thr Val Val Val Thr Glu Pro Ala Phe Val Ala Lys Val Ser Gly Leu
50 55 60

Ala Gly Val Thr Val Val Ala Thr Gly Gly Gly Ala Glu Arg Cys Ala
65 70 75 80

Ser Phe Ala Gly Leu Ala Ala Ala Asp Gly Ser Ala Leu Pro Glu Val
85 90 95

Ala Ile Asp Val Ala Asn Asp Ala Val Ala Leu Pro Tyr Ser Ser Gly
100 105 110

Thr Thr Gly Leu Pro Lys Gly Val Met Leu Ser His Arg Gly Leu Val
115 120 125

Thr Ser Val Ala Gln Leu Val Asp Gly Glu Asn Pro Asn Leu His Leu
130 135 140

Arg Glu Asp Asp Val Val Leu Cys Val Leu Pro Met Phe His Val Tyr
145 150 155 160

Ser Leu His Ser Ile Leu Leu Cys Gly Met Arg Ala Gly Ala Ala Ile
165 170 175

Val Val Met Lys Arg Phe Asp Thr Val Lys Met Leu Gln Leu Val Glu
180 185 190

Arg His Gly Val Thr Ile Ala Pro Leu
195 200

<210> 1287

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1287

Thr Val Ala Lys Trp Gly Arg Ser Val Tyr Val Asn Ile Gln Lys Phe
1 5 10 15

Val Gln Phe Gln Leu Thr Val Asn Val Val Ala Leu Leu Val Asn Phe
20 25 30

Ser Ser Ala Cys Phe Thr Gly Asn Ala Pro Leu Thr Ala Val Gln Leu
35 40 45

Leu Trp Val Asn Met Ile Met Asp Thr Leu Gly Ala Leu Ala Leu Ala
50 55 60

Thr Glu Pro Pro Asn Asp Asp Leu Met Lys Arg Glu
65 70 75

<210> 1288

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1288

Leu Gln Val His Leu His Asp Ala Asp Val Thr Thr Leu Pro Pro Pro
 1 5 10 15

Pro Pro Phe Leu Thr Leu Gly Pro Arg Ile Gly Tyr Leu Pro Leu Leu
 20 25 30

Val Pro Ile Ile Lys Ala His Phe Ser Ser Thr Leu Pro Pro Gly Ile
 35 40 45

Asp Thr Val Trp Phe Glu Tyr Lys Gly Leu Pro Leu Lys Trp Tyr Ile
 50 55 60

Pro Ile Gly Val Leu Tyr Asp Leu Leu Cys Ala Asp
 65 70 75

<210> 1289

<211> 76

<212> PRT

<213> Zea mays

<400> 1289

Asn Leu Thr Leu Ser Pro Gly Val Ile Phe Gly Tyr Leu Leu Lys Ser
 1 5 10 15

Pro Phe Gly Gly Glu Gly Trp Ile Val Ser Val Asp Asp Leu Glu Asp
 20 25 30

Ile Ile Gly Gly His Val Trp Leu Gly Ser Ile Cys Val Leu Gly Gly
 35 40 45

Ile Trp His Ile Leu Thr Lys Pro Phe Ala Trp Ala Arg Arg Ala Phe
 50 55 60

Val Trp Ser Gly Glu Ala Tyr Leu Ser Tyr Ser Leu
 65 70 75

<210> 1290

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1290

Lys Arg Pro Ala Phe Lys Gly Ser Ala Pro Ile Asn Leu Ser Asp Arg
 1 5 10 15

Leu Asn Gln Val Leu Arg Trp Ala Leu Gly Ser Val Glu Ile Leu Phe
 20 25 30

Ser Arg His Cys Pro Ile Trp Tyr Gly Tyr Gly Gly Arg Leu Lys Phe
 35 40 45

Leu Glu Arg Phe Ala Tyr Ile Asn Thr Thr Ile Tyr Pro Leu Thr Ser
 50 55 60

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Ile Pro Leu Leu Ile Tyr Cys Val Leu Pro Ala Ile Cys Leu Leu Thr
65 70 75 80

Gly Lys Phe Ile Ile Pro Glu Ile Ser Asn Phe Ala Ser Ile Trp Phe
85 90 95

Ile Ser Leu Phe Ile
100

<210> 1291

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1291

Ala Val Ser Ile Thr Ile Arg Ile Val Leu Gly Phe Met Leu Leu Ala
1 5 10 15

Leu Ile Trp Lys Phe Asp Phe Pro Pro Phe Met Val Leu Ile Ile Ala
20 25 30

Ile Leu Asn Asp Gly Thr Ile Met Thr Ile Ser Lys Asp Arg Val Lys
35 40 45

Pro Ser Pro Leu Pro Asp Ser Trp Lys Leu Ala Glu Ile Phe Thr Thr
50 55 60

Gly Val Val Leu Gly Gly Tyr Leu Ala Met Met Thr
65 70 75

<210> 1292

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1292

Ile Tyr Ala Val Ser Ile Thr Ile Arg Ile Val Leu Gly Phe Met Leu
1 5 10 15

Leu Ala Leu Ile Trp Lys Phe Asp Phe Pro Pro Phe Met Val Leu Ile
20 25 30

Ile Ala Ile Leu Asn Asp Gly Thr Ile Met Thr Ile Ser Lys Asp Arg
35 40 45

Val Lys Pro Ser Pro Leu Pro Asp Ser Trp Lys Leu Ala Glu Ile Phe
50 55 60

Thr Thr Gly Val Val Leu Gly Gly Tyr Leu Ala Met
65 70 75

<210> 1293

<211> 126

<212> PRT

<213> Zea mays

<400> 1293

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Arg Lys Glu Gly Glu Ala Gly Arg Lys Lys Val Leu Gln Tyr Thr Arg
1 5 10 15

Tyr Ala Ser Val Gly Phe Ala Ile Val Gln Ala Ile Gly Gln Val Leu
20 25 30

Tyr Leu Arg Pro Tyr Val Asn Asp Phe Ser Thr Glu Trp Val Leu Thr
35 40 45

Ser Val Thr Leu Leu Thr Leu Gly Ser Val Phe Thr Thr Phe Ile Gly
50 55 60

Glu Arg Ile Ser Asp Leu Lys Leu Gly Asn Gly Thr Ser Leu Leu Ile
65 70 75 80

Phe Thr Ser Ile Ile Ser Tyr Leu Pro Ala Ser Phe Gly Arg Thr Val
85 90 95

Ala Gln Ala Phe Gln Asp Gly Asn Tyr Val Gly Leu Leu Thr Ile Ile
100 105 110

Leu Ser Phe Leu Leu Leu Val Leu Gly Ile Val Tyr Val Gln
115 120 125

<210> 1294

<211> 126

<212> PRT

<213> Zea mays

<400> 1294

Met Lys Gly Ser Ser Glu His Gly Glu Thr Ser Lys Gln Ala Pro Leu
1 5 10 15

Gly Ser Ser Arg Gly Val Ser Lys Gly Val Ser Val Leu Asp Leu Ile
20 25 30

Leu Arg Phe Ile Ala Ile Ile Gly Thr Leu Ala Ser Ala Ile Ala Met
35 40 45

Gly Thr Thr Asn Glu Thr Leu Pro Phe Phe Thr Gln Phe Ile Arg Phe
50 55 60

Lys Ala Gln Tyr Ser Asp Leu Pro Thr Leu Thr Phe Phe Val Val Ala
65 70 75 80

Asn Ser Ile Val Cys Ala Tyr Leu Thr Leu Ser Leu Pro Leu Ser Ile
85 90 95

Val His Ile Ile Arg Ser Arg Ala Lys Tyr Ser Arg Leu Leu Leu Val
100 105 110

Val Leu Asp Ala Ala Met Leu Ala Leu Val Thr Pro Gly Ala
115 120 125

<210> 1295

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1295

Met Ile Leu Glu His Val Leu Val Leu Ser Ala Tyr Leu Phe Ser Ile
 1 5 10 15

Gly Ile Tyr Gly Leu Ile Thr Ser Arg Asn Met Val Arg Ala Leu Met
 20 25 30

Cys Leu Glu Leu Ile Leu Asn Ala Val Asn Ile Asn Phe Val Thr Phe
 35 40 45

Ser Asp Phe Phe Asp Asn Arg Gln Leu Lys Gly Asp Ile Phe Ser Ile
 50 55 60

Phe Val Ile Ala Ile Ala Ala Ala Glu Ala Ala Ile
 65 70 75

<210> 1296

<211> 76

<212> PRT

<213> Zea mays

<400> 1296

Met Val Ala Ala Ala Arg Val Val Ser Gly Val Lys Ala Glu Gly Leu
 1 5 10 15

Leu Arg Gly Ala Cys Ala Ala Leu Ala Ala Ala Ala Ala Leu Leu Leu
 20 25 30

Gly Leu Ser Thr Gln Thr Glu Thr Val Leu Leu Val Arg Lys Lys Gly
 35 40 45

Thr Val Lys Asp Val Gln Ala Leu Trp Val Leu Ala Met Ala Ala Ala
 50 55 60

Ser Ala Ala Gly Tyr His Leu Leu Gln Leu Leu Lys
 65 70 75

<210> 1297

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1297

Leu His Pro Pro Leu Pro Leu Pro Ser Asp Pro Ser Leu Ser Leu Val
 1 5 10 15

Pro His Leu Phe Ser His Leu Pro Leu His His His Ser Leu Leu Val
 20 25 30

Asp Ala Pro Thr Ala Ala Thr Leu Ser Cys Ala Asp Phe Arg Arg Leu
 35 40 45

Val Ser Ser Leu Ala Ala Gly Leu Arg Arg Arg Leu His Ile Ala Arg
 50 55 60

Gly Ser Leu Val Leu Leu Leu Leu Pro Asn Ser Leu
65 70 75

<210> 1298
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1298
Gln Phe Leu Ile Leu Leu Cys Ser Thr Leu Cys Ile Pro Leu Ser Val
1 5 10 15

Glu Tyr Ile Glu Cys Thr Glu Met Ala Ile Thr Glu Phe Leu Leu Phe
20 25 30

Val Leu Thr Ala Thr Leu Gly Gly Met Phe Leu Cys Gly Ala Asn Asp
35 40 45

Leu Ile Thr Ile Phe Val Ala Pro Glu Cys Phe Ser Leu Cys Ser Tyr
50 55 60

Leu Leu Ser Gly Tyr Thr Lys Lys Asp Val Arg Ser
65 70 75

<210> 1299
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1299
Gln Phe Leu Ile Leu Leu Cys Ser Thr Leu Cys Ile Pro Leu Ser Val
1 5 10 15

Glu Tyr Ile Glu Cys Thr Glu Met Ala Ile Thr Glu Phe Leu Leu Phe
20 25 30

Val Leu Thr Ala Thr Leu Gly Gly Met Phe Leu Cys Gly Ala Asn Asp
35 40 45

Leu Ile Thr Ile Phe Val Ala Pro Glu Cys Phe Ser Leu Cys Ser Tyr
50 55 60

Leu Leu Ser Gly Tyr Thr Lys Lys Asp Val Arg Ser
65 70 75

<210> 1300
<211> 76
<212> PRT
<213> Zea mays

<400> 1300
Gln Phe Leu Ile Leu Leu Cys Ser Thr Leu Cys Ile Pro Leu Ser Val
1 5 10 15

Glu Tyr Ile Glu Cys Thr Glu Met Ala Ile Thr Glu Phe Leu Leu Phe
20 25 30

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Val Leu Thr Ala Thr Leu Gly Gly Met Phe Leu Cys Gly Ala Asn Asp
35 40 45

Leu Ile Thr Ile Phe Val Ala Leu Glu Cys Phe Ser Leu Cys Ser Tyr
50 55 60

Leu Leu Ser Gly Tyr Thr Lys Arg Asp Leu Arg Ser
65 70 75

<210> 1301
<211> 76
<212> PRT
<213> Zea mays

<400> 1301
Gln Phe Leu Ile Leu Leu Cys Ser Thr Leu Cys Ile Pro Leu Ser Val
1 5 10 15

Glu Tyr Ile Glu Cys Thr Glu Met Ala Ile Thr Glu Phe Leu Leu Phe
20 25 30

Val Leu Thr Ala Thr Leu Gly Gly Met Phe Leu Cys Gly Ala Asn Asp
35 40 45

Leu Ile Thr Ile Phe Val Ala Leu Glu Cys Phe Ser Leu Cys Ser Tyr
50 55 60

Leu Leu Ser Gly Tyr Thr Lys Arg Asp Leu Arg Ser
65 70 75

<210> 1302
<211> 76
<212> PRT
<213> Zea mays

<400> 1302
Met Glu Arg Asn Gly Glu Ile Val Asn Asn Gly Ser Ile Ile Ile Pro
1 5 10 15

Gly Gly Gly Gly Pro Val Thr Glu Ser Pro Leu Asp Gln Phe Gly Ile
20 25 30

His Pro Ile Leu Asp Leu Asn Ile Gly Lys Tyr Tyr Val Ser Phe Thr
35 40 45

Asn Leu Ser Leu Ser Met Leu Leu Thr Leu Gly Leu Val Leu Leu Leu
50 55 60

Val Phe Val Val Thr Lys Lys Gly Gly Gly Lys Ser
65 70 75

<210> 1303
<211> 76
<212> PRT
<213> Zea mays

<400> 1303

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Ala Val Ala Thr Ala Leu Ile Gln Val Ala Tyr Met Gly Leu Val Gly
1 5 10 15

Ser Phe Pro Phe Asn Ser Phe Leu Ser Gly Val Leu Ser Cys Ile Gly
20 25 30

Thr Ala Val Leu Ala Val Cys Leu Arg Ile Gln Val Asn Lys Asp Asn
35 40 45

Lys Glu Phe Lys Asp Leu Pro Pro Glu Arg Ala Phe Ala Asp Phe Val
50 55 60

Leu Cys Asn Leu Val Leu His Leu Val Ile Met Asn
65 70 75

<210> 1304

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1304

Met Ala Thr Pro Gln Gln Pro Leu Leu Thr Lys Thr His Lys Gln Asn
1 5 10 15

Ser Ile Ile Ser Phe Lys Ile Leu Thr Phe Val Val Thr Leu Phe Val
20 25 30

Ala Leu Phe Leu Val Val Phe Leu Val Ala Pro Tyr Gln Phe Glu Ile
35 40 45

Lys His Ser Asn Leu Cys Lys Thr Ala Gln Asp Ser Gln Leu Cys Leu
50 55 60

Ser Tyr Val Ser Asp Leu Met Ser Asn Glu Ile Val
65 70 75

<210> 1305

<211> 101

<212> PRT

<213> Zea mays

<400> 1305

Gly Phe Phe Gly Trp Asn Leu Trp Arg Gln Pro Ile Gly Phe Leu Val
1 5 10 15

Phe Leu Ile Ser Ser Leu Ala Glu Cys Glu Arg Leu Pro Phe Asp Leu
20 25 30

Pro Glu Ala Glu Glu Glu Leu Val Ala Gly Tyr Gln Thr Glu Tyr Ser
35 40 45

Gly Ile Lys Tyr Gly Leu Phe Tyr Leu Val Ser Tyr Leu Asn Leu Leu
50 55 60

Val Ser Ser Leu Phe Val Thr Val Leu Tyr Leu Gly Gly Trp Asn Phe
65 70 75 80

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Ser Ile Pro Tyr Ile Ser Phe Phe Gly Phe Phe Gln Met Asn Lys Ile
85 90 95

Ile Gly Ile Leu Glu
100

<210> 1306
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1306
Met Ala Thr Pro Leu Gln Pro Phe Leu Thr Lys Thr His Lys Gln Asn
1 5 10 15

Pro Ile Ile Gly Phe Asn Ile Leu Thr Phe Val Val Thr Leu Phe Val
20 25 30

Ala Leu Phe Leu Val Val Phe Leu Val Ala Pro Tyr Gln Phe Glu Ile
35 40 45

Lys His Ser Asn Leu Cys Lys Thr Ala Gln Asp Ser Gln Leu Cys Leu
50 55 60

Ser Tyr Val Ser Glu Ile Val Thr Thr Glu Ser Asp
65 70 75

<210> 1307
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1307
Met Ala Thr Pro Gln Gln Pro Leu Leu Thr Lys Thr His Lys Gln Asn
1 5 10 15

Ser Ile Ile Ser Phe Lys Ile Leu Thr Phe Val Val Thr Leu Phe Val
20 25 30

Ala Leu Phe Leu Val Val Phe Leu Val Ala Pro Tyr Gln Phe Glu Ile
35 40 45

Lys His Ser Asn Leu Cys Lys Thr Ala Gln Asp Ser Gln Leu Cys Leu
50 55 60

Ser Tyr Val Ser Asp Leu Ile Ser Asn Glu Ile Val
65 70 75

<210> 1308
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1308
Gly Ala Pro Val Val Cys Ile Asp Val Ala Ala Gln Leu Cys Cys Asp
1 5 10 15

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Phe Asn Lys Asn Gln Ser Thr Trp Ser Pro Ile Leu Leu Leu Val Pro
20 25 30

Leu Val Leu Gly Leu Asp Lys Leu Asn Pro Arg Tyr Ile Pro Leu Leu
35 40 45

Lys Glu Thr Leu Thr Phe Pro Gln Ser Leu Gly Ile Leu Gly Gly Lys
50 55 60

Pro Gly Thr Ser Thr Tyr Ile Ala Gly Val Gln Asp
65 70 75

<210> 1309
<211> 76
<212> PRT
<213> Zea mays

<400> 1309
Val Pro Glu Trp Tyr Phe Leu Pro Ile His Ala Ile Leu Arg Ser Ile
1 5 10 15

Pro Asp Lys Ala Gly Gly Val Ala Ala Ile Ala Pro Val Phe Ile Ser
20 25 30

Leu Leu Ala Leu Pro Phe Phe Lys Glu Met Tyr Val Arg Ser Ser Ser
35 40 45

Phe Arg Pro Ile His Gln Gly Ile Phe Trp Leu Leu Leu Ala Asp Cys
50 55 60

Leu Leu Leu Gly Trp Ile Gly Cys Gln Pro Val Glu
65 70 75

<210> 1310
<211> 76
<212> PRT
<213> Zea mays

<400> 1310
Met Gly Lys Leu Thr Leu Gly His Arg Gly Glu Ala Ser Glu Pro Asp
1 5 10 15

Phe Phe Arg Gly Val Leu Gly Glu Leu Val Leu Thr Phe Leu Phe Val
20 25 30

Phe Ile Gly Val Gly Ala Ala Met Thr Asp Gly Ala Thr Thr Lys Gly
35 40 45

Ser Thr Ala Gly Gly Asp Leu Thr Ala Val Ala Leu Gly Gln Ala Leu
50 55 60

Val Val Ala Val Ile Ala Thr Ala Gly Phe His Ile
65 70 75

<210> 1311
<211> 76
<212> PRT

<213> Oryza sativa

<400> 1311

Ser Asp Arg Leu His Gln Val Leu Arg Trp Ala Leu Gly Ser Val Glu
 1 5 10 15

Ile Phe Phe Ser Asn His Cys Pro Leu Trp Tyr Gly Tyr Gly Gly Gly
 20 25 30

Leu Lys Cys Leu Glu Arg Phe Ser Tyr Ile Asn Ser Ile Val Tyr Pro
 35 40 45

Phe Thr Ser Ile Pro Leu Leu Ala Tyr Cys Thr Leu Pro Ala Ile Cys
 50 55 60

Leu Leu Thr Gly Lys Phe Ile Thr Pro Glu Leu Thr
 65 70 75

<210> 1312

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1312

Ile Ile Phe Thr Ala Leu Phe Ala Arg Arg Glu Tyr Val Glu Leu Ile
 1 5 10 15

Tyr Gly Val Pro Gly Arg Pro Tyr Gly Leu Phe Met Gly Gly Gly Gly
 20 25 30

Arg Leu Leu Ala Ala His Ile Val Gln Ile Leu Val Ile Val Gly Trp
 35 40 45

Val Ser Ala Thr Met Gly Thr Leu Phe Tyr Val Leu His Arg Phe Gly
 50 55 60

Leu Leu Arg Val Ser Pro Ala Thr Glu Met Glu Gly
 65 70 75

<210> 1313

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1313

Thr Leu Leu Lys Ala Leu Arg Trp Arg Leu Ala Cys Val Thr Pro Phe
 1 5 10 15

Ser Phe Leu Pro Val Thr Thr Thr Thr Thr Thr Arg Ala Leu Leu
 20 25 30

Leu Arg Ser Leu Leu Asp Pro Ser Phe Leu Arg Phe Asp Ala Ser Leu
 35 40 45

Leu Ala Ala Ser Ala Leu Thr Leu Ser Ser Thr Thr Pro Gln His Pro
 50 55 60

Asn His Leu Leu Leu Asn Arg Leu Ile His Pro Phe
65 70 75

<210> 1314
<211> 76
<212> PRT
<213> Zea mays

<400> 1314
Met Asp Ser Thr Asn Val Tyr Ala Tyr Ile Ser Ile Ile Ala Leu Ile
1 5 10 15

Val Cys Ile Pro Pro Ala Leu Ile Phe Glu Gly Pro Lys Leu Met Gln
20 25 30

His Gly Phe Ser Asp Ala Ile Ala Lys Val Gly Leu Thr Lys Phe Val
35 40 45

Ser Asp Leu Phe Leu Val Gly Leu Phe Tyr His Leu Tyr Asn Gln Ile
50 55 60

Ala Thr Asn Thr Leu Glu Arg Val Ala Pro Leu Thr
65 70 75

<210> 1315
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1315
Thr Asp Gly Arg Pro Thr Gln Gly Gly Phe Ala Ser Ala Met Val Val
1 5 10 15

Asp Gln Lys Phe Val Val Lys Ile Pro Ala Gly Leu Ala Pro Glu Gln
20 25 30

Ala Ala Pro Leu Leu Cys Ala Gly Leu Thr Val Tyr Ser Pro Leu Lys
35 40 45

His Phe Gly Leu Met Ser Pro Gly Leu Arg Gly Gly Val Leu Gly Leu
50 55 60

Gly Gly Val Gly His Met Gly Val Lys Val Ala Lys
65 70 75

<210> 1316
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1316
Ile Ser Met Val His His Val Val Ser Val Ile Leu Ile Ala Leu Ser
1 5 10 15

Tyr Ile Phe Arg Phe Ala Arg Val Gly Ser Ile Val Leu Ala Ile His
20 25 30

Asp Ala Ser Asp Val Phe Leu Glu Leu Gly Lys Ile Ser Lys Tyr Ser
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40

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Gly Tyr Gln Leu Leu Ala Asp Val Ser Phe Leu Ile Phe Val Cys Ser
 50 55 60

Trp Ala Val Leu Arg Leu Ile Tyr Tyr Pro Phe Trp
 65 70 75

<210> 1317

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1317

Ala Gly Val Phe Gly Asn Gly Ile Glu Ser Phe His Thr Leu Pro His
 1 5 10 15

Ser Ala Thr Arg Ala Ala Met Leu Val Arg Ile Asn Thr Leu Leu Gln
 20 25 30

Gly Tyr Ser Gly Ile Arg Phe Glu Ile Leu Glu Ala Ile Thr Lys Leu
 35 40 45

Ile Asn Ser Asn Ile Thr Pro Cys Leu Pro Leu Arg Gly Thr Ile Thr
 50 55 60

Ala Ser Gly Asp Leu Val Pro Leu Ser Tyr Ile Ala
 65 70 75

<210> 1318

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1318

Met Ala His Arg Arg Ile Ala Leu Ala Val Leu Val Thr Leu Leu Leu
 1 5 10 15

Ser Ala Phe Arg Pro Cys Leu Ala Gln Gln Ser Asn Asp Asp Thr Ser
 20 25 30

Lys His His Arg Ser Ala Thr Ala Gly Gly Phe Thr Pro Thr Thr Val
 35 40 45

Val Val Leu Val Ala Leu Ile Thr Ala Phe Val Leu Leu Thr Val Phe
 50 55 60

Ser Val Leu Ile Asn Arg Cys Ala Gln Ala Arg Ala
 65 70 75

<210> 1319

<211> 76

<212> PRT

<213> Zea mays

<400> 1319

Val Ala Cys Tyr Thr Ile Ala Phe Gly Gly Gly Phe Gly Ser Thr Leu
 1 5 10 15

Leu Gly Leu Asp Lys Lys Thr Tyr Glu Leu Ala Gly Ala Ser Pro Ala
20 25 30

Asn Val Pro Gly Ser Tyr Lys Asp Pro Gly Phe Gly Trp Met Ala Gly
35 40 45

Phe Val Ala Ala Ile Ser Phe Ala Gly Leu Leu Ser Leu Ile Pro Leu
50 55 60

Arg Lys Val Leu Val Ile Asp Tyr Lys Leu Thr Tyr
65 70 75

<210> 1320

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1320

Met Glu Val Ala Met Val Cys Thr Arg Val Asn Leu Leu Ile Leu Ile
1 5 10 15

Leu Ser Leu Cys Ser Pro Tyr Lys Phe Ile Gln Ser Pro Met Asp Phe
20 25 30

Gly Pro Leu Asn Leu Leu Pro Thr Thr Thr Thr Ala Ser Ser Asp Phe
35 40 45

Gly Arg Ile Leu Phe His Ser Pro Ser Ala Val Leu Lys Pro Gln Ala
50 55 60

Pro Arg Asp Ile Ser Leu Leu Leu Ser Phe Leu Ser
65 70 75

<210> 1321

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1321

Leu Tyr Glu Ile Asp Ile Pro Leu Asn Phe Val Ala Ser Val Gly Thr
1 5 10 15

Arg Val His Gly Leu Ala Cys Trp Phe Asp Val Leu Phe Asn Gly Ser
20 25 30

Thr Val Gln Arg Trp Leu Thr Thr Ala Pro Gly Ser Pro Thr Thr His
35 40 45

Trp Tyr Gln Leu Arg Cys Ile Leu Ser Gln Pro Leu Tyr Val Met Ala
50 55 60

Gly Gln Glu Ile Thr Gly Arg Leu His Leu Val Ala
65 70 75

<210> 1322

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1322

Thr Ile Ile Asn Val Ala Lys Trp Gly Arg Ser Val Tyr Ile Asn Ile
 1 5 10 15

Gln Lys Phe Val Gln Phe Gln Leu Thr Val Asn Val Val Ala Leu Met
 20 25 30

Val Asn Phe Ile Ser Ala Ser Phe Thr Gly Ser Ala Pro Leu Thr Ile
 35 40 45

Val Gln Leu Leu Trp Val Asn Leu Ile Met Asp Thr Leu Gly Ala Leu
 50 55 60

Ala Leu Ala Thr Glu Pro Pro Asn Asp Ala Met Met Lys Arg Pro Pro
 65 70 75 80

Val Gly Arg Gly Asp Asn Phe Ile Thr Lys Val Met Trp Arg Asn Ile
 85 90 95

Val Gly Gln Ser Ile Tyr Gln Leu Val Val Leu Gly Val Leu Leu Leu
 100 105 110

Arg Gly Lys Ser Leu Leu Gln Ile Asn Gly Pro Gln Ala Asp
 115 120 125

<210> 1323

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1323

Pro Ala Thr Leu Leu Tyr Ser Ser Gly Thr Thr Gly Pro Ser Lys Gly
 1 5 10 15

Val Val Ala Thr His Arg Ser Leu Ile Ser Met Val Gln Ile Ile Met
 20 25 30

Thr Arg Phe Arg Leu Glu Gly Ser Asp Lys Thr Glu Thr Phe Leu Cys
 35 40 45

Thr Val Pro Met Phe His Val Tyr Gly Leu Val Ala Phe Ala Thr Gly
 50 55 60

Leu Leu Gly Cys Gly Ala Thr Val Val Val Leu Ser Lys Tyr Glu Leu
 65 70 75 80

Pro Glu Met Leu Arg Ser Ile Asn Ala Tyr Gly Val Thr Tyr Leu Pro
 85 90 95

Leu Val Pro Pro Ile
 100

<210> 1324

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1324

Ser Ala Ala Thr Glu Ala Ile Ser Thr Pro Ser Val Ala Pro Gly Ser
1 5 10 15

Leu Ser Ser Thr Leu Asn Leu Arg Ser Leu Ile Leu Ser Gly Asp Phe
20 25 30

Phe Leu Ala Ala Val Ile Ser Cys Thr Leu Thr Lys Leu Val Leu Arg
35 40 45

Leu Glu Glu Val Gln Pro Ser Met Val Glu Val Asn Lys Ala Cys Thr
50 55 60

Gly Ala Leu Leu Val Met Thr Ser Ile Leu Gln Leu
65 70 75

<210> 1325

<211> 176

<212> PRT

<213> Zea mays

<400> 1325

Met Ala Lys Leu Met Asn Lys Leu Val Asp Ser Phe Glu His Asp Glu
1 5 10 15

Ile Pro Asp Val Gly Cys Val Arg Ala Val Leu Ala Glu Leu Val Leu
20 25 30

Thr Phe Leu Phe Val Phe Thr Gly Val Ser Ala Ala Met Ala Ala Gly
35 40 45

Ser Asp Gly Lys Pro Gly Asp Ala Met Pro Met Ala Thr Leu Ala Ala
50 55 60

Val Ala Ile Ala His Ala Leu Ala Ala Gly Val Leu Val Thr Ala Gly
65 70 75 80

Phe His Val Ser Gly Gly His Leu Asn Pro Ala Val Thr Val Gly Leu
85 90 95

Met Val Arg Gly His Ile Thr Lys Leu Arg Ala Val Leu Tyr Val Ala
100 105 110

Ala Gln Leu Leu Ala Ser Ser Ala Ala Cys Val Leu Leu Arg Phe Leu
115 120 125

Ser Gly Gly Met Val Thr Pro Val His Ala Leu Gly Arg Gly Ile Ser
130 135 140

Pro Met Gln Gly Leu Val Met Glu Val Ile Leu Thr Phe Ser Leu Leu
145 150 155 160

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Phe Val Thr Tyr Ala Met Ile Leu Asp Pro Arg Ser Gln Val Arg Ala
165 170 175

<210> 1326
<211> 76
<212> PRT
<213> Zea mays

<400> 1326
Met Phe Ile Ser Gly Phe Leu Leu Ser Ala Met Met Met Leu Tyr Phe
1 5 10 15

Ser Ser Leu Gly Tyr Ile Asp Val Ile Trp Glu Glu Ala Leu Gly Lys
20 25 30

Leu Ala Leu Val Ala Leu Ala Ala Thr Val Val Glu Cys Val Pro Val
35 40 45

Thr Glu Val Val Asp Asp Asn Ile Ser Val Pro Leu Ala Thr Met Leu
50 55 60

Val AlaPhe Leu Leu Phe Ser Ser Asn Arg Thr Ile
65 70 75

<210> 1327
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1327
Gly Ser Val Pro Glu Val Ala Ile Ser Pro Asp Asp Pro Val Ala Leu
1 5 10 15

Pro Phe Ser Ser Gly Thr Thr Gly Leu Pro Lys Gly Val Val Leu Thr
20 25 30

His Arg Ser Val Val Ser Gly Val Ala Gln Gln Val Asp Gly Glu Asn
35 40 45

Pro Asn Leu His Met Gly Ala Gly Asp Val Ala Leu Cys Val Leu Pro
50 55 60

Leu Phe His Ile Phe Ser Leu Asn Ser Val Leu Leu
65 70 75

<210> 1328
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1328
Leu Glu Thr Pro Arg Thr Glu Pro Phe Tyr Ala Glu Ala Ala Leu Val
1 5 10 15

Leu Phe Glu Phe Glu Phe Ala Ala Ile Thr Leu Val Leu Leu Ala Gly
20 25 30

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Ser Leu Leu Gly Arg Met Asn Ile Lys Ala Trp Met Ala Phe Thr Pro
 35 40 45

Leu Trp Leu Leu Phe Ser Tyr Thr Val Gly Ala Phe Ser Leu Trp Gly
 50 55 60

Gly Gly Phe Leu Tyr Gln Trp Gly Val Ile Asp Tyr
 65 70 75

<210> 1329
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1329
 Thr Leu Ala Ala Trp Pro Val Thr Arg Asn Ser Gln Leu Phe Tyr Phe
 1 5 10 15

Leu Met Leu Ala Met Tyr Ser Gly Gln Ile Gly Leu Phe Ser Ser Arg
 20 25 30

Asp Leu Leu Leu Phe Phe Ile Met Trp Glu Leu Glu Leu Ile Pro Val
 35 40 45

Tyr Leu Leu Leu Ser Met Trp Gly Gly Lys Arg Arg Leu Tyr Ser Ala
 50 55 60

Thr Lys Phe Ile Leu Tyr Thr Ala Gly Gly Ser Ile
 65 70 75

<210> 1330
 <211> 101
 <212> PRT
 <213> Solanum lycopersicum

<400> 1330
 Thr Ala Thr Asp Asp Phe Arg Lys Leu Ala Ser Ala Ile Tyr Leu Gln
 1 5 10 15

Val Ser Thr Ile Ser Gln Ala Leu Ile Phe Val Thr Arg Ser Arg Ser
 20 25 30

Trp Ser Phe Val Glu Arg Pro Gly Leu Leu Leu Val Val Ala Leu Ile
 35 40 45

Val Ala Gln Leu Val Ala Thr Leu Ile Ala Val Tyr Ala Ser Trp Ser
 50 55 60

Phe Ala Ala Ile Glu Gly Ile Gly Trp Gly Trp Ala Gly Val Ile Trp
 65 70 75 80

Leu Tyr Asn Leu Val Phe Tyr Phe Pro Leu Asp Ile Ile Lys Phe Leu
 85 90 95

Ile Arg Tyr Ala Leu
 100

<210> 1331
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1331
 Met Ala Leu Glu Ala Gly Tyr Asp Tyr Leu His Val Ala Val Val Gln
 1 5 10 15

Cys Thr Pro Thr Gln Ala Ala Ala Val Leu Gly Val Leu Leu Leu Leu
 20 25 30

Ala Ile Arg Leu Ala Ala Ala Ala Arg Ser Ser Ser Ala Thr Ser Pro
 35 40 45

Lys Trp Lys Gln His Arg Leu Pro Pro Thr Pro Pro Gly Lys Leu Pro
 50 55 60

Ile Ile Gly His Leu His Leu Ile Gly Ser His Pro
 65 70 75

<210> 1332
 <211> 101
 <212> PRT
 <213> Zea mays

<400> 1332
 Val Glu Ala Phe Thr Arg Gly Gly Ala Ala Gly Pro Val Asn Ile Ala
 1 5 10 15

Tyr Ser Gly Val Tyr Gln Trp Trp Tyr Thr Ile Gly Leu Arg Thr Asn
 20 25 30

Glu Asp Leu Tyr Thr Gly Ala Leu Phe Leu Leu Phe Leu Ser Thr Leu
 35 40 45

Ser Leu Ile Gly Gly Trp Leu His Leu Gln Pro Lys Trp Lys Pro Ser
 50 55 60

Leu Ser Trp Phe Lys Asn Ala Glu Ser Arg Leu Asn His His Leu Ser
 65 70 75 80

Gly Leu Phe Gly Val Ser Ser Leu Ala Trp Thr Gly His Leu Val His
 85 90 95

Val Ala Ile Pro Gly
 100

<210> 1333
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1333
 Cys Leu Leu Ser Leu Gly Gly Leu Pro Pro Leu Ala Gly Phe Phe Gly
 1 5 10 15

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Lys Leu Tyr Leu Phe Trp Cys Gly Trp Gln Ala Gly Leu Tyr Phe Leu
20 25 30

Val Ser Ile Gly Leu Leu Thr Ser Val Leu Ser Ile Tyr Tyr Tyr Leu
35 40 45

Lys Ile Ile Lys Leu Leu Met Thr Gly Arg Asn Gln Glu Ile Thr Pro
50 55 60

Tyr Val Arg Asn Tyr Arg Arg Ser Pro Leu Arg Ser
65 70 75

<210> 1334

<211> 76

<212> PRT

<213> Zea mays

<400> 1334

Cys Leu Leu Ser Leu Gly Gly Leu Pro Pro Leu Ala Gly Phe Phe Gly
1 5 10 15

Lys Leu Tyr Leu Phe Trp Cys Gly Trp Gln Ala Gly Leu Tyr Phe Leu
20 25 30

Val Ser Ile Gly Leu Leu Thr Ser Val Leu Ser Ile Tyr Tyr Tyr Leu
35 40 45

Lys Ile Ile Lys Leu Leu Met Thr Gly Arg Asn Gln Glu Ile Thr Pro
50 55 60

Tyr Val Arg Asn Tyr Arg Arg Ser Pro Leu Arg Ser
65 70 75

<210> 1335

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1335

Val Glu Ala Phe Thr Arg Gly Gly Ala Leu Gly Pro Val Asn Ile Ala
1 5 10 15

Tyr Ser Gly Val Tyr Gln Trp Trp Tyr Thr Ile Gly Leu Arg Thr Asn
20 25 30

Glu Asp Leu Tyr Thr Gly Ala Leu Phe Leu Leu Phe Leu Ser Ala Ile
35 40 45

Ser Leu Ile Ala Gly Trp Leu His Leu Gln Pro Lys Trp Lys Pro Ser
50 55 60

Val Ser Trp Phe Lys Asn Ala Glu Ser Arg Leu Asn His His Leu Ser
65 70 75 80

Gly Leu Phe Gly Val Ser Ser Leu Ala Trp Thr Gly His Leu Val His
85 90 95

Val Ala Ile Pro Ala
100

<210> 1336
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1336
Ser Leu Ile Gly Leu Val Pro Leu Ala Glu Arg Leu Ser Phe Leu Thr
1 5 10 15

Glu Gln Ile Ala Phe Tyr Thr Gly Pro Thr Val Gly Gly Leu Leu Asn
20 25 30

Ala Thr Phe Gly Asn Val Thr Glu Val Ile Ile Ala Leu Leu Ala Leu
35 40 45

Arg Glu Gly Lys Ile Glu Val Val Lys Cys Ser Leu Leu Gly Ser Ile
50 55 60

Leu Ser Asn Leu Leu Leu Val Leu Gly Thr Ser Leu
65 70 75

<210> 1337
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1337
Leu Gly Val Phe His Thr His Ala Val Ala Gly Phe Leu Gly Gly Ala
1 5 10 15

Thr Thr Gly Leu Phe Ala Glu Pro Ile Leu Cys Ser Leu Phe Leu Ser
20 25 30

Ile Pro Asp Ser Lys Gly Ala Phe Tyr Gly Gly Pro Gly Gly Ser Gln
35 40 45

Phe Gly Lys Gln Ile Ala Gly Ala Leu Phe Val Thr Ala Trp Asn Ile
50 55 60

Val Ile Thr Ser Ile Ile Cys Val Ile Ile Ser Leu Ile Leu Pro Leu
65 70 75 80

Arg Ile Ala Asp Gln Glu Leu Leu Ile Gly Asp Asp Ala Val His Gly
85 90 95

Glu Glu Ala Tyr Ala
100

<210> 1338
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1338

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Leu Lys Leu Gly Leu Ala Pro Pro Ser Trp Thr Asp Tyr Leu Tyr Leu
1 5 10 15

Thr Val Gly Gly Thr Leu Ser Asn Gly Gly Ile Ser Gly Gln Thr Phe
20 25 30

Lys His Gly Pro Gln Ile Ser Asn Val Leu Gln Leu Glu Val Val Thr
35 40 45

Gly Lys Gly Glu Val Val Thr Cys Ser Pro Thr Glu Ile Pro Glu Leu
50 55 60

Phe Phe Ala Val Leu Gly Gly Leu Gly Gln Phe Gly
65 70 75

<210> 1339

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1339

Phe Phe Gly Ile Ile Thr Gly Gln Lys Tyr Leu Leu Met Pro Lys Leu
1 5 10 15

Leu Ile Thr Phe Val Met Ala Ile Gly Ile Ile Leu Thr Pro Ile Tyr
20 25 30

Ser Leu Ser Met Pro Arg Gln Met Phe Tyr Gly Tyr Lys Leu Phe Asn
35 40 45

Ala Pro Lys Asp Ser Phe Phe Asp Ser Gly Pro Arg Glu Leu Phe Leu
50 55 60

Ser Ile Ser Ile Phe Leu Pro Val Ile Gly Ile Gly
65 70 75

<210> 1340

<211> 126

<212> PRT

<213> Zea mays

<400> 1340

Met Ala Lys Leu Val Asn Lys Leu Val Asp Ser Phe Asp His Asp Glu
1 5 10 15

Ala Pro Ala Pro Asp Val Gly Cys Val Arg Ala Val Leu Ala Glu Leu
20 25 30

Val Leu Thr Phe Leu Phe Val Phe Thr Gly Val Ser Ala Ser Met Ala
35 40 45

Ala Gly Ala Gly Gly Lys Pro Gly Glu Ala Met Pro Met Ala Thr Leu
50 55 60

Ala Ala Val Ala Ile Ala His Ala Leu Ala Ala Gly Val Leu Val Thr
65 70 75 80

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Ala Gly Phe His Val Ser Gly Gly His Leu Asn Pro Ala Val Thr Val
85 90 95

Gly Ile Leu Val Arg Gly His Ile Thr Lys Leu Arg Ala Leu Leu Tyr
100 105 110

Val Ala Ala Gln Leu Leu Ala Ser Ser Leu Ala Cys Ile Leu
115 120 125

<210> 1341

<211> 76

<212> PRT

<213> Zea mays

<400> 1341

Phe Trp Ala Ser Ser His Ser Ser Leu Ala Pro Thr Val Glu Ile Gly
1 5 10 15

Gly Ile Trp Pro Pro Lys Gly Ile Gly Val Leu Asp Pro Trp Glu Ile
20 25 30

Pro Leu Leu Asn Thr Pro Ile Leu Pro Ser Ser Gly Ala Ala Val Thr
35 40 45

Trp Ala His His Ala Ile Leu Ala Gly Lys Glu Lys Arg Ala Val Tyr
50 55 60

Ala Leu Val Ala Thr Val Leu Leu Ala Leu Val Ser
65 70 75

<210> 1342

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1342

Ile Asn Gly Lys Leu Ala Gly Ser Ala Lys Gly Ser Ala Ser Ser Ser
1 5 10 15

Leu Ile Ser Leu Gln Thr Pro Val Thr Leu Val Pro Gly Lys Asn Lys
20 25 30

Ile Asp Leu Leu Ser Thr Thr Val Gly Leu Ser Asn Tyr Gly Ala Phe
35 40 45

Phe Asp Leu Val Gly Ala Gly Val Thr Gly Pro Val Lys Leu Ser Gly
50 55 60

Pro Asn Gly Ala Leu Asn Leu Ser Ser Thr Asp Trp
65 70 75

<210> 1343

<211> 201

<212> PRT

<213> Zea mays

<400> 1343

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Pro Ser Ile Ala Val Ile Ser Ile Leu Leu Ser Phe Leu Val Ile Pro
1 5 10 15

Leu Gly Tyr Arg Phe Val Leu Ala Asp Leu Ser Ile Gly Val Phe Leu
20 25 30

Trp Ile Ala Ile Ser Ser Ile Ala Pro Ile Gly Leu Leu Met Ala Gly
35 40 45

Tyr Ser Ser Asn Asn Lys Tyr Ser Phe Leu Gly Gly Leu Arg Ala Ala
50 55 60

Ala Gln Ser Ile Ser Tyr Glu Ile Pro Leu Thr Phe Cys Val Leu Ala
65 70 75 80

Ile Ser Leu Leu Ser Asn Ser Leu Ser Thr Val Asp Ile Val Glu Ala
85 90 95

Gln Ser Lys Tyr Gly Phe Phe Gly Trp Asn Leu Trp Arg Gln Pro Ile
100 105 110

Gly Phe Leu Val Phe Leu Ile Ser Ser Leu Ala Glu Cys Glu Arg Leu
115 120 125

Pro Phe Asp Leu Pro Glu Ala Glu Glu Glu Leu Val Ala Gly Tyr Gln
130 135 140

Thr Glu Tyr Ser Gly Ile Lys Tyr Gly Leu Phe Tyr Leu Val Ser Tyr
145 150 155 160

Leu Asn Leu Leu Val Ser Ser Leu Phe Val Thr Val Leu Tyr Leu Gly
165 170 175

Gly Trp Asn Phe Ser Ile Pro Tyr Ile Ser Phe Phe Gly Phe Phe Gln
180 185 190

Met Asn Lys Ile Ile Gly Ile Leu Glu
195 200

<210> 1344

<211> 76

<212> PRT

<213> Zea mays

<400> 1344

Met Asn Trp Arg Ser Glu His Ile Trp Ile Glu Leu Leu Lys Gly Ser
1 5 10 15

Arg Lys Arg Gly Asn Phe Phe Trp Ala Cys Ile Leu Phe Leu Gly Ser
20 25 30

Leu Gly Phe Leu Ala Val Gly Ala Ser Ser Tyr Leu Gly Lys Asn Met
35 40 45

Ile Ser Val Leu Pro Ser Gln Gln Ile Leu Phe Phe Pro Gln Gly Val

50

55

60

Val Met Ser Phe Tyr Gly Ile Ala Gly Leu Phe Ile
65 70 75

<210> 1345
<211> 76
<212> PRT
<213> Zea mays

<400> 1345
Met Ala Lys Phe Ala Leu Gly His His Arg Glu Ala Ser Asp Ala Gly
1 5 10 15

Cys Val Arg Ala Val Leu Ala Glu Leu Ile Leu Thr Phe Leu Phe Val
20 25 30

Phe Ala Gly Val Gly Ser Ala Met Ala Thr Gly Lys Leu Ala Gly Gly
35 40 45

Gly Gly Asp Thr Val Val Gly Leu Thr Ala Val Ala Leu Ala His Thr
50 55 60

Leu Val Val Ala Val Met Val Ser Ala Gly Leu His
65 70 75

<210> 1346
<211> 76
<212> PRT
<213> Zea mays

<400> 1346
Ala Tyr Leu Pro Phe Lys Val Asn Ser Ser Gly Val Met Pro Ile Ile
1 5 10 15

Phe Ser Thr Ser Ser Leu Ala Leu Pro Gly Thr Leu Ala Arg Phe Ser
20 25 30

Gly Leu Asp Phe Leu Lys Lys Ala Ala Ile Ala Leu Asn Pro Gly Gly
35 40 45

Ala Leu Tyr Leu Pro Thr Asn Val Leu Leu Ile Ala Phe Phe Asn Tyr
50 55 60

Tyr Tyr Thr Phe Leu Gln Leu Asp Pro Asp Asp Leu
65 70 75

<210> 1347
<211> 176
<212> PRT
<213> Zea mays

<400> 1347
Met Glu Arg Asn Gly Glu Ile Val Asn Asn Gly Ser Ile Ile Ile Pro
1 5 10 15

Gly Gly Gly Gly Pro Val Thr Glu Ser Pro Leu Asp Gln Phe Gly Ile
20 25 30

His Pro Ile Leu Asp Leu Asn Ile Gly Lys Tyr Tyr Val Ser Phe Thr
35 40 45

Asn Leu Ser Leu Ser Met Leu Leu Thr Leu Gly Leu Val Leu Leu Leu
50 55 60

Val Phe Val Val Thr Lys Lys Gly Gly Gly Lys Ser Val Pro Asn Ala
65 70 75 80

Phe Gln Ser Leu Val Glu Leu Ile Tyr Asp Phe Val Pro Asn Leu Val
85 90 95

Asn Glu Gln Ile Gly Gly Leu Ser Gly Asn Val Lys His Lys Phe Phe
100 105 110

Pro Cys Ile Ser Val Thr Phe Thr Phe Ser Leu Phe Arg Asn Pro Gln
115 120 125

Gly Met Ile Pro Phe Ser Phe Thr Val Thr Ser His Phe Leu Ile Thr
130 135 140

Leu Ala Leu Ser Phe Ser Ile Phe Ile Gly Ile Thr Ile Val Gly Phe
145 150 155 160

Gln Arg His Gly Leu His Phe Phe Ser Phe Leu Leu Pro Ala Gly Val
165 170 175

<210> 1348
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1348
Ser Ala Val Gly Arg Thr Ala Val Thr Thr Ser Leu Ala Gly Ser Val
1 5 10 15

Ala Ala Leu Thr Thr Leu Tyr Gly Lys Arg Trp Leu Thr Gly His Trp
20 25 30

Asn Val Thr Asp Val Cys Asn Gly Leu Leu Gly Gly Phe Ala Ala Ile
35 40 45

Thr Ala Gly Cys Ser Val Val Asp Pro Trp Ala Ser Val Ile Cys Gly
50 55 60

Phe Val Ser Ala Trp Val Leu Ile Gly Cys Asn Lys Leu Ser Leu Ile
65 70 75 80

Leu Lys Phe Asp Asp Pro Leu Glu Ala Thr Gln Leu His Ala Gly Cys
85 90 95

Gly Ala Trp Gly Ile
100

<210> 1349
 <211> 76
 <212> PRT
 <213> Oryza sativa

<400> 1349
 Glu Gly Ala Ser Val Gly Pro Leu Ile Lys Leu Ala Val Asp Phe Asp
 1 5 10 15
 Ser Ser Ile Leu Val Thr Ala Phe Val Gly Thr Ala Ile Ala Phe Gly
 20 25 30
 Cys Phe Thr Cys Ala Ala Ile Val Ala Lys Arg Arg Glu Tyr Leu Tyr
 35 40 45
 Leu Gly Gly Leu Leu Ser Ser Gly Leu Ser Ile Leu Leu Trp Leu Gln
 50 55 60
 Phe Ala Ala Ser Ile Phe Gly His Ser Thr Gly Ser
 65 70 75

<210> 1350
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1350
 His Ile Thr Lys Leu Arg Ala Val Leu Tyr Val Ala Ala Gln Leu Leu
 1 5 10 15
 Ala Ser Ser Ala Ala Cys Val Leu Leu Arg Phe Leu Ser Gly Gly Met
 20 25 30
 Val Thr Pro Val His Ala Leu Gly Arg Gly Ile Ser Pro Met Gln Gly
 35 40 45
 Leu Val Met Glu Val Ile Leu Thr Phe Ser Leu Leu Phe Val Thr Tyr
 50 55 60
 Ala Met Ile Leu Asp Pro Arg Ser Gln Val Arg Ala
 65 70 75

<210> 1351
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1351
 Arg Gly His Ile Thr Lys Leu Arg Ala Leu Leu Tyr Val Ala Ala Gln
 1 5 10 15
 Leu Leu Ala Ser Ser Leu Ala Cys Ile Leu Leu Arg Tyr Leu Ser Gly
 20 25 30
 Gly Met Val Thr Pro Val His Ala Leu Gly Ala Gly Ile Arg Pro Met
 35 40 45

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Gln Gly Leu Val Met Glu Val Ile Leu Thr Phe Ser Leu Leu Phe Val
 50 55 60

Thr Tyr Ala Met Ile Leu Asp Pro Arg Ser Gln Val
 65 70 75

<210> 1352
 <211> 101
 <212> PRT
 <213> Zea mays

<400> 1352
 His Phe Asn Pro Ala Val Thr Leu Ala Phe Ala Thr Ser Gly Arg Phe
 1 5 10 15

Pro Trp Arg Gln Leu Pro Ala Tyr Val Leu Ala Gln Met Leu Gly Ala
 20 25 30

Thr Leu Ala Ser Gly Thr Leu Arg Leu Met Phe Gly Gly Arg His Glu
 35 40 45

His Phe Pro Gly Thr Leu Pro Thr Gly Ser Glu Val Gln Ser Leu Val
 50 55 60

Ile Glu Ile Ile Thr Thr Phe Tyr Leu Met Phe Val Ile Ser Gly Val
 65 70 75 80

Ala Thr Asp Asn Arg Ala Ile Gly Glu Leu Ala Gly Leu Ala Val Gly
 85 90 95

Ala Thr Ile Leu Leu
 100

<210> 1353
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1353
 Thr Leu Phe Leu Gly Ala Thr Leu Ala Leu Ala Gln Arg Asp Ile Lys
 1 5 10 15

Arg Ser Leu Ala Tyr Ser Thr Met Ser Gln Leu Gly Tyr Met Met Leu
 20 25 30

Ala Leu Gly Ile Gly Ser Tyr Gln Ala Ala Leu Phe His Leu Ile Thr
 35 40 45

His Ala Tyr Ser Lys Ala Leu Leu Phe Leu Gly Ser Gly Ser Val Ile
 50 55 60

His Ser Met Glu Pro Leu Val Gly Tyr Ser Pro Asp
 65 70 75

<210> 1354
 <211> 76
 <212> PRT

<213> Oryza sativa

<400> 1354

Ala Glu Arg Val Ser Phe Leu Thr Glu Gln Ile Ala Leu Tyr Thr Gly
 1 5 10 15

Pro Thr Val Gly Gly Leu Leu Asn Ala Thr Cys Gly Asn Ala Thr Glu
 20 25 30

Leu Ile Ile Ala Leu Phe Ala Leu Leu Lys Gly Lys Ile Glu Val Val
 35 40 45

Lys Cys Ser Leu Leu Gly Ser Val Leu Ser Asn Leu Leu Leu Val Leu
 50 55 60

Gly Thr Ser Leu Phe Cys Gly Gly Val Val Asn Leu
 65 70 75

<210> 1355

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1355

Ile Ile Pro Ser Pro Pro Ala Gln Pro Thr Cys Pro Ile Asp Ala Leu
 1 5 10 15

Lys Leu Gly Ala Cys Val Asp Val Leu Gly Gly Leu Ile His Ile Gly
 20 25 30

Ile Gly Gly Ser Ala Lys Gln Thr Cys Cys Pro Leu Leu Gly Gly Leu
 35 40 45

Val Asp Leu Asp Ala Ala Ile Cys Leu Cys Thr Thr Ile Arg Leu Lys
 50 55 60

Leu Leu Asn Ile Asn Ile Ile Leu Pro Ile Ala Leu
 65 70 75

<210> 1356

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1356

Ile Leu Ala Ile Leu Ser Met Ile Leu Gly Asn Leu Ile Ala Ile Thr
 1 5 10 15

Gln Thr Ser Met Lys Arg Met Leu Ala Tyr Ser Ser Ile Gly Gln Ile
 20 25 30

Gly Tyr Val Ile Ile Gly Ile Ile Val Gly Asp Ser Asn Asp Gly Tyr
 35 40 45

Ala Ser Met Ile Thr Tyr Met Leu Phe Tyr Ile Ser Met Asn Leu Gly
 50 55 60

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Thr Phe Ala Cys Ile Val Leu Phe Gly Leu Arg Thr Gly Thr Asp Asn
65 70 75 80

Ile Arg Asp Tyr Ala Gly Leu Tyr Thr Lys Asp Pro Phe Leu Ala Leu
85 90 95

Ser Leu Ala Leu Cys
100

<210> 1357

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1357

Ile Leu Ala Ile Leu Ser Met Ile Leu Gly Asn Leu Ile Ala Ile Thr
1 5 10 15

Gln Thr Ser Met Lys Arg Met Leu Ala Tyr Ser Ser Ile Gly Gln Ile
20 25 30

Gly Tyr Val Ile Ile Gly Ile Ile Val Gly Asp Ser Asn Asp Gly Tyr
35 40 45

Ala Ser Met Ile Thr Tyr Met Leu Phe Tyr Ile Ser Met Asn Leu Gly
50 55 60

Thr Phe Ala Cys Ile Val Leu Phe Gly Leu Arg Thr Gly Thr Asp Asn
65 70 75 80

Ile Arg Asp Tyr Ala Gly Leu Tyr Thr Lys Asp Pro Phe Leu Ala Leu
85 90 95

Ser Leu Ala Leu Cys
100

<210> 1358

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1358

Thr Val Leu Leu Gly Ala Thr Leu Ala Leu Ala Gln Lys Asp Ile Lys
1 5 10 15

Arg Gly Leu Ala Tyr Ser Thr Met Ser Gln Leu Gly Tyr Met Met Leu
20 25 30

Ala Leu Gly Met Gly Ser Tyr Arg Ser Ala Leu Phe His Leu Ile Thr
35 40 45

His Ala Tyr Ser Lys Ala Leu Leu Phe Leu Gly Ser Gly Ser Ile Ile
50 55 60

His Ser Met Glu Thr Ile Val Gly Tyr Ser Pro Ala
65 70 75

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<210> 1359

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1359

Leu Lys Lys Arg Ile Ala Tyr Ser Ser Val Ser His Met Gly Phe Ile
1 5 10 15

Ile Ile Gly Ile Ser Ser Leu Thr Asp Thr Gly Leu Asn Gly Ala Leu
20 25 30

Leu Gln Ile Ile Ser His Gly Phe Ile Gly Ala Ala Leu Phe Phe Leu
35 40 45

Ala Gly Thr Thr Tyr Asp Arg Ile Arg Leu Val Tyr Leu Asp Glu Met
50 55 60

Gly Gly Ile Ala Ile Pro Met Pro Lys Met Phe Thr Met Phe Ser Ser
65 70 75 80

Phe Ser Met Ala Ser Leu Ala Leu Pro Gly Met Ser Gly Phe Val Ala
85 90 95

Glu Leu Ile Val Phe Phe Gly Ile Ile Thr Gly Gln Lys Tyr Leu Leu
100 105 110

Met Pro Lys Leu Leu Ile Thr Phe Val Met Ala Ile Gly Ile
115 120 125

<210> 1360

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1360

Asn Gly Trp Gln Leu Ala Ala Ala Thr Phe Val Gly Leu Gln Ser Met
1 5 10 15

Pro Gly Leu Val Val Leu Tyr Gly Ser Ile Val Lys Lys Lys Trp Ala
20 25 30

Val Asn Ser Ala Phe Met Ala Leu Tyr Ala Tyr Ala Ser Thr Leu Ile
35 40 45

Val Trp Val Leu Val Gly Phe Arg Met Ala Phe Gly Asp Arg Leu Leu
50 55 60

Pro Phe Trp Gly Lys Ala Gly Ala Ala Leu Thr Glu
65 70 75

<210> 1361

<211> 176

<212> PRT

<213> Zea mays

<400> 1361

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Phe Lys Lys Arg Ile Ala Tyr Ser Ser Val Ser His Met Gly Phe Ile
1 5 10 15

Ile Ile Gly Ile Gly Ser Ile Thr Asn Ile Gly Leu Asn Gly Ala Ile
20 25 30

Leu Gln Ile Leu Ser His Gly Phe Ile Gly Ala Thr Leu Phe Phe Leu
35 40 45

Ala Gly Thr Ala Cys Asp Arg Met Arg Leu Val Tyr Leu Glu Glu Leu
50 55 60

Gly Gly Ile Ser Ile Pro Met Pro Lys Ile Phe Thr Met Phe Ser Ser
65 70 75 80

Phe Ser Met Ala Ser Leu Ala Leu Pro Gly Met Ser Gly Phe Val Ala
85 90 95

Glu Leu Val Val Phe Phe Gly Leu Ile Thr Ser Pro Lys Phe Met Leu
100 105 110

Met Pro Lys Met Leu Ile Thr Phe Val Met Ala Ile Gly Met Ile Leu
115 120 125

Thr Pro Ile Tyr Leu Leu Ser Met Leu Arg Gln Met Phe Tyr Gly Tyr
130 135 140

Lys Leu Phe His Val Pro Asn Lys Asn Phe Val Asp Ser Gly Pro Arg
145 150 155 160

Glu Leu Phe Leu Leu Ile Cys Ile Phe Leu Pro Val Ile Gly Ile Gly
165 170 175

<210> 1362

<211> 76

<212> PRT

<213> Zea mays

<400> 1362

Phe Phe Gly Leu Ile Thr Ser Pro Lys Phe Met Leu Met Pro Lys Met
1 5 10 15

Leu Ile Thr Phe Val Met Ala Ile Gly Met Ile Leu Thr Pro Ile Tyr
20 25 30

Leu Leu Ser Met Leu Arg Gln Met Phe Tyr Gly Tyr Lys Leu Phe His
35 40 45

Val Pro Asn Lys Asn Phe Val Asp Ser Gly Pro Arg Glu Leu Phe Leu
50 55 60

Leu Ile Cys Ile Phe Leu Pro Val Ile Gly Ile Gly
65 70 75

<210> 1363

<211> 76
 <212> PRT
 <213> Oryza sativa

<400> 1363
 Ile Cys Val Gly Ala Ile Asp Ile Thr Gln Leu Ser Val Ala Gly Tyr
 1 5 10 15
 Leu Phe Ser Ser Gly Lys Pro Tyr Tyr Ala Leu Ala Leu Leu Gly Leu
 20 25 30
 Thr Ile Pro Gln Val Val Phe Gln Phe Gln Tyr Phe Leu Lys Asp Pro
 35 40 45
 Val Lys Tyr Asp Val Lys Tyr Gln Ala Ser Ala Gln Pro Phe Phe Val
 50 55 60
 Leu Gly Leu Leu Val Thr Ala Leu Ala Thr Ser His
 65 70 75

<210> 1364
 <211> 126
 <212> PRT
 <213> Zea mays

<400> 1364
 Met Ala Thr Val Asp Ala Thr Thr Thr Ala Gly Ser Gly Lys Gln Thr
 1 5 10 15
 Asp Ala Ala Pro Ser Pro Pro Ala Ala Ala Ala Ala Cys Arg Ser
 20 25 30
 Leu Ser Gly Ala Asp Leu Ala Leu Arg Val Leu Leu Phe Ala Val Thr
 35 40 45
 Leu Ser Gly Leu Val Val Leu Ala Thr Ala Glu Gln Thr Val Arg Val
 50 55 60
 Pro Val Pro Gln Ile Pro Gly Leu Val Leu Ser Leu Pro Ala Lys Phe
 65 70 75 80
 Lys Asp Ser Pro Ala Leu Ile Tyr Leu Leu Val Ala Leu Cys Val Thr
 85 90 95
 Cys Phe Tyr Ser Leu Leu Ser Thr Ala Phe Thr Ser Leu Lys Leu Leu
 100 105 110
 Phe Gly Ser Ser Pro Ser Arg Thr Leu Phe Leu Leu Val Leu
 115 120 125

<210> 1365
 <211> 101
 <212> PRT
 <213> Zea mays

<400> 1365
 Met Ala Lys Leu His Arg Leu Ile Ser Ala Val Leu Arg Leu Ala Ala
 1 5 10 15

Ala Gly Ala Ala Ala Ala Ala Val Ile Met Val Thr Ser His Glu
 20 25 30

Thr Thr Ser Leu Phe Gly Ile Glu Met Glu Ala Lys Tyr Ser Tyr Thr
 35 40 45

Pro Ser Phe Val Phe Phe Val Val Ala Phe Ala Val Thr Phe Ala Tyr
 50 55 60

Ser Leu Leu Ala Ala Val Leu Val Arg Pro Gly Thr Thr Ala Ser Arg
 65 70 75 80

Leu Val Leu Leu Ser Asp Val Thr Val Gly Met Leu Leu Thr Gly Ala
 85 90 95

Val Ala Ala Thr Gly
 100

<210> 1366
 <211> 76
 <212> PRT
 <213> Solanum lycopersicum

<400> 1366
 Met Thr Trp Arg Ser Asp Asp Ile Trp Ile Glu Leu Ile Thr Gly Ser
 1 5 10 15

Arg Lys Ile Ser Asn Phe Cys Trp Ala Leu Ile Leu Phe Leu Gly Ser
 20 25 30

Leu Gly Phe Leu Leu Val Gly Thr Ser Ser Tyr Leu Gly Arg Asn Leu
 35 40 45

Leu Ser Phe Phe Pro Pro Gln Gln Ile Ile Phe Phe Pro Gln Gly Ile
 50 55 60

Val Met Ser Phe Tyr Gly Ile Ala Gly Leu Phe Ile
 65 70 75

<210> 1367
 <211> 76
 <212> PRT
 <213> Oryza sativa

<400> 1367
 Leu Lys Ser Asp Arg Glu Arg Phe Ser Pro Asn Asn Ile Leu Leu Met
 1 5 10 15

Ile Ala Gly Gly Gly Leu Leu Trp Leu Gly Trp Ala Gly Phe Asn Gly
 20 25 30

Gly Ala Pro Tyr Ala Pro Asn Val Thr Ala Thr Val Ala Val Leu Asn
 35 40 45

Thr Asn Val Ser Ala Ala Thr Ser Leu Leu Thr Trp Thr Cys Leu Asp

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50 55 60

Val Ile Phe Phe Gly Lys Pro Ser Val Ile Gly Ala
65 70 75

<210> 1368
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1368
Met Ile Phe Gln Ser Phe Leu Leu Gly Asn Leu Val Ser Leu Cys Met
1 5 10 15

Lys Ile Ile Asn Ser Val Val Val Val Gly Leu Tyr Tyr Gly Phe Leu
20 25 30

Thr Thr Phe Ser Ile Gly Pro Ser Tyr Leu Phe Leu Leu Arg Ala Leu
35 40 45

Val Met Glu Glu Gly Thr Glu Lys Lys Val Ser Ala Thr Thr Gly Phe
50 55 60

Ile Thr Gly Gln Leu Met Met Phe Ile Ser Ile Tyr
65 70 75

<210> 1369
<211> 76
<212> PRT
<213> Zea mays

<400> 1369
Leu Leu Leu Cys Ile Thr Ile Pro Phe Ser Leu Met Thr Thr Ile Pro
1 5 10 15

Asp Thr Ser Trp Tyr Gly Ile Leu Trp Thr Thr Arg Ser Asn Gln Ile
20 25 30

Val Glu Gln Gly Leu Ile Asn Asn Val Gln Gln Ile Gly Ile His Leu
35 40 45

Ala Thr Asp Phe Tyr Leu Pro Phe Glu Leu Ile Ser Leu Ile Leu Leu
50 55 60

Val Ser Leu Ile Gly Ala Ile Thr Met Ala Arg Gln
65 70 75

<210> 1370
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1370
Phe Ile Gly Val Val Ala Gly Val Ser Asn Ala Ile Asn Asn Gly Tyr
1 5 10 15

Glu Ser Trp Gly Pro Leu Phe Gly Lys Leu Phe Phe Ala Phe Trp Val
20 25 30

Ile Val His Leu Tyr Pro Phe Leu Lys Gly Leu Val Gly Arg Gln Asn
35 40 45

Arg Thr Pro Thr Ile Val Ile Val Trp Ser Ile Leu Leu Ala Ser Ile
50 55 60

Phe Ser Leu Leu Trp Val Arg Ile Asp Pro Phe Leu
65 70 75

<210> 1371

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1371

Phe Ile Gly Val Val Ala Gly Val Ser Asn Ala Ile Asn Asn Gly Tyr
1 5 10 15

Glu Ser Trp Gly Pro Leu Phe Gly Lys Leu Phe Phe Ala Phe Trp Val
20 25 30

Ile Val His Leu Tyr Pro Phe Leu Lys Gly Leu Val Gly Arg Gln Asn
35 40 45

Arg Thr Pro Thr Ile Val Ile Val Trp Ser Ile Leu Leu Ala Ser Ile
50 55 60

Phe Ser Leu Leu Trp Val Arg Ile Asp Pro Phe Leu
65 70 75

<210> 1372

<211> 126

<212> PRT

<213> Zea mays

<400> 1372

Leu Ile Ala Val Ser Arg Tyr Ser Gly Ala Thr Phe Cys Pro Pro Ser
1 5 10 15

Val Phe Ser Arg Gly Ile Gly Trp Glu Gly Ile Ser Ile Ile Leu Asp
20 25 30

Gly Met Cys Gly Thr Leu Thr Gly Thr Ala Ala Ser Val Glu Asn Ala
35 40 45

Gly Leu Leu Ala Val Thr Arg Val Gly Ser Arg Arg Val Ile Lys Ile
50 55 60

Ser Ala Leu Phe Met Ile Phe Phe Ser Leu Phe Ala Lys Phe Gly Ala
65 70 75 80

Val Leu Ala Ser Ile Pro Leu Pro Ile Phe Ala Ala Leu Tyr Cys Val
85 90 95

Leu Phe Ala Tyr Ser Ala Gly Ala Gly Phe Ser Leu Leu Gln Tyr Cys

100

105

110

Asn Leu Asn Ser Leu Arg Thr Lys Phe Ile Leu Ser Ile Ser
 115 120 125

<210> 1373
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1373
 Met Ala Ser Asn Asn Leu Leu Val Asp Leu Lys Arg Cys Phe Ser Ala
 1 5 10 15

Pro Ser Leu Arg Ser Tyr Leu Ala Glu Phe Ile Ser Thr Phe Leu Phe
 20 25 30

Val Phe Thr Ala Val Gly Ser Ala Ile Ser Ala Arg Met Leu Thr Thr
 35 40 45

Pro Asp Val Thr Ser Ser Ala Gly Pro Leu Val Ala Thr Ala Val Ala
 50 55 60

Gln Ala Phe Gly Leu Phe Ala Ala Val Leu Ile Ala
 65 70 75

<210> 1374
 <211> 76
 <212> PRT
 <213> Oryza sativa

<400> 1374
 Ser Thr Ile Val Thr Val Ala Lys Trp Gly Arg Ser Val Tyr Val Asn
 1 5 10 15

Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val Asn Val Val Ala Leu
 20 25 30

Leu Val Asn Phe Thr Ser Ala Cys Phe Thr Gly Asp Ala Pro Leu Thr
 35 40 45

Ala Val Gln Leu Leu Trp Val Asn Met Ile Met Asp Thr Leu Gly Ala
 50 55 60

Leu Ala Leu Ala Thr Glu Pro Pro Asn Asn Asn Leu
 65 70 75

<210> 1375
 <211> 176
 <212> PRT
 <213> Zea mays

<400> 1375
 Met Ala Lys Phe Ala Leu Gly His His Arg Glu Ala Ser Asp Ala Gly
 1 5 10 15

Cys Val Arg Ala Val Leu Ala Glu Leu Ile Leu Thr Phe Leu Phe Val
 20 25 30

Phe Ala Gly Val Gly Ser Ala Met Ala Thr Gly Lys Leu Ala Gly Gly
 35 40 45
 Gly Gly Asp Thr Val Val Gly Leu Thr Ala Val Ala Leu Ala His Thr
 50 55 60
 Leu Val Val Ala Val Met Val Ser Ala Gly Leu His Val Ser Gly Gly
 65 70 75 80
 His Ile Asn Pro Ala Val Thr Leu Gly Leu Ala Ala Thr Gly Arg Ile
 85 90 95
 Thr Leu Phe Arg Ser Ala Leu Tyr Val Ala Ala Gln Leu Leu Gly Ser
 100 105 110
 Thr Leu Ala Cys Leu Leu Leu Ala Phe Leu Ala Val Ala Asp Ser Gly
 115 120 125
 Val Pro Val His Ala Leu Gly Ala Gly Val Gly Ala Leu Arg Gly Val
 130 135 140
 Leu Met Glu Ala Val Leu Thr Phe Ser Leu Leu Phe Ala Val Tyr Ala
 145 150 155 160
 Thr Val Val Asp Pro Arg Arg Ala Val Gly Gly Met Gly Pro Leu Leu
 165 170 175

 <210> 1376
 <211> 101
 <212> PRT
 <213> Oryza sativa

 <400> 1376
 Tyr Thr Gly Pro Thr Val Gly Gly Leu Leu Asn Ala Thr Phe Gly Asn
 1 5 10 15
 Ala Thr Glu Met Ile Ile Ala Ile Tyr Ala Leu Lys Asn Gly Met Ile
 20 25 30
 Arg Val Val Gln Gln Ser Leu Leu Gly Ser Ile Leu Ser Asn Met Leu
 35 40 45
 Leu Val Met Gly Cys Ala Phe Phe Ala Gly Gly Ile Val His Arg Asn
 50 55 60
 Lys Asp Gln Val Phe Ser Lys Ala Thr Ala Val Val Asn Ser Gly Leu
 65 70 75 80
 Leu Leu Met Ala Val Met Gly Leu Met Phe Pro Ala Val Leu His Phe
 85 90 95
 Thr His Ser Glu Val
 100

<210> 1377
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1377
 Met Val Lys Leu Ala Phe Gly Ser Phe Arg Asp Ser Leu Ser Ala Ala
 1 5 10 15
 Ser Leu Lys Ala Tyr Val Ala Glu Phe Ile Ala Thr Leu Leu Phe Val
 20 25 30
 Phe Ala Gly Val Gly Ser Ala Ile Ala Tyr Ser Gln Leu Thr Lys Gly
 35 40 45
 Gly Ala Leu Asp Pro Ala Gly Leu Val Ala Ile Ala Ile Ala His Ala
 50 55 60
 Phe Ala Leu Phe Val Gly Val Ser Met Ala Ala Asn
 65 70 75

<210> 1378
 <211> 76
 <212> PRT
 <213> Solanum lycopersicum

<400> 1378
 Ile Cys Asn Gln Phe Ser Gly Val Ser Asp Arg Phe Val Asp Thr Gly
 1 5 10 15
 Tyr Ala Ile Asp Ser Thr Tyr Leu Leu Phe Ser Ala Tyr Leu Val Phe
 20 25 30
 Ser Met Gln Leu Gly Phe Ala Met Leu Leu Ala Gly Ser Val Arg Asn
 35 40 45
 Thr Met Asn Ile Met Leu Thr Asn Val Leu Asp Ala Ala Ala Gly Gly
 50 55 60
 Leu Phe Tyr Tyr Leu Phe Gly Phe Ala Phe Ala Leu
 65 70 75

<210> 1379
 <211> 76
 <212> PRT
 <213> Oryza sativa

<400> 1379
 Leu Leu Gln Gln Val Asp Asp Thr Leu Gly Val Phe His Thr His Ala
 1 5 10 15
 Val Ala Gly Phe Leu Gly Gly Ala Thr Thr Gly Leu Phe Ala Glu Pro
 20 25 30
 Val Leu Cys Ser Leu Phe Leu Pro Val Thr Asn Ser Arg Gly Ala Phe
 35 40 45

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Tyr Pro Gly Arg Gly Gly Gly Leu Gln Phe Val Arg Gln Val Ala Gly
 50 55 60

Ala Leu Phe Ile Ile Cys Trp Asn Val Val Thr
 65 70 75

<210> 1380

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1380

Leu Arg Gly Gly Asp Val Ala Phe Val Leu Ala Pro Ala Gly Leu Asp
 1 5 10 15

Val Pro Val Leu Tyr Phe Ala Leu Leu Ser Ile Gly Ala Val Val Ser
 20 25 30

Pro Ala Asn Pro Ala Leu Thr Pro Ala Glu Val Ser Arg Leu Val Ser
 35 40 45

Leu Ser Gly Ala Ser Val Ala Phe Ala Val Ser Ser Thr Ala Thr Lys
 50 55 60

Leu Pro Ala Gly Leu Thr Thr Val Val Leu Leu Asp
 65 70 75

<210> 1381

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1381

Asn Gly Val Ala Thr Ile Ile Gly Lys Ile Gly Leu Val Phe Ala Ile
 1 5 10 15

Leu Thr Phe Leu Val Leu Leu Val Arg Phe Leu Ile Asp Lys Gly Met
 20 25 30

Thr Val Gly Leu Leu Lys Trp Tyr Ser Thr Asp Ala Leu Thr Ile Val
 35 40 45

Asn Tyr Phe Ala Thr Ala Val Thr Ile Ile Val Val Ala Val Pro Glu
 50 55 60

Gly Leu Pro Leu Ala Val Thr Leu Ser Leu Ala Phe
 65 70 75

<210> 1382

<211> 76

<212> PRT

<213> Zea mays

<400> 1382

Leu Lys Ala Leu Val Tyr Trp Val Ala Gln Leu Leu Gly Ser Val Val
 1 5 10 15

Ala Cys Leu Leu Leu Lys Ile Ala Thr Gly Gly Ala Ala Leu Gly Ala
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20

25

30

Phe Ser Leu Ser Ala Gly Val Gly Ala Met Asn Ala Val Val Leu Glu
 35 40 45

Met Val Met Thr Phe Gly Leu Val Tyr Thr Val Tyr Ala Thr Ala Val
 50 55 60

Asp Pro Lys Lys Gly Asp Leu Gly Val Ile Ala Pro
 65 70 75

<210> 1383

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1383

Ser Leu Ile Gly Ile Thr Pro Leu Ala Glu Arg Leu Gly Tyr Ala Thr
 1 5 10 15

Glu Gln Leu Ala Leu Tyr Thr Gly Pro Thr Ile Gly Gly Leu Leu Asn
 20 25 30

Ala Thr Phe Gly Asn Ala Thr Glu Met Ile Ile Ser Leu Tyr Ala Leu
 35 40 45

Lys Asn Gly Met Ile Arg Val Val Gln Gln Ser Leu Leu Gly Ser Ile
 50 55 60

Leu Ser Asn Met Leu Leu Val Leu Gly Cys Ala Phe
 65 70 75

<210> 1384

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1384

Leu Asp Ile Thr Leu Gly Val Ala Ile Gly Ser Ser Thr Gln Ile Ser
 1 5 10 15

Met Phe Val Ile Pro Phe Cys Val Val Ile Gly Trp Met Met Gly Gln
 20 25 30

Lys Met Asp Leu Asn Phe Gln Leu Phe Glu Thr Ala Thr Leu Phe Ile
 35 40 45

Thr Val Leu Val Val Ala Phe Met Leu Gln Asp Gly Val Ala Asn Tyr
 50 55 60

Leu Lys Gly Leu Met Leu Ile Leu Cys Tyr Leu Ile
 65 70 75

<210> 1385

<211> 76

<212> PRT

<213> Zea mays

<400> 1385

Thr Tyr Ile Tyr Pro Ala Val Ala Ile Ile Leu Ser Pro Arg Tyr Ala
 1 5 10 15

Leu Leu Ile Asp Pro Leu Glu Arg Phe Val Phe Thr Met Arg Ser Leu
 20 25 30

Gln Gly Ala Leu Ile Ile Ala Gly Val Phe Gln Ala Val Val Gly Phe
 35 40 45

Phe Gly Ile Trp Arg Val Phe Ile Arg Phe Leu Ser Pro Leu Ala Ala
 50 55 60

Val Pro Phe Val Thr Leu Thr Gly Leu Gly Leu Phe
 65 70 75

<210> 1386

<211> 76

<212> PRT

<213> *Oryza sativa*

<400> 1386

Asn Glu Ala Val Gln Asp Gln Leu Ser Ala Leu Ser Phe Thr Ser Leu
 1 5 10 15

Ala Val Ile Phe Gly Ala Gly Leu Val Thr Ser Leu Ser Pro Cys Thr
 20 25 30

Leu Ser Val Leu Pro Leu Thr Leu Gly Tyr Ile Gly Ala Phe Gly Ser
 35 40 45

Gly Lys Asp Arg Ser Glu Val Val Gly Asn Ser Val Ala Phe Ser Leu
 50 55 60

Gly Leu Ala Thr Thr Leu Ala Ile Leu Gly Val Ala
 65 70 75

<210> 1387

<211> 76

<212> PRT

<213> *Zea mays*

<400> 1387

Asn Lys Tyr Cys Leu Ser Ser Lys Ile Pro Leu Gly Val Val Leu Ala
 1 5 10 15

Ile Pro Pro Phe Asn Tyr Pro Ala Asn Leu Ala Gly Ser Lys Ile Gly
 20 25 30

Pro Ala Leu Ile Ala Gly Asn Ala Leu Val Leu Lys Pro Pro Thr Gln
 35 40 45

Gly Ala Val Ala Ala Leu His Met Val His Cys Phe His Leu Ala Gly
 50 55 60

Phe Pro Lys Gly Leu Ile Ser Cys Val Thr Gly Lys

65

70

75

<210> 1388

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1388

Met Ala Ala Ala Gly Ala Tyr Ser Ala Ser Leu Pro Ala Val Pro Asp
1 5 10 15Trp Leu Asn Lys Gly Asp Asn Ala Trp Gln Leu Thr Ala Ser Thr Leu
20 25 30Val Gly Ile Gln Ser Met Pro Gly Leu Val Val Leu Tyr Gly Ser Ile
35 40 45Val Lys Lys Lys Trp Ala Val Asn Ser Ala Phe Met Ala Leu Tyr Ala
50 55 60Tyr Ala Ser Ser Leu Leu Val Trp Val Leu Val Gly
65 70 75

<210> 1389

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1389

Val Gly Arg Thr Ala Val Thr Thr Thr Leu Ala Gly Ser Thr Ala Gly
1 5 10 15Ile Val Thr Leu Phe Gly Arg Arg Leu Leu Val Gly His Trp Asp Ala
20 25 30Met Asp Val Cys Asn Gly Val Leu Gly Gly Phe Val Ala Ile Thr Ser
35 40 45Gly Cys Ser Val Val Glu Pro Trp Ala Ala Ile Leu Cys Gly Phe Cys
50 55 60Ala Ala Trp Val Leu Ile Gly Leu Asn Ile Leu Ala
65 70 75

<210> 1390

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1390

Val Met Lys Ser Ile Val Pro Val Val Met Ala Gly Val Leu Gly Ile
1 5 10 15Tyr Gly Leu Ile Ile Ala Val Ile Ile Ser Thr Gly Ile Asn Pro Lys
20 25 30Thr Lys Ser Tyr Tyr Leu Phe Asp Gly Tyr Ala His Leu Ser Ser Gly
35 40 45

Leu Ala Cys Gly Leu Ala Gly Leu Ser Ala Gly Met Ala Ile Gly Ile
50 55 60

Val Gly Asp Ala Gly Val Arg Ala Asn Ala Gln Gln Pro Lys Leu Phe
65 70 75 80

Val Gly Met Ile Leu Ile Leu Ile Phe Ala Glu Ala Leu Ala Leu Tyr
85 90 95

Gly Leu Ile Val Gly
100

<210> 1391

<211> 76

<212> PRT

<213> Zea mays

<400> 1391

Ser Ala Leu Tyr Val Ala Ala Gln Leu Leu Gly Ser Thr Leu Ala Cys
1 5 10 15

Leu Leu Leu Ala Phe Leu Ala Val Ala Asp Ser Gly Val Pro Val His
20 25 30

Ala Leu Gly Ala Gly Val Gly Ala Leu Arg Gly Val Leu Met Glu Ala
35 40 45

Val Leu Thr Phe Ser Leu Leu Phe Ala Val Tyr Ala Thr Val Val Asp
50 55 60

Pro Arg Arg Ala Val Gly Gly Met Gly Pro Leu Leu
65 70 75

<210> 1392

<211> 101

<212> PRT

<213> Zea mays

<400> 1392

Leu His Ile Phe Arg Gly Leu Tyr His Ala Ser Tyr Ser Ser Pro Arg
1 5 10 15

Glu Phe Val Trp Cys Leu Gly Val Val Ile Phe Leu Leu Met Ile Val
20 25 30

Thr Ala Phe Ile Gly Tyr Val Pro Pro Trp Gly Gln Met Ser Phe Trp
35 40 45

Gly Ala Thr Val Ile Thr Ser Leu Ala Ser Ala Ile Pro Val Val Gly
50 55 60

Asp Thr Ile Val Thr Trp Leu Trp Gly Gly Phe Ser Val Asp Asn Ala
65 70 75 80

Thr Leu Asn Arg Phe Phe Ser Leu His His Leu Leu Pro Leu Ile Leu

Ala Gly Ala Ser Leu
100

<210> 1393
<211> 76
<212> PRT
<213> Zea mays

<400> 1393
Gln Leu Gln Pro Ile Phe Ala Gln Trp Ile Gln Asn Ile His Ala Gly
1 5 10 15

Ala Pro Gly Val Thr Ala Pro Gly Ala Thr Thr Ser Thr Ser Leu Thr
20 25 30

Trp Gly Gly Gly Glu Leu Val Ala Ile Gly Gly Lys Val Ala Leu Leu
35 40 45

Pro Ile Pro Leu Gly Thr Ala Asp Phe Leu Val His His Ile His Ala
50 55 60

Phe Thr Ile His Val Thr Val Leu Ile Leu Leu Lys
65 70 75

<210> 1394
<211> 76
<212> PRT
<213> Zea mays

<400> 1394
Ile Leu Ala Ile Leu Ser Met Ile Leu Gly Asn Leu Leu Ala Ile Thr
1 5 10 15

Gln Thr Ser Met Lys Arg Met Leu Ala Tyr Ser Ser Ile Gly Gln Ile
20 25 30

Gly Tyr Val Ile Ile Gly Ile Ile Val Gly Asp Ser Asn Asp Gly Tyr
35 40 45

Ala Ser Met Ile Thr Tyr Met Leu Phe Tyr Ile Ser Met Asn Leu Gly
50 55 60

Thr Phe Ala Cys Ile Val Leu Phe Gly Leu Arg Thr
65 70 75

<210> 1395
<211> 76
<212> PRT
<213> Zea mays

<400> 1395
Ile Leu Ala Ile Leu Ser Met Ile Leu Gly Asn Leu Leu Ala Ile Thr
1 5 10 15

Gln Thr Ser Met Lys Arg Met Leu Ala Tyr Ser Ser Ile Gly Gln Ile
20 25 30

Gly Tyr Val Ile Ile Gly Ile Ile Val Gly Asp Ser Asn Asp Gly Tyr
35 40 45

Ala Ser Met Ile Thr Tyr Met Leu Phe Tyr Ile Ser Met Asn Leu Gly
50 55 60

Thr Phe Ala Cys Ile Val Leu Phe Gly Leu Arg Thr
65 70 75

<210> 1396
<211> 76
<212> PRT
<213> Zea mays

<400> 1396
Met Ala Met Gly Glu Ala Leu Arg Ala Ala Ala Asp Ala Val Val
1 5 10 15

Thr Phe Leu Trp Val Leu Cys Val Ser Thr Leu Gly Ala Ser Thr Thr
20 25 30

Ala Val Thr Ser Tyr Leu Arg Leu Gln Gly Val His Phe Ala Leu Leu
35 40 45

Val Thr Val Ser Leu Leu Ser Val Leu Leu Phe Val Phe Asn Ile Leu
50 55 60

Cys Asp Ala Leu Gly Gly Ala Ser Phe Asn Pro Thr
65 70 75

<210> 1397
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1397
Val Gly Arg Thr Ala Val Thr Thr Thr Leu Ala Gly Ser Thr Ala Ala
1 5 10 15

Leu Thr Thr Leu Phe Gly Lys Arg Leu Gln Thr Gly His Trp Asn Val
20 25 30

Ile Asp Val Cys Asn Gly Leu Leu Gly Gly Phe Ala Ala Ile Thr Ala
35 40 45

Gly Cys Ser Val Val Asp Pro Trp Ala Ala Ile Ile Cys Gly Phe Val
50 55 60

Ser Ala Trp Val Leu Ile Gly Leu Asn Ala Leu Ala
65 70 75

<210> 1398
<211> 76
<212> PRT
<213> Zea mays

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<400> 1398

Met Ala Leu Gln Ala Ala Tyr Glu Tyr Leu Gln Gln Ala Val Gly His
1 5 10 15

Gly Ala Trp Ser Ser Thr Gln Thr Leu Thr Leu Leu Ile Ala Val
20 25 30

Pro Thr Val Leu Leu Leu Leu Ala Ser Leu Ala Lys Ser Thr Ser Ser
35 40 45

Ser Gly Arg Gly Lys Pro Pro Leu Pro Pro Ser Pro Pro Gly Thr Leu
50 55 60

Pro Ile Val Gly His Leu His His Ile Gly Pro Gln
65 70 75

<210> 1399

<211> 101

<212> PRT

<213> Zea mays

<400> 1399

Gly Gly Leu Ser Gly Asn Val Lys His Lys Phe Phe Pro Cys Ile Ser
1 5 10 15

Val Thr Phe Thr Phe Ser Leu Phe Arg Asn Pro Gln Gly Met Ile Pro
20 25 30

Phe Ser Phe Thr Val Thr Ser His Phe Leu Ile Thr Leu Ala Leu Ser
35 40 45

Phe Ser Ile Phe Ile Gly Ile Thr Ile Val Gly Phe Gln Arg His Gly
50 55 60

Leu His Phe Phe Ser Phe Leu Leu Pro Ala Gly Val Pro Leu Pro Leu
65 70 75 80

Ala Pro Phe Leu Val Leu Leu Glu Leu Ile Ser His Cys Phe Arg Ala
85 90 95

Leu Ser Ser Gly Ile
100

<210> 1400

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1400

Val Gly Arg Thr Ala Val Thr Thr Thr Leu Ala Gly Ser Val Ala Ala
1 5 10 15

Leu Thr Thr Leu Phe Gly Lys Arg Leu Gln Thr Gly His Trp Asn Val
20 25 30

Val Asp Val Cys Asn Gly Leu Leu Gly Gly Phe Ala Ala Ile Thr Ala
35 40 45

Gly Cys Ser Val Val Asp Pro Trp Ala Ala Ile Ile Cys Gly Phe Val
50 55 60

Ser Ala Trp Val Leu Ile Gly Leu Asn Ala Leu Ala
65 70 75

<210> 1401

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1401

Phe Tyr Leu Ala Val Gly Gly Ser Leu Leu Ser Tyr Ile Tyr Ser Ala
1 5 10 15

Pro Pro Leu Lys Leu Lys Gln Asn Gly Trp Ile Gly Asn Phe Ala Leu
20 25 30

Gly Ala Ser Tyr Ile Gly Leu Pro Trp Trp Ala Gly Gln Ala Leu Phe
35 40 45

Gly Thr Leu Thr Pro Asp Ile Val Val Leu Thr Ser Leu Tyr Ser Ile
50 55 60

Ala Gly Leu Gly Ile Ala Ile Val Asn Asp Phe Lys
65 70 75

<210> 1402

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1402

Leu Gly Gln Ser Phe Leu Leu Ala Gln Ala Val Leu Pro Gln Thr Thr
1 5 10 15

Gln Phe Tyr Lys Gly Gly Gly Gly Ala Asp Ala Val Val Glu Thr Pro
20 25 30

Trp Val Asn Pro Leu Tyr Pro Met Ala Thr Met Val Tyr Phe Gln Cys
35 40 45

Val Phe Ala Ala Ile Thr Leu Ile Leu Leu Ala Gly Ser Leu Leu Gly
50 55 60

Arg Met Asn Ile Lys Ala Trp Met Leu Phe Val Pro
65 70 75

<210> 1403

<211> 76

<212> PRT

<213> Zea mays

<400> 1403

Pro Ser Ile Ala Val Ile Ser Ile Leu Leu Ser Phe Leu Val Ile Pro
1 5 10 15

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Leu Gly Tyr Arg Phe Val Leu Ala Asp Leu Ser Ile Gly Val Phe Leu
20 25 30

Trp Ile Ala Ile Ser Ser Ile Ala Pro Ile Gly Leu Leu Met Ala Gly
35 40 45

Tyr Ser Ser Asn Asn Lys Tyr Ser Phe Leu Gly Gly Leu Arg Ala Ala
50 55 60

Ala Gln Ser Ile Ser Tyr Glu Ile Pro Leu Thr Phe
65 70 75

<210> 1404
<211> 101
<212> PRT
<213> Zea mays

<400> 1404
Val Pro Val Val Met Ala Gly Val Leu Gly Ile Tyr Gly Leu Ile Ile
1 5 10 15

Ala Val Ile Ile Ser Thr Gly Ile Asn Pro Lys Ala Lys Pro Tyr Tyr
20 25 30

Leu Phe Asp Gly Tyr Ala His Leu Ser Ser Gly Leu Ala Cys Gly Leu
35 40 45

Ala Gly Leu Ala Ala Gly Met Ala Ile Gly Ile Val Gly Asp Ala Gly
50 55 60

Val Arg Ala Asn Ala Gln Gln Pro Lys Leu Phe Val Gly Met Ile Leu
65 70 75 80

Ile Leu Ile Phe Ala Glu Ala Leu Ala Leu Tyr Gly Leu Ile Val Gly
85 90 95

Ile Ile Leu Ser Ser
100

<210> 1405
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1405
Glu Thr Ala Ala Val Glu Pro Leu Tyr Pro Met Ala Thr Val Val Tyr
1 5 10 15

Phe Gln Cys Val Phe Ala Ala Ile Thr Leu Ile Leu Val Ala Gly Ser
20 25 30

Leu Leu Gly Arg Met Ser Phe Leu Ala Trp Met Ile Phe Val Pro Leu
35 40 45

Trp Leu Thr Phe Ser Tyr Thr Val Gly Ala Phe Ser Leu Trp Gly Gly
50 55 60

Gly Phe Leu Phe His Trp Gly Val Ile Asp Tyr Cys
65 70 75

<210> 1406
<211> 76
<212> PRT
<213> Zea mays

<400> 1406
Met Ala Met Gly Ala Thr Val Arg Ala Ala Ala Ala Asp Ala Val Val
1 5 10 15

Thr Phe Leu Trp Val Leu Cys Ala Ser Ala Leu Gly Ala Ser Thr Ala
20 25 30

Ala Val Thr Ser Tyr Leu Gly Val Gln Glu Gly Ala Gly His Tyr Ala
35 40 45

Leu Leu Val Thr Thr Ser Leu Leu Ser Val Leu Leu Phe Thr Phe Asp
50 55 60

Leu Leu Cys Gly Ala Leu Gly Gly Ala Ser Phe Asn
65 70 75

<210> 1407
<211> 101
<212> PRT
<213> Zea mays

<400> 1407
Val Leu Gly Thr Thr Thr Pro Thr Gly Pro His Trp His Ser Leu Val
1 5 10 15

Ile Glu Ile Ile Val Thr Phe Asn Met Met Phe Val Thr Leu Ala Val
20 25 30

Ala Thr Asp Thr Arg Ala Val Gly Glu Leu Ala Gly Leu Ala Val Gly
35 40 45

Ser Ala Val Cys Ile Thr Ser Ile Phe Ala Gly Ala Val Ser Gly Gly
50 55 60

Ser Met Asn Pro Ala Arg Thr Leu Gly Pro Ala Leu Ala Ser Asn Leu
65 70 75 80

Tyr Thr Gly Leu Trp Ile Tyr Phe Leu Gly Pro Val Leu Gly Thr Leu
85 90 95

Ser Gly Ala Trp Thr
100

<210> 1408
<211> 76
<212> PRT
<213> Zea mays

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<400> 1408

Phe Gly Ala Ile Ser Leu Leu Val Leu Ser Val Ile Pro Gln Leu Asn
1 5 10 15

Thr Tyr Val Leu Gly Leu Pro Met Val Ser Met Leu Val Tyr Val Trp
20 25 30

Ser Arg Glu Asn Pro Asn Ala Gln Ile Asn Ile Tyr Gly Ile Leu Gln
35 40 45

Leu Lys Ala Phe Tyr Leu Pro Trp Val Met Leu Leu Leu Asp Val Ile
50 55 60

Phe Gly Ser Pro Leu Met Pro Gly Leu Leu Gly Ile
65 70 75

<210> 1409

<211> 76

<212> PRT

<213> Zea mays

<400> 1409

Phe Gly Ala Ile Ser Leu Leu Val Leu Ser Ile Ile Pro Leu Phe Asn
1 5 10 15

Ser Phe Phe Leu Gly Ile Pro Met Val Ser Met Leu Leu Tyr Val Trp
20 25 30

Ser Arg Glu Asn Pro Asn Ala Gln Ile Asn Ile Tyr Gly Leu Val Gln
35 40 45

Leu Arg Ser Phe Tyr Leu Pro Trp Ala Met Leu Leu Leu Asp Val Ile
50 55 60

Phe Gly Ser Ser Leu Met Pro Gly Leu Leu Gly Ile
65 70 75

<210> 1410

<211> 76

<212> PRT

<213> Zea mays

<400> 1410

Asn Asn Ile Ser Phe Trp Leu Leu Pro Pro Ser Leu Leu Leu Leu Leu
1 5 10 15

Ser Ser Ala Leu Val Glu Val Gly Ser Gly Thr Gly Trp Thr Val Tyr
20 25 30

Pro Pro Leu Ser Gly Ile Thr Ser His Ser Gly Gly Ala Val Asp Leu
35 40 45

Ala Ile Phe Ser Leu His Leu Ser Gly Val Ser Ser Ile Leu Gly Ser
50 55 60

Ile Asn Phe Ile Thr Thr Ile Phe Asn Met Arg Gly
65 70 75

<210> 1411
 <211> 76
 <212> PRT
 <213> Oryza sativa

<400> 1411
 Leu Gly Leu Lys Gln Ala Lys Val Val Gly Met Phe Ser Gly Gly Leu
 1 5 10 15

Asn Ala Ala Ser Thr Leu Ser Val Val Ile Val Val Ile Tyr Gly Ala
 20 25 30

Asn Leu Thr Ile Asn Gly Tyr Met Thr Thr Gly Ser Leu Thr Ser Phe
 35 40 45

Ile Leu Tyr Ser Leu Thr Val Gly Ser Ser Val Ser Ala Leu Ser Gly
 50 55 60

Leu Tyr Thr Thr Val Met Lys Ala Ser Gly Ala Ser
 65 70 75

<210> 1412
 <211> 76
 <212> PRT
 <213> Solanum lycopersicum

<400> 1412
 Met Asp Leu Ser Glu Pro Ile His Asp Phe Leu Leu Val Phe Leu Gly
 1 5 10 15

Ser Gly Leu Ile Leu Gly Gly Leu Gly Val Val Leu Leu Pro Asn Pro
 20 25 30

Ile Tyr Ser Ala Phe Ser Leu Gly Leu Val Leu Val Cys Thr Ser Leu
 35 40 45

Phe Tyr Ile Leu Ser Asn Ala Tyr Phe Val Ala Ala Ala Gln Leu Leu
 50 55 60

Ile Tyr Val Gly Ala Ile Asn Val Leu Ile Ile Phe
 65 70 75

<210> 1413
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1413
 Gly Pro Thr Thr Pro Ala Gly Leu Ile Ala Ala Ala Val Ala His Ala
 1 5 10 15

Phe Ala Leu Phe Val Ala Val Ser Val Gly Ala Asn Ile Ser Gly Gly
 20 25 30

His Val Asn Pro Ala Val Thr Phe Gly Ala Phe Val Gly Gly Asn Ile
 35 40 45

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Thr Leu Phe Arg Gly Leu Leu Tyr Trp Val Ala Gln Leu Leu Gly Ser
50 55 60

Thr Val Ala Cys Phe Leu Leu Arg Phe Ser Thr Gly
65 70 75

<210> 1414
<211> 76
<212> PRT
<213> Zea mays

<400> 1414
Met Asp Leu Pro Gly Pro Ile His Glu Ile Leu Val Leu Phe Gly Gly
1 5 10 15

Phe Gly Leu Leu Leu Gly Gly Leu Gly Val Val Leu Leu Thr Asn Pro
20 25 30

Ile Tyr Ser Ala Phe Ser Leu Gly Leu Val Leu Val Cys Ile Ser Leu
35 40 45

Phe Tyr Phe Leu Leu Asn Ser Tyr Phe Val Ala Val Ala Gln Leu Leu
50 55 60

Ile Tyr Val Gly Ala Ile Asn Val Leu Ile Ile Phe
65 70 75

<210> 1415
<211> 176
<212> PRT
<213> Solanum lycopersicum

<400> 1415
Leu Ser Gly Val Leu Thr Asn His Val Thr Cys Leu Asp Glu Leu Thr
1 5 10 15

Ser Phe Ser Leu Ser Thr Lys Asn Gly Thr Val Leu Asp Glu Leu Ile
20 25 30

Thr Arg Ala Lys Val Ala Leu Ala Met Leu Ala Ser Val Thr Thr Pro
35 40 45

Asn Asp Glu Val Leu Arg Gln Gly Leu Gly Lys Met Pro Tyr Trp Val
50 55 60

Ser Ser Arg Asp Arg Lys Leu Met Glu Ser Ser Gly Lys Asp Ile Ile
65 70 75 80

Ala Asn Arg Val Val Ala Gln Asp Gly Thr Gly Asp Tyr Gln Thr Leu
85 90 95

Ala Glu Ala Val Ala Ala Ala Pro Asp Lys Asn Lys Thr Arg Tyr Val
100 105 110

Ile Tyr Val Lys Met Gly Ile Tyr Lys Glu Asn Val Val Val Thr Lys
115 120 125

Lys Lys Met Asn Leu Met Ile Val Gly Asp Gly Met Asn Ala Thr Ile
130 135 140

Ile Thr Gly Ser Leu Asn Val Val Asp Gly Ser Thr Phe Pro Ser Asn
145 150 155 160

Thr Leu Ala Ala Val Gly Gln Gly Phe Ile Leu Gln Asp Ile Cys Ile
165 170 175

<210> 1416

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1416

Ile Arg Leu His Gln Glu Met Ile Met Gln Ser Asp Lys Thr Ile Asp
1 5 10 15

Ala Arg Gly Val Asn Val His Ile Thr Lys Gly Ala Gly Ile Thr Leu
20 25 30

Gln Tyr Ile Lys Asn Val Ile Ile His Gly Leu His Ile His Asp Ile
35 40 45

Val Glu Gly Asn Gly Gly Met Val Arg Asp Ala Val Asp His Ile Gly
50 55 60

Ile Arg Thr Lys Ser Asp Gly Asp Gly Ile Ser Ile Phe Gly Ala Ser
65 70 75 80

Tyr Ile Trp Ile Asp His Val Ser Met Gln Arg Cys Tyr Asp Gly Leu
85 90 95

Ile Asp Ala Val Glu
100

<210> 1417

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1417

Leu Thr Phe Ala Asp Leu Leu Glu Ala Thr Asn Gly Phe His Asn Asp
1 5 10 15

Ser Leu Val Gly Ser Gly Gly Phe Gly Asp Val Tyr Lys Ala Gln Leu
20 25 30

Lys Asp Gly Ser Val Val Ala Ile Lys Lys Leu Ile His Val Ser Gly
35 40 45

Gln Gly Asp Arg Glu Phe Thr Ala Glu Met Glu Thr Ile Gly Lys Ile
50 55 60

Lys His Arg Asn Leu Val Pro Leu Leu Gly Tyr Cys Lys Val Gly Glu
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				70				75				80			
Glu	Arg	Leu	Leu	Val ₈₅	Tyr	Glu	Tyr	Met	Lys ₉₀	Tyr	Gly	Ser	Leu	Glu ₉₅	Asp
Val	Leu	His	Asp ₁₀₀	Arg	Lys	Lys	Ile	Gly ₁₀₅	Ile	Lys	Leu	Asn	Trp ₁₁₀	Pro	Ala
Arg	Arg	Lys ₁₁₅	Ile	Ala	Ile	Gly	Ala ₁₂₀	Ala	Arg	Gly	Leu	Ala ₁₂₅	Phe		
<210> 1418															
<211> 276															
<212> PRT															
<213> Zea mays															
<400> 1418															
Tyr ₁	Gly	Phe	Ile	Ala ₅	Ala	Phe	Phe	Val	Val ₁₀	Glu	Val	Ser	Phe	Ile ₁₅	Ser
Phe	Ala	Trp	Phe ₂₀	Phe	Val	Leu	Lys	Arg ₂₅	Glu	Leu	Arg	Pro	Ser ₃₀	Glu	Leu
Trp	Ala	Ser ₃₅	Glu	Lys	Gly	Tyr	Lys ₄₀	Ala	Met	Thr	Ser	Asn ₄₅	Phe	Arg	Arg
Tyr	Ser ₅₀	Tyr	Arg	Glu	Leu	Val ₅₅	Lys	Ala	Thr	Arg	Lys ₆₀	Phe	Lys	Val	Glu
Leu ₆₅	Gly	Arg	Gly	Glu	Ser ₇₀	Gly	Thr	Val	Tyr	Lys ₇₅	Gly	Val	Leu	Glu	Asp ₈₀
Asp	Arg	His	Val	Ala ₈₅	Val	Lys	Lys	Leu	Glu ₉₀	Asn	Val	Arg	Gln	Gly ₉₅	Lys
Glu	Val	Phe	Gln ₁₀₀	Ala	Glu	Leu	Ser	Val ₁₀₅	Ile	Gly	Arg	Ile	Asn ₁₁₀	His	Met
Asn	Leu	Val ₁₁₅	Arg	Ile	Trp	Gly	Phe ₁₂₀	Cys	Ser	Glu	Gly	Ser ₁₂₅	His	Arg	Leu
Leu	Val ₁₃₀	Ser	Glu	Tyr	Val	Glu ₁₃₅	Asn	Gly	Ser	Leu	Ala ₁₄₀	Asn	Ile	Leu	Phe
Ser ₁₄₅	Glu	Gly	Gly	Asn	Ile ₁₅₀	Leu	Leu	Asp	Trp	Glu ₁₅₅	Gly	Arg	Phe	Asn	Ile ₁₆₀
Ala	Leu	Gly	Val	Ala ₁₆₅	Lys	Gly	Leu	Ala	Tyr ₁₇₀	Leu	His	His	Glu	Cys ₁₇₅	Leu
Glu	Trp	Val	Ile ₁₈₀	His	Cys	Asp	Val	Lys ₁₈₅	Pro	Glu	Asn	Ile	Leu ₁₉₀	Leu	Asp
Gln	Ala	Phe ₁₉₅	Glu	Pro	Lys	Ile	Thr ₂₀₀	Asp	Phe	Gly	Leu	Val ₂₀₅	Lys	Leu	Leu

Asn Arg Gly Gly Ser Thr Gln Asn Val Ser His Val Arg Gly Thr Leu
210 215 220

Gly Tyr Ile Ala Pro Glu Trp Val Ser Ser Leu Pro Ile Thr Ala Lys
225 230 235 240

Val Asp Val Tyr Ser Tyr Gly Val Val Leu Leu Glu Leu Leu Thr Gly
245 250 255

Thr Arg Val Ser Glu Leu Val Gly Gly Thr Asp Glu Val His Ser Met
260 265 270

Leu Arg Lys Leu
275

<210> 1419

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1419

His Gly Gly Gly Ala Ala Thr Gln Gly Gly Phe Ser Asp Ala Ile Val
1 5 10 15

Val Asn Glu His Tyr Val Leu Arg Val Pro Ala Gly Leu Pro Leu Asp
20 25 30

Ser Ala Ala Pro Leu Leu Cys Ala Gly Val Thr Val Tyr Ser Pro Met
35 40 45

Val Ile His Gly Leu Asn Ala Pro Gly Lys His Val Gly Val Val Gly
50 55 60

Leu Gly Gly Leu Gly His Val Ala Val Lys Phe Ala Lys Ala Phe Gly
65 70 75 80

Met Arg Val Thr Val Ile Ser Thr Ser Pro Gly Lys Arg Gln Glu Ala
85 90 95

Leu Glu His Leu Gly Ala Asp Glu Phe Leu Val Ser Arg Asp Ala Gly
100 105 110

Gln Met Ala Ala Ala Ala Ala Thr Met Asp Gly Ile Leu Asn Thr Val
115 120 125

Ser Ala Trp His Pro Ile Ala Pro Leu Phe Ser Leu Met Lys Pro Met
130 135 140

Ala Gln Met Val Phe Val Gly
145 150

<210> 1420

<211> 226

<212> PRT

<213> Oryza sativa

<400> 1420

Asp Leu His Phe Ile His Asn Asp Trp Gly Ile Thr Met Tyr Pro Val
 1 5 10 15

Val Pro Gly His Glu Ile Thr Gly Val Val Thr Lys Val Gly Thr Asn
 20 25 30

Val Ala Gly Phe Lys Val Gly Asp Arg Val Gly Val Gly Cys Ile Ala
 35 40 45

Ala Ser Cys Leu Asp Cys Glu His Cys Arg Arg Ser Glu Glu Asn Tyr
 50 55 60

Cys Asp Lys Val Ala Leu Thr Tyr Asn Gly Ile Phe Trp Asp Gly Ser
 65 70 75 80

Ile Thr Tyr Gly Gly Tyr Ser Gly Met Leu Val Ala His Lys Arg Phe
 85 90 95

Val Val Arg Ile Pro Asp Thr Leu Pro Leu Asp Ala Ala Ala Pro Leu
 100 105 110

Leu Cys Ala Gly Ile Thr Val Tyr Ser Pro Met Lys Gln His Gly Met
 115 120 125

Leu Gln Ala Asp Ala Ala Gly Arg Arg Leu Gly Val Val Gly Leu Gly
 130 135 140

Gly Leu Gly His Val Ala Val Lys Phe Gly Lys Ala Phe Gly Leu His
 145 150 155 160

Val Thr Val Ile Ser Thr Ser Pro Ala Lys Glu Arg Glu Ala Arg Glu
 165 170 175

Asn Leu Lys Ala Asp Asn Phe Val Val Ser Thr Asp Gln Lys Gln Met
 180 185 190

Gln Ala Met Thr Arg Ser Leu Asp Tyr Ile Ile Asp Thr Val Ala Ala
 195 200 205

Thr His Ser Leu Gly Pro Ile Leu Glu Leu Leu Lys Val Asn Gly Lys
 210 215 220

Leu Val
 225

<210> 1421

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1421

Asp Phe Asp Ala Glu Ala Val Phe Asp Gln Glu Phe Ile Asn Val Lys
 1 5 10 15

Leu Ser Asp Tyr Ile Gly Lys Lys Tyr Val Ile Leu Phe Phe Tyr Pro
 20 25 30
 Leu Asp Phe Thr Phe Val Cys Pro Thr Glu Ile Thr Ala Phe Ser Asp
 35 40 45
 Arg Tyr Asp Glu Phe Glu Lys Leu Asn Thr Glu Ile Leu Gly Val Ser
 50 55 60
 Ile Asp Ser Val Phe Ser His Leu Ala Trp Val Gln Thr Asp Arg Lys
 65 70 75 80
 Ser Gly Gly Leu Gly Asp Leu Lys Tyr Pro Leu Ile Ser Asp Val Thr
 85 90 95
 Lys Ser Ile Ser Lys Ser Phe Gly Val Leu Ile Pro Asp Gln Gly Ile
 100 105 110
 Ala Leu Arg Gly Leu Phe Ile Ile Asp Lys Glu Gly Val Ile Gln His
 115 120 125
 Ser Thr Ile Asn Asn Leu Ala Ile Gly Arg Ser Val Asp Glu Thr Met
 130 135 140
 Arg Thr Leu Gln Ala Leu Gln
 145 150
 <210> 1422
 <211> 201
 <212> PRT
 <213> Zea mays
 <400> 1422
 Leu Ala Gly Ser Lys Ile Gly Pro Ala Leu Ile Ala Gly Asn Ala Leu
 1 5 10 15
 Val Leu Lys Pro Pro Thr Gln Gly Ala Val Ala Ala Leu His Met Val
 20 25 30
 His Cys Phe His Leu Ala Gly Phe Pro Lys Gly Leu Ile Ser Cys Val
 35 40 45
 Thr Gly Lys Gly Ser Glu Ile Gly Asp Phe Leu Thr Met His Pro Gly
 50 55 60
 Val Asn Cys Ile Ser Phe Thr Gly Gly Asp Thr Gly Ile Ala Ile Ser
 65 70 75 80
 Lys Lys Ala Gly Met Val Pro Leu Gln Met Glu Leu Gly Gly Lys Asp
 85 90 95
 Ala Cys Ile Val Leu Glu Asp Ala Asp Leu Asp Leu Val Ser Ala Asn
 100 105 110

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Ile Val Lys Gly Gly Phe Ser Tyr Ser Gly Gln Arg Cys Thr Ala Val
115 120 125

Lys Val Val Leu Ile Met Glu Ser Ile Ala Asp Ala Val Val Gln Lys
130 135 140

Val Asn Ala Lys Leu Ala Lys Leu Lys Val Gly Pro Pro Glu Asp Asp
145 150 155 160

Ser Asp Ile Thr Pro Val Val Thr Glu Ser Ser Ala Asn Phe Ile Glu
165 170 175

Gly Leu Val Met Asp Ala Lys Glu Lys Gly Ala Thr Phe Cys Gln Glu
180 185 190

Tyr Arg Arg Glu Gly Asn Leu Ile Trp
195 200

<210> 1423
<211> 251
<212> PRT
<213> Zea mays

<400> 1423
Leu Trp Lys Arg Ala Asp Val Leu His Lys Ala Ala Ala Ile Leu Lys
1 5 10 15

Glu His Lys Ala Pro Ile Ala Glu Cys Leu Val Lys Glu Ile Ala Lys
20 25 30

Pro Ala Lys Asp Ala Val Ser Glu Val Val Arg Ser Gly Asp Leu Val
35 40 45

Ser Tyr Thr Ala Glu Glu Gly Val Arg Ile Leu Gly Glu Gly Lys Leu
50 55 60

Val Val Ser Asp Ser Phe Pro Gly Asn Glu Arg Asn Lys Tyr Cys Leu
65 70 75 80

Ser Ser Lys Ile Pro Leu Gly Val Val Leu Ala Ile Pro Pro Phe Asn
85 90 95

Tyr Pro Ala Asn Leu Ala Gly Ser Lys Ile Gly Pro Ala Leu Ile Ala
100 105 110

Gly Asn Ala Leu Val Leu Lys Pro Pro Thr Gln Gly Ala Val Ala Ala
115 120 125

Leu His Met Val His Cys Phe His Leu Ala Gly Phe Pro Lys Gly Leu
130 135 140

Ile Ser Cys Val Thr Gly Lys Gly Ser Glu Ile Gly Asp Phe Leu Thr
145 150 155 160

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Met His Pro Gly Val Asn Cys Ile Ser Phe Thr Gly Gly Asp Thr Gly
165 170 175

Ile Ala Ile Ser Lys Lys Ala Gly Met Val Pro Leu Gln Met Glu Leu
180 185 190

Gly Gly Lys Asp Ala Cys Ile Val Leu Glu Asp Ala Asp Leu Asp Leu
195 200 205

Val Ser Ala Asn Ile Val Lys Gly Gly Phe Ser Tyr Ser Gly Gln Arg
210 215 220

Cys Thr Ala Val Lys Val Val Leu Ile Met Glu Ser Ile Ala Asp Ala
225 230 235 240

Val Val Gln Lys Val Asn Ala Lys Leu Ala Lys
245 250

<210> 1424

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1424

Leu Pro Leu Asp Gly Ala Ala Pro Leu Leu Cys Ala Gly Val Thr Val
1 5 10 15

Tyr Ser Pro Met Val Ile His Gly Leu Asn Ala Pro Gly Lys His Val
20 25 30

Gly Val Val Gly Leu Gly Gly Leu Gly His Val Ala Val Lys Phe Ala
35 40 45

Lys Ala Phe Gly Met Arg Val Thr Val Ile Ser Thr Ser Pro Gly Lys
50 55 60

Arg Arg Glu Ala Leu Glu His Leu Gly Ala Asp Glu Phe Leu Val Ser
65 70 75 80

Arg Asp Ala Gly Gln Met Ala Ala Ala Ala Gly Thr Met Asp Gly Ile
85 90 95

Leu Asn Thr Val Ser Ala Trp His Pro Val Ala Pro Leu Phe Ala Leu
100 105 110

Met Lys Pro Met Ala Gln Met Val Phe Val Gly Ala Pro Thr
115 120 125

<210> 1425

<211> 76

<212> PRT

<213> Zea mays

<400> 1425

Val Leu Asp Ser Val Asn Ile Thr Leu Gly Ala Glu Asp Glu Leu Lys
1 5 10 15

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Asp Ala Val Gly Leu Val Arg Pro Val Ser Val Ala Phe Glu Val Ile
20 25 30

Thr Gly Phe Arg Leu Tyr Lys Ser Gly Val Tyr Thr Ser Asp His Cys
35 40 45

Gly Thr Thr Pro Met Asp Val Asn His Ala Val Leu Ala Val Gly Tyr
50 55 60

Gly Val Glu Asp Gly Val Pro Tyr Trp Leu Ile Lys
65 70 75

<210> 1426

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1426

Val Val Lys Asn Asp Trp Gly Asn Ala Met Tyr Pro Val Val Pro Gly
1 5 10 15

His Glu Ile Val Gly Val Val Thr Gly Val Gly Ala Gly Val Thr Lys
20 25 30

Phe Lys Ala Gly Asp Thr Val Gly Val Gly Phe Phe Val Gly Ser Cys
35 40 45

Arg Thr Cys Asp Ser Cys Gly Lys Gly Tyr Glu Asn Tyr Cys Pro Thr
50 55 60

Met Val Ile Thr Ser Asn Gly Lys Asp Tyr Gly Gly Ala Ala Thr Gln
65 70 75 80

Gly Gly Phe Ser Asp Ala Ile Val Val Asn Glu His Tyr Val Leu Arg
85 90 95

Val Pro Ala Gly Leu Pro Leu Asp Gly Ala Ala Pro Leu Leu Cys Ala
100 105 110

Gly Val Thr Val Tyr Ser Pro Met Val Ile His Gly Leu Asn Ala Pro
115 120 125

Gly Lys His Val Gly Val Val Gly Leu Gly Gly Leu Gly His Val Ala
130 135 140

Val Lys Phe Ala Lys Ala Phe
145 150

<210> 1427

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1427

Thr Arg Arg Val Gln Gln Glu Asp Asp Val Thr Ile Lys Val Leu Tyr
1 5 10 15

Cys Gly Ile Cys His Thr Asp Leu His Ile Ile Lys Asn Glu Trp Gly
20 25 30

Asn Ala Met Tyr Pro Val Val Pro Gly His Glu Ile Val Gly Val Val
35 40 45

Thr Gly Val Gly Ala Gly Val Thr Lys Phe Lys Ala Gly Asp Thr Val
50 55 60

Gly Val Gly Tyr Phe Val Asp Ser Cys Arg Ala Cys
65 70 75

<210> 1428
<211> 251
<212> PRT
<213> Zea mays

<400> 1428
Asn Ile Gln Val Ile Cys Val Thr Asp Gly Glu Arg Ile Leu Gly Leu
1 5 10 15

Gly Asp Leu Gly Cys Gln Gly Met Gly Ile Pro Val Gly Lys Leu Ala
20 25 30

Leu Tyr Thr Ala Leu Gly Gly Val Asp Pro Ser Val Cys Leu Pro Ile
35 40 45

Thr Ile Asp Val Gly Thr Asn Asn Glu Phe Leu Leu Asn Asp Glu Phe
50 55 60

Tyr Ile Gly Leu Arg Gln Lys Arg Ala Thr Gly Glu Glu Tyr Asp Glu
65 70 75 80

Leu Ile Glu Glu Phe Met Ser Ala Val Lys Gln Phe Tyr Gly Glu Lys
85 90 95

Val Leu Ile Gln Phe Glu Asp Phe Ala Asn His Asn Ala Phe Asp Leu
100 105 110

Leu Glu Lys Tyr Ser Lys Ser His Leu Val Phe Asn Asp Asp Ile Gln
115 120 125

Gly Thr Ala Ser Val Val Leu Ala Gly Leu Leu Ala Ala Leu Lys Met
130 135 140

Val Gly Gly Thr Leu Ala Glu Gln Thr Tyr Leu Phe Leu Gly Ala Gly
145 150 155 160

Glu Ala Gly Thr Gly Ile Ala Glu Leu Ile Ala Leu Glu Ile Ser Lys
165 170 175

Gln Thr Asn Ala Pro Ile Glu Glu Cys Arg Lys Lys Val Trp Leu Val
180 185 190

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Asp Ser Lys Gly Leu Ile Val Asp Ser Arg Lys Gly Ser Leu Gln Pro
195 200 205

Phe Lys Lys Pro Trp Ala His Glu His Glu Pro Leu Lys Thr Leu Tyr
210 215 220

Asp Ala Val Gln Ser Ile Lys Pro Thr Val Leu Ile Gly Thr Ser Gly
225 230 235 240

Val Gly Arg Thr Phe Thr Lys Glu Ile Ile Glu
245 250

<210> 1429

<211> 151

<212> PRT

<213> Zea mays

<400> 1429

Leu Trp Lys Arg Ala Asp Val Leu His Lys Ala Ala Ala Ile Leu Lys
1 5 10 15

Glu His Lys Ala Pro Ile Ala Glu Cys Leu Val Lys Glu Ile Ala Lys
20 25 30

Pro Ala Lys Asp Ala Val Ser Glu Val Val Arg Ser Gly Asp Leu Val
35 40 45

Ser Tyr Thr Ala Glu Glu Gly Val Arg Ile Leu Gly Glu Gly Lys Leu
50 55 60

Val Val Ser Asp Ser Phe Pro Gly Asn Glu Arg Asn Lys Tyr Cys Leu
65 70 75 80

Ser Ser Lys Ile Pro Leu Gly Val Val Leu Ala Ile Pro Pro Phe Asn
85 90 95

Tyr Pro Ala Asn Leu Ala Gly Ser Lys Ile Gly Pro Ala Leu Ile Ala
100 105 110

Gly Asn Ala Leu Val Leu Lys Pro Pro Thr Gln Gly Ala Val Ala Ala
115 120 125

Leu His Met Val His Cys Phe His Leu Ala Gly Phe Pro Lys Gly Leu
130 135 140

Ile Ser Cys Val Thr Gly Lys
145 150

<210> 1430

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1430

Ser Ile Ala Glu Arg Thr Gln Phe Val Ala Tyr Leu Ile Tyr Ser Ser
1 5 10 15

Phe Leu Thr Gly Phe Val Tyr Pro Ile Val Ser His Trp Phe Trp Ser
20 25 30

Gly Asp Gly Trp Ala Ser Ala Ser Lys Thr Asp Gly Asn Leu Leu Leu
35 40 45

Arg Phe Gly Val Ile Asp Phe Ala Gly Ser Gly Val Val His Met Val
50 55 60

Gly Gly Ile Ala Gly Leu Trp Gly Ala Phe Ile Glu Gly Pro Arg Ile
65 70 75 80

Gly Arg Phe Asp Arg Ser Gly Arg Ser Val Ala Leu Arg Gly His Ser
85 90 95

Ala Ser Leu Val Val Leu Gly Thr Phe Leu Leu Trp Phe Gly Trp Tyr
100 105 110

Gly Phe Asn Pro Gly Ser Phe Leu Thr Ile Leu Lys Ser Tyr Asp His
115 120 125

Thr Ile Arg Gly Thr Tyr Tyr Gly Gln Trp Ser Ala Ile Gly Arg Thr
130 135 140

Ala Val Thr Thr Thr Leu Ala Gly Cys Thr Ala Ala Leu Thr Thr Leu
145 150 155 160

Phe Cys Lys Arg Leu Leu Val Ala His Trp Asn Val Val Asp Val Cys
165 170 175

Asn Gly Leu Leu Gly Gly Phe Ala Ala Ile Thr Ser Gly Cys Ala Val
180 185 190

Val Glu Pro Trp Ala Ala Ile Val Cys Gly Phe Ile Ala Ala Trp Val
195 200 205

Leu Ile Gly Phe Asn Ala Leu Ala Ala Lys Leu Lys Tyr Asp Asp Pro
210 215 220

Leu Glu
225

<210> 1431
<211> 151
<212> PRT
<213> Zea mays

<400> 1431
Gly Gly Ala Ile Ser Pro Phe Gly Asn Ala Ala Cys Ala Gly Leu Ala
1 5 10 15

Val Ala Thr Val Ile Leu Ser Thr Gly His Ile Ser Gly Ala His Leu
20 25 30

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Asn Pro Ser Leu Thr Ile Ala Phe Ala Ala Leu Arg His Phe Pro Trp
35 40 45

Leu Gln Val Pro Ala Tyr Val Ala Val Gln Ala Leu Ala Ser Val Cys
50 55 60

Ala Ala Phe Ala Leu Lys Gly Val Phe His Pro Phe Leu Ser Gly Gly
65 70 75 80

Val Thr Val Pro Asp Ala Thr Val Ser Thr Ala Gln Ala Phe Phe Thr
85 90 95

Glu Phe Ile Ile Ser Phe Asn Leu Leu Phe Val Val Thr Ala Val Ala
100 105 110

Thr Asp Thr Arg Ala Val Gly Glu Leu Ala Gly Ile Ala Val Gly Ala
115 120 125

Ala Val Thr Leu Asn Ile Leu Val Ala Gly Pro Thr Thr Gly Gly Ser
130 135 140

Met Asn Pro Val Arg Thr Leu
145 150

<210> 1432
<211> 251
<212> PRT
<213> Zea mays

<400> 1432
Met Glu Pro Gly Ser Thr Pro Pro Asn Gly Ser Ala Pro Ala Thr Pro
1 5 10 15

Gly Thr Pro Ala Pro Leu Phe Ser Ser Gly Gly Pro Arg Val Asp Ser
20 25 30

Leu Ser Tyr Glu Arg Lys Ser Met Pro Arg Cys Lys Cys Leu Pro Leu
35 40 45

Pro Ala Val Glu Gly Trp Gly Val Ala Thr His Thr Cys Val Val Glu
50 55 60

Ile Pro Ala Pro Asp Val Ser Leu Thr Arg Lys Leu Gly Ala Glu Phe
65 70 75 80

Val Gly Thr Phe Ile Leu Ile Phe Phe Ala Thr Ala Ala Pro Ile Val
85 90 95

Asn Gln Lys Tyr Gly Gly Ala Ile Ser Pro Phe Gly Asn Ala Ala Cys
100 105 110

Ala Gly Leu Ala Val Ala Thr Val Ile Leu Ser Thr Gly His Ile Ser
115 120 125

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Gly Ala His Leu Asn Pro Ser Leu Thr Ile Ala Phe Ala Ala Leu Arg
 130 135 140

His Phe Pro Trp Leu Gln Val Pro Ala Tyr Val Ala Val Gln Ala Leu
 145 150 155 160

Ala Ser Val Cys Ala Ala Phe Ala Leu Lys Gly Val Phe His Pro Phe
 165 170 175

Leu Ser Gly Gly Val Thr Val Pro Asp Ala Thr Val Ser Thr Ala Gln
 180 185 190

Ala Phe Phe Thr Glu Phe Ile Ile Ser Phe Asn Leu Leu Phe Val Val
 195 200 205

Thr Ala Val Ala Thr Asp Thr Arg Ala Val Gly Glu Leu Ala Gly Ile
 210 215 220

Ala Val Gly Ala Ala Val Thr Leu Asn Ile Leu Val Ala Gly Pro Thr
 225 230 235 240

Thr Gly Gly Ser Met Asn Pro Val Arg Thr Leu
 245 250

<210> 1433

<211> 276

<212> PRT

<213> Zea mays

<400> 1433

Ser Arg Leu Ala Trp Ser Arg Asn Tyr Ala Ala Lys Asp Ile Lys Phe
 1 5 10 15

Gly Val Glu Ala Arg Ala Leu Met Leu Arg Gly Val Glu Glu Leu Ala
 20 25 30

Asp Ala Val Lys Val Thr Met Gly Pro Lys Gly Arg Asn Val Val Ile
 35 40 45

Glu Gln Ser Phe Gly Ala Pro Lys Val Thr Lys Asp Gly Val Thr Val
 50 55 60

Ala Lys Ser Ile Glu Phe Lys Asp Arg Val Lys Asn Val Gly Ala Ser
 65 70 75 80

Leu Val Lys Gln Val Ala Asn Ala Thr Asn Asp Thr Ala Gly Asp Gly
 85 90 95

Thr Thr Cys Ala Thr Val Leu Thr Lys Ala Ile Phe Thr Glu Gly Cys
 100 105 110

Lys Ser Val Ala Ala Gly Met Asn Ala Met Asp Leu Arg Arg Gly Ile
 115 120 125

Ser Met Ala Val Asp Ala Val Val Thr Asn Leu Lys Gly Met Ala Arg

130

135

140

Met Ile Ser Thr Ser Glu Glu Ile Ala Gln Val Gly Thr Ile Ser Ala
145 150 155 160

Asn Gly Glu Arg Glu Ile Gly Glu Leu Ile Ala Lys Ala Met Glu Lys
165 170 175

Val Gly Lys Glu Gly Val Ile Thr Ile Ala Asp Gly Asn Thr Leu Tyr
180 185 190

Asn Glu Leu Glu Val Val Glu Gly Met Lys Leu Asp Arg Gly Tyr Ile
195 200 205

Ser Pro Tyr Phe Ile Thr Asn Ser Lys Thr Gln Lys Cys Glu Leu Glu
210 215 220

Asp Pro Leu Ile Leu Ile His Asp Lys Lys Val Thr Asn Met His Ala
225 230 235 240

Val Val Lys Val Leu Glu Met Ala Leu Lys Lys Gln Lys Pro Leu Leu
245 250 255

Ile Val Ala Glu Asp Val Glu Ser Glu Ala Leu Gly Thr Leu Ile Ile
260 265 270

Asn Lys Leu Arg
275

<210> 1434

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 1434

Arg Lys Leu Ser Leu Thr Arg Ala Val Phe Tyr Met Val Met Gln Cys
1 5 10 15

Leu Gly Ala Ile Cys Gly Ala Gly Val Val Lys Gly Phe Met Val Gly
20 25 30

Pro Tyr Gln Arg Leu Gly Gly Gly Ala Asn Val Val Asn Pro Gly Tyr
35 40 45

Thr Lys Gly Asp Gly Leu Gly Ala Glu Ile Ile Gly Thr Phe Val Leu
50 55 60

Val Tyr Thr Val Phe Ser Ala Thr Asp Ala Lys Arg Asn Ala Arg Asp
65 70 75 80

Ser His Val Pro Ile Leu Ala Pro Leu Pro Ile Gly Phe Ala Val Phe
85 90 95

Leu Val His Leu Ala Thr Ile Pro Ile Thr Gly Thr Gly Ile Asn Pro
100 105 110

Ala Arg Ser Leu Gly Ala Ala Ile Ile Tyr Asn Asp Glu His Ala Trp
115 120 125

Asn Asp His Trp Ile Phe Trp Val Gly Pro Met Ile Gly Ala Ala Leu
130 135 140

Ala Ala Ile Tyr His Gln Ile
145 150

<210> 1435

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 1435

Met Ala Thr Pro Gln Gln Pro Leu Leu Thr Lys Thr His Lys Gln Asn
1 5 10 15

Ser Ile Ile Ser Phe Lys Ile Leu Thr Phe Val Val Thr Leu Phe Val
20 25 30

Ala Leu Phe Leu Val Val Phe Leu Val Ala Pro Tyr Gln Phe Glu Ile
35 40 45

Lys His Ser Asn Leu Cys Lys Thr Ala Gln Asp Ser Gln Leu Cys Leu
50 55 60

Ser Tyr Val Ser Asp Leu Met Ser Asn Glu Ile Val Thr Thr Asp Ser
65 70 75 80

Asp Gly Leu Ser Ile Leu Met Lys Phe Leu Val Asn Tyr Val His Gln
85 90 95

Met Asn Asn Ala Ile Pro Val Val Ser Lys Met Lys Asn Gln Ile Asn
100 105 110

Asp Ile Arg Gln Glu Gly Ala Leu Thr Asp Cys Leu Glu Leu Leu Asp
115 120 125

Gln Ser Val Asp Leu Val Ser Asp Ser Ile Ala Ala Ile Asp Lys Arg
130 135 140

Thr His Ser Glu His Ala Asn Ala Gln Ser Trp Leu Ser Gly Val Leu
145 150 155 160

Thr Asn His Val Thr Cys Leu Asp Glu Leu Asp Ser Phe Thr Lys Ala
165 170 175

Met Ile Asn Gly Thr Asn Leu Asp Glu Leu Ile Ser Arg Ala Lys Val
180 185 190

Ala Leu Ala Met Leu Ala Ser Val Thr Thr Pro Asn Asp Asp Val Leu
195 200 205

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Arg Pro Gly Leu Gly Lys Met Pro Ser Trp Val Ser Ser Arg Asp Arg
210 215 220

Lys Leu Met Glu Ser Ser Gly Lys Asp Ile Gly Ala Asn Ala Val Val
225 230 235 240

Ala Lys Asp Gly Thr Gly Lys Tyr Arg Thr Leu Ala Glu Ala Val Ala
245 250 255

Ala Ala Pro Asp Lys Ser Lys Thr Arg Tyr Val Ile Tyr Val Lys Arg
260 265 270

Gly Ile Tyr Lys
275

<210> 1436

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 1436

Met Ala Thr Pro Gln Gln Pro Leu Leu Thr Lys Thr His Lys Gln Asn
1 5 10 15

Ser Ile Ile Ser Phe Lys Ile Leu Thr Phe Val Val Thr Leu Phe Val
20 25 30

Ala Leu Phe Leu Val Val Phe Leu Val Ala Pro Tyr Gln Phe Glu Ile
35 40 45

Lys His Ser Asn Leu Cys Lys Thr Ala Gln Asp Ser Gln Leu Cys Leu
50 55 60

Ser Tyr Val Ser Asp Leu Ile Ser Asn Glu Ile Val Thr Ser Asp Ser
65 70 75 80

Asp Gly Leu Ser Ile Leu Lys Lys Phe Leu Val Tyr Ser Val His Gln
85 90 95

Met Asn Asn Ala Ile Pro Val Val Arg Lys Ile Lys Asn Gln Ile Asn
100 105 110

Asp Ile Arg Glu Gln Gly Ala Leu Thr Asp Cys Leu Glu Leu Leu Asp
115 120 125

Leu Ser Val Asp Leu Val Cys Asp Ser Ile Ala Ala Ile Asp Lys Arg
130 135 140

Ser Arg Ser Glu His Ala Asn Ala Gln Ser Trp Leu Ser Gly Val Leu
145 150 155 160

Thr Asn His Val Thr Cys Leu Asp Glu Leu Asp Ser Phe Thr Lys Ala
165 170 175

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Met Ile Asn Gly Thr Asn Leu Asp Glu Leu Ile Ser Arg Ala Lys Val
180 185 190

Ala Leu Ala Met Leu Ala Ser Val Thr Thr Pro Asn Asp Glu Val Leu
195 200 205

Arg Pro Gly Leu Gly Lys Met Pro Ser Trp Val Ser Ser Arg Asp Arg
210 215 220

Lys Leu Met Glu Ser Ser Gly Lys Asp Ile Gly Ala Asn Ala Val Val
225 230 235 240

Ala Lys Asp Gly Thr Gly Lys Tyr Arg Thr Leu Ala Glu Ala Val Ala
245 250 255

Ala Ala Pro Asp Lys Ser Lys Thr Arg Tyr Val Ile Tyr Val Lys Arg
260 265 270

Gly Thr Tyr Lys
275

<210> 1437

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1437

Asp Pro Glu Ala Thr Lys Asn Thr Ile Asp Glu Asp Gly Trp Leu His
1 5 10 15

Thr Gly Asp Ile Gly Phe Val Asp Asp Asp Asp Glu Ile Phe Ile Val
20 25 30

Asp Arg Leu Lys Glu Ile Ile Lys Tyr Lys Gly Phe Gln Val Pro Pro
35 40 45

Ala Glu Leu Glu Ala Leu Leu Ile Thr His Pro Glu Ile Lys Asp Ala
50 55 60

Ala Val Val Ser Met Lys Asp Asp Leu Ala Gly Glu Val Pro Val Ala
65 70 75 80

Phe Ile Val Arg Thr Glu Gly Ser Glu Ile Thr Glu Asp Glu Ile Lys
85 90 95

Lys Phe Val Ala Lys
100

<210> 1438

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1438

Lys Leu Glu Gly Ile Leu Gln Glu Lys Glu Ser Gly Ile Trp Val Gln
1 5 10 15

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Leu Asp Lys Thr Leu Asp Asn Ile Arg Met Met Val Asp Thr Val Phe
20 25 30

Lys Arg Met Asp Val Met Leu Gln Leu Ser Lys Thr Ser Leu His His
35 40 45

Trp Gln Glu Glu His Leu Ile Lys Val Glu Leu Glu Ser Met Val Met
50 55 60

Gln Cys Val Ile Arg Thr Val Gln Glu Glu Phe Glu
65 70 75

<210> 1439

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 1439

Lys Lys Tyr Phe Leu Thr Leu Lys Ile Leu Lys Gly Lys Thr Lys Leu
1 5 10 15

Phe Arg Lys Val Ser Lys Glu Thr Thr Lys Leu Phe Ile Lys Ser Ile
20 25 30

Gly Phe Leu Lys Lys Ile Lys Lys Glu Leu Ser Lys Val Asn Leu Ile
35 40 45

Val Leu Phe Arg Phe Lys Glu Ile Ser Glu Ser Asn Glu Thr Lys Lys
50 55 60

Glu Lys Asp Tyr Leu Ile Ser Asn Gln Ile Ile Asn Glu Ser Phe Arg
65 70 75 80

Gln Ile Glu Ser Gly Asn Trp Pro Asn Ser Ser Leu Ile Glu Thr Lys
85 90 95

Met Lys Asp Leu Thr Asn Arg Thr Ser Thr Ile Lys Asn Lys Ile Glu
100 105 110

Arg Ile Thr Lys Glu Lys Lys Lys Val Thr Pro Glu Ile Asp Ile Asn
115 120 125

Pro Asn Lys Thr Asn Asn Ile Lys Lys Phe Glu Ser Pro Lys Lys Ile
130 135 140

Phe Gln Ile Leu Lys Ser Arg Asn Thr Arg Val Ile Trp Lys Phe His
145 150 155 160

Tyr Phe Leu Lys Leu Phe Ile Gln Arg Leu Tyr Ile Asn Leu Phe Leu
165 170 175

Ser Ile Ile Asn Ile Pro Arg Ile Thr Thr Gln Leu Phe Leu Lys Ser
180 185 190

Thr Asn Lys Leu Ile Glu Lys Phe Ile
195 200

<210> 1440
<211> 151
<212> PRT
<213> Zea mays

<400> 1440
Val Gln Trp Gly Glu Gln Asp Asp Tyr Glu Val Val Arg Lys Val Gly
1 5 10 15

Arg Gly Lys Tyr Ser Glu Val Phe Glu Gly Ile Asn Val Asn Asn Asn
20 25 30

Glu Lys Cys Ile Ile Lys Ile Leu Lys Pro Val Lys Lys Lys Lys Ile
35 40 45

Lys Arg Glu Ile Lys Ile Leu Gln Asn Leu Cys Gly Gly Pro Asn Ile
50 55 60

Val Lys Leu Leu Asp Ile Val Arg Asp Gln His Ser Lys Thr Pro Ser
65 70 75 80

Leu Ile Phe Glu Tyr Val Asn Asn Thr Asp Phe Lys Val Leu Tyr Pro
85 90 95

Thr Leu Thr Asp Tyr Asp Ile Arg Tyr Tyr Ile Tyr Glu Leu Leu Lys
100 105 110

Ala Leu Asp Tyr Cys His Ser Gln Gly Ile Met His Arg Asp Val Lys
115 120 125

Pro His Asn Val Met Ile Asp His Glu Leu Arg Lys Leu Arg Leu Ile
130 135 140

Asp Trp Gly Leu Ala Glu Phe
145 150

<210> 1441
<211> 101
<212> PRT
<213> Zea mays

<400> 1441
Asp Leu Met Asp Asp Ile Val His Ala Ala Arg Asn Gln Ser Lys Ser
1 5 10 15

Asp Lys Pro Val Val Gly His Ile Ala Lys Glu Ala Pro Glu Gly Lys
20 25 30

Leu Leu Glu Thr Trp Ile Lys Lys Leu Ser Gly Ser Gly Leu Arg Leu
35 40 45

Val Asp Val Thr Asn Gly Phe Ser Glu Leu Phe Ala Val Lys Asp Thr
50 55 60

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Thr Glu Ile Thr Cys Val Lys Lys Ala Ala Tyr Leu Thr Ser Ser Val
65 70 75 80

Leu Lys Asn Phe Val Ile Pro Lys Leu Glu Lys Val Ile Asp Glu Glu
85 90 95

Lys Glu Val Ser His
100

<210> 1442

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1442

Glu Val Glu Leu Lys Glu Val Lys Leu Lys Glu Gly Tyr Tyr Val Met
1 5 10 15

Asp Pro Ala Lys Ala Val Glu Ile Val Asp Glu Asn Thr Ile Cys Val
20 25 30

Ala Ala Ile Leu Gly Ser Thr Leu Thr Gly Glu Phe Glu Asp Val Lys
35 40 45

Leu Leu Asn Glu Leu Leu Thr Lys Lys Asn Lys Glu Thr Gly Trp Glu
50 55 60

Thr Pro Ile His Val Asp Ala Ala Ser Gly Gly Phe
65 70 75

<210> 1443

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1443

Gly Glu Gln Ile Met Lys Gly Tyr Leu Asn Asp Pro Glu Ser Thr Lys
1 5 10 15

Asn Thr Ile Asp Lys Gly Gly Trp Leu His Thr Gly Asp Ile Gly Tyr
20 25 30

Val Asp Asp Asp Asp Glu Ile Phe Ile Val Asp Arg Leu Lys Glu Ile
35 40 45

Ile Lys Tyr Lys Gly Phe Gln Val Pro Pro Ala Glu Leu Glu Ala Leu
50 55 60

Leu Ile Thr His Pro Asp Ile Lys Asp Ala Ala Val Val Pro Met Ile
65 70 75 80

Asp Glu Ile Ala Gly Glu Val Pro Val Ala Phe Ile Val Arg Ile Glu
85 90 95

Gly Ser Ala Ile Ser Glu Asn Glu Ile Lys Gln Phe Val Ala Lys Glu
100 105 110

Val Val Phe Tyr Lys Arg Leu Asn Lys Val Phe Phe Ala Asp
115 120 125

<210> 1444
<211> 226
<212> PRT
<213> Zea mays

<400> 1444
Met Asp Pro Lys Ala Thr Ser Thr Ser Lys Thr Asp Asn Ile Asp Gln
1 5 10 15

Ile Thr Ile Ile Glu Glu Lys Val Asn Lys Ile Gly Thr Glu Pro Thr
20 25 30

Ile Arg Lys Tyr Ser Lys Gly Arg Met Leu Gly Lys Gly Gly Phe Ala
35 40 45

Lys Cys Tyr Glu Val Thr Asn Leu Glu Asn Lys Lys Val Leu Ala Gly
50 55 60

Lys Ile Ile Cys Lys Ala Ser Leu Thr Lys Ser Arg Ala Lys Gln Lys
65 70 75 80

Leu Ile Ser Glu Ile Lys Ile His Lys Ser Leu Arg His Ser Asn Ile
85 90 95

Val Glu Phe Glu His Val Phe Glu Asp Gln Glu Asn Val Tyr Ile Leu
100 105 110

Leu Glu Leu Cys Pro Asn Gln Ser Leu His Asp Leu Ile Lys Arg Arg
115 120 125

Lys Arg Leu Thr Glu Ile Glu Val Gln Cys Tyr Thr Leu Gln Leu Ile
130 135 140

Cys Gly Leu Lys Tyr Leu His Ser Arg Arg Val Ile His Arg Asp Leu
145 150 155 160

Lys Leu Gly Asn Leu Leu Leu Asn Asp Lys Met Glu Leu Lys Ile Cys
165 170 175

Asp Phe Gly Leu Ala Ala Lys Leu Glu Phe Asp Gly Glu Lys Arg Lys
180 185 190

Thr Val Cys Gly Thr Pro Asn Tyr Ile Ala Pro Glu Val Ile Glu Gly
195 200 205

Lys Gly Gly His Ser Tyr Glu Val Asp Thr Trp Ser Leu Gly Val Ile
210 215 220

Ile Tyr
225

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<210> 1445
 <211> 101
 <212> PRT
 <213> Zea mays

<400> 1445
 Ser Trp Ser Pro Ser Glu Gln Ser Ala Asp Arg Glu His Leu Thr Glu
 1 5 10 15
 Glu Glu Lys Ile Met Phe Arg Arg Ile Gly Arg Lys Met Asp Gly Leu
 20 25 30
 Val Leu Leu Gly Arg Arg Gly Ile Phe Asp Gly Val Ile Glu Glu Ile
 35 40 45
 His Gln His Trp Lys His Lys Glu Val Val Lys Val Ile Thr Lys Gln
 50 55 60
 Asn Gln Thr Arg Gln Ile Met Tyr Ala Ala Ser Leu Leu Glu Val Glu
 65 70 75 80
 Thr Gly Gly Ile Leu Ile Ala Val Glu Lys Leu Thr Thr Ser His Ala
 85 90 95
 Ile Ile Leu Tyr Arg
 100

<210> 1446
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1446
 His Ser Arg Arg Val Ile His Arg Asp Leu Lys Leu Gly Asn Leu Leu
 1 5 10 15
 Leu Asn Asp Lys Met Glu Leu Lys Ile Cys Asp Phe Gly Leu Ala Ala
 20 25 30
 Lys Leu Glu Phe Asp Gly Glu Lys Arg Lys Thr Val Cys Gly Thr Pro
 35 40 45
 Asn Tyr Ile Ala Pro Glu Val Ile Glu Gly Lys Gly Gly His Ser Tyr
 50 55 60
 Glu Val Asp Thr Trp Ser Leu Gly Val Ile Ile Tyr
 65 70 75

<210> 1447
 <211> 126
 <212> PRT
 <213> Oryza sativa

<400> 1447
 Gly Trp Leu Lys Thr Gly Asp Leu Cys Tyr Ile Asp Glu Asp Gly Tyr
 1 5 10 15

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Leu Phe Val Val Asp Arg Leu Lys Glu Leu Ile Lys Tyr Lys Gly Tyr
20 25 30

Gln Val Pro Pro Ala Glu Leu Glu Ala Leu Leu Leu Thr His Pro Glu
35 40 45

Val Thr Asp Val Ala Val Ile Pro Phe Pro Asp Arg Glu Val Gly Gln
50 55 60

Phe Pro Met Ala Tyr Ile Val Arg Lys Lys Gly Ser Asn Leu Ser Glu
65 70 75 80

Arg Glu Val Met Glu Phe Val Ala Lys Gln Val Ala Pro Tyr Lys Lys
85 90 95

Val Arg Lys Val Ala Phe Val Thr Asp Ile Pro Lys Asn Ala Ser Gly
100 105 110

Lys Ile Leu Arg Lys Asp Leu Ile Lys Leu Ala Thr Ser Lys
115 120 125

<210> 1448

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1448

Met Lys Gly Tyr Leu Asn Asp Pro Glu Ala Thr Ala Ala Thr Ile Asp
1 5 10 15

Val Glu Gly Trp Leu His Thr Gly Asp Ile Gly Tyr Val Asp Asp Asp
20 25 30

Asp Glu Val Phe Ile Val Asp Arg Val Lys Glu Leu Ile Lys Phe Lys
35 40 45

Gly Phe Gln Val Pro Pro Ala Glu Leu Glu Ser Leu Leu Ile Ala His
50 55 60

Pro Ser Ile Ala Asp Ala Ala Val Val Pro Gln Lys Asp Asp Val Ala
65 70 75 80

Gly Glu Val Pro Val Ala Phe Val Val Arg Ala Ala Asp Ser Asp Ile
85 90 95

Thr Glu Glu Ser Ile Lys Glu Phe Ile Ser Lys Gln Val Val Phe Tyr
100 105 110

Lys Arg Leu His Lys Val His Phe Ile His Ala Ile Pro Lys
115 120 125

<210> 1449

<211> 76

<212> PRT

<213> Solanum lycopersicum

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<400> 1449

Phe Met Ile Thr Leu Ser His Ala Asn Arg Leu Pro Val Thr Ile Gln
1 5 10 15

Tyr Pro Tyr Glu Lys Leu Ile Thr Ser Glu Arg Phe Arg Gly Arg Ile
20 25 30

His Phe Glu Phe Asp Lys Cys Ile Ala Cys Glu Val Cys Val Arg Val
35 40 45

Cys Pro Ile Asp Leu Pro Val Val Asp Trp Lys Leu Glu Thr Asp Ile
50 55 60

Arg Lys Lys Arg Leu Leu Asn Tyr Ser Ile Asp Phe
65 70 75

<210> 1450

<211> 126

<212> PRT

<213> Zea mays

<400> 1450

Lys Cys Val Val Leu Asp Ile Glu Gly Thr Thr Thr Pro Ile Ser Phe
1 5 10 15

Val Thr Asp Val Met Phe Pro Tyr Ala Arg Asp Asn Val Arg Lys His
20 25 30

Leu Thr Ser Thr Phe Asp Phe Glu Glu Thr Lys Glu Asp Ile Lys Leu
35 40 45

Leu Arg Ile Gln Ile Glu Asp Asp Leu Gln Asn Gly Val Ala Gly Ala
50 55 60

Val Pro Val Pro Pro Asp Glu Gly Gly Lys Glu Glu Val Ile Asn Ser
65 70 75 80

Leu Val Ala Asn Val Glu Ser Met Ile Lys Ala Asp Arg Lys Ile Thr
85 90 95

Ser Leu Lys Gln Leu Gln Gly His Ile Trp Arg Ile Gly Phe Gln Lys
100 105 110

Lys Glu Leu Gln Gly Val Val Phe Glu Asp Val Pro Val Ala
115 120 125

<210> 1451

<211> 176

<212> PRT

<213> Zea mays

<400> 1451

Ile Val Pro Thr Ser Thr Asn Ile Asp Asp Cys Leu Ser Val Ile Ala
1 5 10 15

Leu Pro Leu Pro His Arg Pro Leu Phe Pro Gly Phe Tyr Met Pro Ile
20 25 30

Asn Val Lys Asp Gln Lys Leu Leu Gln Ala Leu Ile Glu Asn Arg Lys
 35 40 45
 Arg Ser Ala Pro Tyr Ala Gly Ala Phe Leu Val Lys Asp Glu Glu Gly
 50 55 60
 Thr Asp Pro Asn Ile Val Thr Gly Ser Asp Ser Ala Lys Ser Ile Asp
 65 70 75 80
 Asp Leu Lys Gly Lys Asp Leu Leu Lys Arg Leu His Glu Val Gly Thr
 85 90 95
 Leu Ala Gln Ile Thr Ser Ile Gln Gly Asp His Val Val Leu Leu Gly
 100 105 110
 His Arg Arg Leu Arg Ile Thr Glu Met Val Glu Glu Asp Pro Leu Thr
 115 120 125
 Val Lys Val Asp His Leu Lys Glu Lys Pro Tyr Asn Lys Asp Asp Asp
 130 135 140
 Val Met Lys Ala Thr Ser Phe Glu Val Ile Ser Thr Leu Arg Glu Val
 145 150 155 160
 Leu Arg Thr Ser Ser Leu Trp Lys Asp His Val Gln Thr Tyr Thr Gln
 165 170 175

 <210> 1452
 <211> 201
 <212> PRT
 <213> Solanum lycopersicum

 <400> 1452
 Glu Arg Trp Asp Asp Tyr Ala Ser Val Gly Tyr Lys Ser Glu Lys Val
 1 5 10 15
 Lys Val Phe Phe Ser Val Phe Tyr Lys Ser Ile Glu Glu Leu Ala Thr
 20 25 30
 Ile Ala Glu Ile Lys Gln Gly Arg Ser Val Lys Asn His Leu Ile Asn
 35 40 45
 Leu Trp Leu Glu Leu Met Lys Leu Met Leu Met Glu Arg Val Glu Trp
 50 55 60
 Cys Ser Gly Lys Thr Ile Pro Ser Ile Glu Glu Tyr Leu Tyr Val Thr
 65 70 75 80
 Ser Ile Thr Phe Cys Ala Lys Leu Ile Pro Leu Ser Thr Gln Tyr Phe
 85 90 95
 Leu Gly Ile Lys Ile Ser Lys Asp Leu Leu Glu Ser Asp Glu Ile Cys
 100 105 110

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Gly Leu Trp Asn Cys Ser Gly Arg Val Met Arg Ile Leu Asn Asp Leu
115 120 125

Gln Asp Ser Lys Arg Glu Gln Lys Glu Val Ser Ile Asn Leu Val Thr
130 135 140

Leu Leu Met Lys Ser Met Ser Glu Glu Glu Ala Ile Met Lys Ile Lys
145 150 155 160

Glu Ile Leu Glu Met Asn Arg Arg Glu Leu Leu Lys Met Val Leu Val
165 170 175

Gln Lys Lys Gly Ser Gln Leu Pro Gln Leu Cys Lys Asp Ile Phe Trp
180 185 190

Arg Thr Ser Lys Trp Ala His Phe Thr
195 200

<210> 1453
<211> 126
<212> PRT
<213> Zea mays

<400> 1453
Ile Leu Ala Ser Gly Val His Val Val Val Gly Thr Pro Gly Arg Val
1 5 10 15

Phe Asp Met Leu Arg Arg Gln Ser Leu Arg Pro Asp Asn Ile Lys Met
20 25 30

Phe Val Leu Asp Glu Ala Asp Glu Met Leu Ser Arg Gly Phe Lys Asp
35 40 45

Gln Ile Tyr Asp Ile Phe Gln Leu Leu Pro Ser Lys Ile Gln Val Gly
50 55 60

Val Phe Ser Ala Thr Met Pro Pro Glu Ala Leu Glu Ile Thr Arg Lys
65 70 75 80

Phe Met Asn Lys Pro Val Arg Ile Leu Val Lys Arg Asp Glu Leu Thr
85 90 95

Leu Glu Gly Ile Lys Gln Phe Tyr Val Asn Ile Asp Lys Glu Asp Trp
100 105 110

Lys Leu Asp Thr Leu Cys Asp Leu Tyr Glu Thr Leu Ala Ile
115 120 125

<210> 1454
<211> 101
<212> PRT
<213> Zea mays

<400> 1454
Asp Pro Leu Ile Lys Ala Asn Asp Thr Ile Lys Ile Asp Leu Glu Thr
1 5 10 15

Asn Lys Ile Val Asp Phe Ile Lys Phe Asp Val Gly Asn Val Val Met
20 25 30

Val Thr Gly Gly Arg Asn Thr Gly Arg Val Gly Val Ile Lys Asn Arg
35 40 45

Glu Lys His Lys Gly Ser Phe Glu Thr Ile His Val Glu Asp Ser Leu
50 55 60

Gly His Gln Phe Ala Thr Arg Met Gly Asn Val Phe Thr Ile Gly Lys
65 70 75 80

Gly Asn Lys Pro Trp Val Ser Leu Pro Lys Gly Lys Gly Ile Lys Leu
85 90 95

Ser Ile Ile Glu Glu
100

<210> 1455
<211> 151
<212> PRT
<213> Zea mays

<400> 1455
Leu Thr Met Leu Leu Thr Gln Asp Glu Gly Val Lys Asn Phe Ile Ala
1 5 10 15

Ser Leu Thr Ser Gln Leu Ser Glu Trp Leu Glu Ala Gly Lys Leu Gln
20 25 30

Arg Ile Val Leu Val Ile Met Ser Lys Ala Thr Ser Glu Val Leu Glu
35 40 45

Arg Trp Asn Phe Asn Ile Val Thr Asp Ala Glu Val Val Glu Lys Gly
50 55 60

Ala Ile Lys Glu Lys Ser Asp Lys Glu Ile Met Arg Glu Ile Gln Ala
65 70 75 80

Ile Met Arg Gln Ile Ala Ser Cys Ile Thr Tyr Leu Pro Cys Leu Asp
85 90 95

Glu Pro Cys Val Phe Asp Val Leu Ala Tyr Thr Asp Thr Asp Val Asp
100 105 110

Ala Pro Gly Thr Trp Val Glu Ser Asp Ala Lys Leu Ile Asp Asn Pro
115 120 125

Gln Met Val Lys Leu His Ser Phe Asp Thr Lys Ile His Lys Val Asp
130 135 140

Thr Leu Val Ser Tyr Lys Lys
145 150

<210> 1456

<211> 251

<212> PRT

<213> Oryza sativa

<400> 1456

Ser Val Ser Lys Ala Lys Val Lys Leu Leu Val Asn His Phe Ile Val
1 5 10 15

Lys Tyr Arg Gln Ala Ser Thr Val Phe His Tyr Asp Ile Asp Ile Lys
20 25 30

Leu Asp Ile Ser Ser Pro Lys Ala Ser Asp Lys Glu Leu Ser Lys Gly
35 40 45

Asp Phe Leu Thr Val Lys Asp Glu Leu Phe Lys Asp Glu Ser Phe Arg
50 55 60

Arg Leu Ser Ser Ala Val Ala Tyr Asp Gly Lys Arg Asn Leu Phe Thr
65 70 75 80

Cys Ala Glu Leu Pro Asp Gly Leu Phe Arg Val Lys Val Arg Ser Arg
85 90 95

Thr Tyr Ile Val Ser Val Glu Phe Lys Lys Lys Leu Pro Leu Ser Gln
100 105 110

Leu Ser Glu Leu Pro Val Pro Arg Glu Val Leu Gln Gly Leu Asp Val
115 120 125

Ile Val Arg Glu Ala Ser Ser Trp Arg Lys Ile Ile Ile Gly Gln Gly
130 135 140

Phe Tyr Ser Gln Gly Arg Ser Val Pro Ile Gly Pro Asp Val Val Ala
145 150 155 160

Leu Lys Gly Thr Gln Gln Thr Leu Lys Cys Thr Gln Lys Gly Leu Ile
165 170 175

Leu Cys Val Asp Tyr Ser Val Met Pro Phe Arg Lys Ala Gly Pro Val
180 185 190

Leu Asp Leu Val Gln Lys Ser Val Arg Tyr Leu Asp Tyr Arg Thr Thr
195 200 205

Leu Asn Lys His Gln Leu Asp Thr Leu Lys Asn Glu Leu Lys Gly Gln
210 215 220

Arg Val Thr Val Asn His Arg Arg Thr Lys Gln Lys Tyr Ile Val Lys
225 230 235 240

Gly Leu Thr Asp Lys Pro Ala Ser Gln Ile Thr
245 250

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<210> 1457

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1457

Val Ile Ile Asn Pro Lys Leu Lys Lys Lys Gly Asn Lys Thr Ala Leu
1 5 10 15

Phe Phe Glu Gly Cys Leu Ser Val Asp Gly Phe Arg Ala Val Val Glu
20 25 30

Arg His Leu Glu Val Glu Val Thr Gly Leu Asp Arg Asn Gly Lys Ala
35 40 45

Ile Lys Val Asp Ala Ser Gly Trp Gln Ala Arg Ile Leu Gln His Glu
50 55 60

Tyr Asp His Leu Asp Gly Thr Leu Tyr Val Asp Lys Met Ala Pro Arg
65 70 75 80

Thr Phe Arg Thr Val Glu Asn Leu Asp Leu Pro Leu Ala Ala Gly Cys
85 90 95

Pro Lys Leu Gly Val
100

<210> 1458

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1458

Met Glu Ser Lys Phe Ala His Ile Ile Val Phe Phe Leu Leu Ala Thr
1 5 10 15

Ser Phe Glu Thr Leu Met Ala Arg Lys Glu Ile Asp Gly Pro Glu Val
20 25 30

Ile Glu Leu Leu Lys Glu Phe Asp Ser Asn Leu Met Cys Glu Gly Lys
35 40 45

Gln Met Trp Pro Glu Leu Ile Gly Val Pro Thr Lys Leu Ala Lys Glu
50 55 60

Ile Ile Glu Lys Glu Asn Pro Ser Ile Thr Asn Ile
65 70 75

<210> 1459

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1459

Ala Trp Glu Ala Leu Phe His Val Asp Asp Pro Gly Pro Arg Val Pro
1 5 10 15

Ile Ala Lys Gly Lys Phe Leu Asp Val Asn Gln Ala Leu Glu Val Val
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20

25

30

Arg Phe Asp Ile Gln Tyr Cys Asp Trp Arg Ala Arg Gln Asp Leu Leu
 35 40 45

Thr Ile Met Val Leu His Asn Lys Val Val Glu Val Leu Asn Pro Leu
 50 55 60

Ala Arg Glu Phe Lys Ser Ile Gly Thr Leu Arg Lys
 65 70 75

<210> 1460

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1460

Glu Gly His Lys His Ile Ile Pro Lys Leu Lys Glu Ile Cys Asp Ile
 1 5 10 15

Ser Ser Lys Leu Gly Ile Gln Ile Ile Thr Ala Phe Ala Phe Ser Thr
 20 25 30

Glu Asn Trp Lys Arg Ser Lys Glu Glu Val Asp Phe Leu Leu Gln Met
 35 40 45

Phe Glu Glu Ile Tyr Asp Glu Phe Ser Arg Ser Gly Val Arg Val Ser
 50 55 60

Ile Ile Gly Cys Lys Ser Asp Leu Pro Met Thr Leu Gln Lys Cys Ile
 65 70 75 80

Ala Leu Thr Glu Glu Thr Thr Lys Gly Asn Lys Gly Leu His Leu Val
 85 90 95

Ile Ala Leu Asn Tyr
 100

<210> 1461

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1461

Arg Val Leu Gly Glu Pro Leu Thr Pro Ala Glu Arg Ala Phe Leu Val
 1 5 10 15

Ser Lys Cys Gln Lys Ser Arg Thr Lys Lys Gln Ile Asn Leu Gly Arg
 20 25 30

Asp Gly Leu Thr His Asn Met Leu Asn Asp Ile His Asn His Trp Lys
 35 40 45

Asn Asp Glu Ala Val Arg Val Lys Cys Leu Gly Val Pro Thr Val Asp
 50 55 60

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Met Gln Asn Val Cys His Gln Leu Glu Asp Lys Thr Gly Gly Leu Ile
65 70 75 80

Ile His Arg His Gly Gly Gln Leu Ile Leu Tyr Arg Gly Arg His Tyr
85 90 95

Asn Pro Lys Lys Arg Pro Val Ile Pro Leu Met Leu Trp Lys Pro Ala
100 105 110

Glu Pro Val Tyr Pro Arg Leu Ile Lys Thr Thr Ile Glu Gly Leu Thr
115 120 125

Val Glu Glu Thr Lys Glu Met Arg Lys Lys Gly Leu Tyr Val Pro Val
130 135 140

Leu Thr Lys Leu Ala Lys Asn Gly Tyr Tyr Ala Ser Leu Val Pro Met
145 150 155 160

Val Arg Asp Ala Phe Leu Thr Asp Glu Leu Val Arg Ile Asp Ser Lys
165 170 175

Gly Leu Pro Lys Ser Asp Tyr Arg Lys Ile Gly Val Lys Leu Arg Asp
180 185 190

Leu Val Pro Cys Ile Ile Val Ser Phe
195 200

<210> 1462

<211> 151

<212> PRT

<213> Zea mays

<400> 1462

Lys Val Phe Tyr Asp His Trp Lys Glu His Lys Ser Asp Leu Trp Gly
1 5 10 15

Ser Ser Asp Ala Ile Ala Ile Ala Thr Pro Pro Pro Ser Asp Asp Leu
20 25 30

Arg Tyr Leu Lys Ser Ser Ala Leu Asp Ile Trp Leu Leu Gly Tyr Glu
35 40 45

Phe Pro Glu Thr Ile Ile Val Phe Met His Lys Gln Ile His Val Leu
50 55 60

Ser Ser Gln Lys Lys Gly Asn Leu Ile Gly Thr Leu Lys Lys Ala Ala
65 70 75 80

Asn Glu Ala Val Gly Val Asp Ile Val Leu His Val Lys Thr Lys Asn
85 90 95

Ser Asp Gly Ala Asp Leu Met Asp Asp Ile Val His Ala Ala Arg Asn
100 105 110

Gln Ser Lys Ser Asp Lys Pro Val Val Gly His Ile Ala Lys Glu Ala

115

120

125

Pro Glu Gly Lys Leu Leu Glu Thr Trp Ile Lys Lys Leu Ser Gly Ser
 130 135 140

Gly Leu Arg Leu Val Asp Val
 145 150

<210> 1463

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1463

Asn Met Ile Asp Asp Ile His Asn His Trp Lys Arg Ala Glu Ala Val
 1 5 10 15

Arg Ile Lys Cys Leu Gly Val Pro Thr Leu Asp Met Asp Asn Ile Cys
 20 25 30

Phe His Leu Glu Asp Lys Thr Gly Gly Lys Val Ile Tyr Arg Asn Ile
 35 40 45

Asn Ile Leu Ile Leu Tyr Arg Gly Arg Asn Tyr Asp Pro Lys Gln Arg
 50 55 60

Pro Gln Ile Pro Leu Met Leu Trp Lys Pro Leu Ala Pro Ile Tyr Pro
 65 70 75 80

Arg Leu Val Gln Asn Val Ala Asp Gly Leu Thr Phe Glu Lys Thr Lys
 85 90 95

Glu Leu Arg Asn Thr Gly Leu Asn Ser Ser Pro Leu Met Lys Leu Thr
 100 105 110

Arg Asn Gly Val Tyr Val Asn Val Val Asp Arg Val Arg Glu Ala Phe
 115 120 125

Lys Thr Val Glu Val Val Arg Leu Asp Cys Ser His Val Gly Ser Ser
 130 135 140

Asp Cys Lys Lys Ile Gly Val Lys Leu Arg Asp Leu Val Pro Cys Val
 145 150 155 160

Pro Leu Leu Phe Lys Asp Glu Gln Ile Ile Leu Trp Arg Gly Lys Val
 165 170 175

<210> 1464

<211> 101

<212> PRT

<213> Zea mays

<400> 1464

Asp Leu Ser Val Leu Arg Tyr Thr Pro Val Phe Gln Asp Ala Ser Ala
 1 5 10 15

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Ser Ala Tyr Gln Ile Met Ser Tyr Phe Leu Leu Asp Ile Asp Tyr Gly
20 25 30

Ile His Thr Asn Leu Leu Lys Lys Thr Asn Thr Asp Gly Arg Tyr Ile
35 40 45

Arg Asp Ile Tyr Glu Phe Met Trp Gly Cys Leu Ile Lys Tyr Leu Ile
50 55 60

Ala Glu Glu Lys Ile Glu Leu Ala Ile Lys Leu Leu Thr Pro Asn Glu
65 70 75 80

Lys Asp Gln Glu Ser Val Leu Ala Lys Ile Val Ser Ile Phe Asp Arg
85 90 95

Asn Val Val Lys Lys
100

<210> 1465

<211> 226

<212> PRT

<213> Oryza sativa

<400> 1465

Arg Trp Arg Gln Ala Val Gly Thr Ile Val Lys Asn Arg Arg Arg Arg
1 5 10 15

Phe Arg Trp Val Pro Asp Leu Asp Arg Arg Ser Leu Asp Lys Ala Lys
20 25 30

Val Arg Ser Thr Gln Glu Lys Ile Arg Val Ala Leu Tyr Val Gln Gln
35 40 45

Ala Ala Leu Ile Phe Ser Asp Asp Glu Leu Ala Leu Ile Thr Ser Lys
50 55 60

His Asp Ser Lys Ala Leu Lys Met His Gly Gly Val Asp Gly Ile Ser
65 70 75 80

Lys Lys Val Arg Ser Ser Phe Asp His Gly Ile Cys Ala Ser Asp Leu
85 90 95

Asp Thr Arg Gln Asn Ile Tyr Gly Val Asn Arg Tyr Ala Glu Lys Pro
100 105 110

Ser Arg Ser Phe Trp Met Phe Val Trp Asp Ala Phe Gln Asp Met Thr
115 120 125

Leu Ile Ile Leu Met Val Cys Ala Leu Leu Ser Val Ala Val Gly Leu
130 135 140

Ala Thr Glu Gly Trp Pro Lys Gly Met Tyr Asp Gly Leu Gly Ile Ile
145 150 155 160

Leu Ser Ile Phe Leu Val Val Met Val Thr Ala Val Ser Asp Tyr Lys

165

170

175

Gln Ser Leu Gln Phe Lys Glu Leu Asp Asn Glu Lys Lys Lys Ile Phe
 180 185 190

Ile His Val Thr Arg Asp Gly Arg Arg Gln Lys Ile Ser Ile Tyr Asp
 195 200 205

Leu Val Val Gly Asp Ile Val His Leu Ser Ile Gly Asp Gln Val Pro
 210 215 220

Ala Asp
 225

<210> 1466
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1466
 Gly Val Gln Asn Val Leu Asp Phe Leu Gln Asp Asp Phe His Asp Met
 1 5 10 15

Asp Val Ile Ser Ile Ser Gly Asn Phe Cys Ser Asp Lys Lys Pro Ser
 20 25 30

Ala Val Asn Trp Ile Glu Gly Arg Gly Lys Ser Val Val Cys Glu Ala
 35 40 45

Val Ile Gly Glu Glu Val Val Lys Lys Val Leu Lys Thr Asp Val Gln
 50 55 60

Ser Leu Val Glu Leu Asn Thr Ile Lys Asn Leu Ala
 65 70 75

<210> 1467
 <211> 76
 <212> PRT
 <213> Oryza sativa

<400> 1467
 Thr Gly Leu Asn Ser Ser Pro Leu Met Lys Leu Thr Arg Asn Gly Val
 1 5 10 15

Tyr Val Asn Val Val Asp Arg Val Arg Glu Ala Phe Lys Thr Val Glu
 20 25 30

Val Val Arg Leu Asp Cys Ser His Val Gly Ser Ser Asp Cys Lys Lys
 35 40 45

Ile Gly Val Lys Leu Arg Asp Leu Val Pro Cys Val Pro Leu Leu Phe
 50 55 60

Lys Asp Glu Gln Ile Ile Leu Trp Arg Gly Lys Val
 65 70 75

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<210> 1468

<211> 101

<212> PRT

<213> Zea mays

<400> 1468

Trp Pro Ser Arg Glu Glu Ala Arg Thr Gln Ile Leu Ser Ile Trp Asp
1 5 10 15

Gln Ala Asp Ile Val Lys Val Ser Glu Val Glu Leu Glu Phe Leu Thr
20 25 30

Gly Ile Asp Ser Val Glu Asp Asp Val Val Met Lys Leu Trp Arg Pro
35 40 45

Thr Met Lys Leu Leu Leu Val Thr Leu Gly Asp Gln Gly Cys Lys Tyr
50 55 60

Tyr Ala Arg Asp Phe His Gly Ala Val Pro Ser Phe Lys Val Gln Gln
65 70 75 80

Val Asp Thr Thr Gly Ala Gly Asp Ala Phe Val Gly Ala Leu Leu Gln
85 90 95

Arg Ile Val Lys Asp
100

<210> 1469

<211> 151

<212> PRT

<213> Zea mays

<400> 1469

Val Ala Glu Leu Ser Gly Leu Arg Val Asp Glu Ala Ile Gly Arg His
1 5 10 15

Ile Leu Thr Leu Val Glu Asp Ser Ser Val Ser Leu Val Gln Arg Met
20 25 30

Leu Tyr Leu Ala Leu Gln Gly Arg Glu Glu Lys Glu Val Arg Phe Glu
35 40 45

Leu Lys Thr His Gly Ser Lys Arg Asp Asp Gly Pro Val Ile Leu Val
50 55 60

Val Asn Ala Cys Ala Ser Arg Asp Leu His Asp His Val Val Gly Val
65 70 75 80

Cys Phe Val Ala Gln Asp Met Thr Val His Lys Leu Val Met Asp Lys
85 90 95

Phe Thr Arg Val Glu Gly Asp Tyr Lys Ala Ile Ile His Asn Pro Asn
100 105 110

Pro Leu Ile Pro Pro Ile Phe Gly Ala Asp Gln Phe Gly Trp Cys Ser
115 120 125

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Glu Trp Asn Ala Ala Met Thr Lys Leu Thr Gly Trp His Arg Asp Glu
130 135 140

Val Val Asp Lys Met Leu Leu
145 150

<210> 1470
<211> 151
<212> PRT
<213> Solanum lycopersicum

<400> 1470
Val Thr Asp Glu Val Phe Ile Ala Met Ser Lys Ala Leu Asn Phe Ile
1 5 10 15

Asn Pro Asp Glu Leu Ser Met Gln Cys Ile Leu Ile Ala Leu Asn Arg
20 25 30

Phe Leu Gln Glu Lys His Gly Ser Lys Met Ala Phe Leu Asp Gly Asn
35 40 45

Pro Pro Glu Arg Leu Cys Met Pro Ile Val Glu His Ile Glu Ser Lys
50 55 60

Gly Gly Gln Val Arg Leu Asn Ser Arg Ile Lys Lys Ile Glu Leu Asn
65 70 75 80

Glu Asp Gly Ser Val Lys Ser Phe Ile Leu Ser Asp Gly Ser Ala Ile
85 90 95

Glu Gly Asp Ala Phe Val Phe Ala Ala Pro Val Asp Ile Phe Lys Leu
100 105 110

Leu Leu Pro Glu Asp Trp Lys Glu Ile Pro Tyr Phe Gln Lys Leu Glu
115 120 125

Lys Leu Val Gly Val Pro Val Ile Asn Val His Ile Trp Phe Asp Arg
130 135 140

Lys Leu Lys Asn Thr Tyr Asp
145 150

<210> 1471
<211> 201
<212> PRT
<213> Solanum lycopersicum

<400> 1471
Ile Asn Asn Lys Asp Leu Leu Ala Phe Ser Ile His Asp Phe Glu Leu
1 5 10 15

Cys Gln Ala Gln His Arg Glu Glu Leu Gln Gln Leu Lys Arg Trp Phe
20 25 30

Glu Asp Tyr Arg Leu Asp Gln Leu Gly Leu Ala Glu Arg Tyr Ile His
35 40 45

Ala Ser Tyr Leu Phe Gly Val Thr Val Ile Pro Glu Pro Glu Leu Ser
50 55 60

Asp Ala Arg Leu Met Tyr Ala Lys Tyr Val Met Leu Leu Thr Ile Val
65 70 75 80

Asp Asp His Phe Glu Ser Phe Ala Ser Lys Asp Glu Cys Phe Asn Ile
85 90 95

Ile Glu Leu Val Glu Arg Trp Asp Asp Tyr Ala Ser Val Gly Tyr Lys
100 105 110

Ser Glu Lys Val Lys Val Phe Phe Ser Val Phe Tyr Lys Ser Ile Glu
115 120 125

Glu Leu Ala Thr Ile Ala Glu Ile Lys Gln Gly Arg Ser Val Lys Asn
130 135 140

His Leu Ile Asn Leu Trp Leu Glu Leu Met Lys Leu Met Leu Met Glu
145 150 155 160

Arg Val Glu Trp Cys Ser Gly Lys Thr Ile Pro Ser Ile Glu Glu Tyr
165 170 175

Leu Tyr Val Thr Ser Ile Thr Phe Cys Ala Lys Leu Ile Pro Leu Ser
180 185 190

Thr Gln Tyr Phe Leu Gly Ile Lys Ile
195 200

<210> 1472
<211> 101
<212> PRT
<213> Zea mays

<400> 1472
Ile Asp Gly Asp Gly Asp Val Lys Asp Asp Ile Val Gly Leu Glu Gly
1 5 10 15

Ala Ser Pro Lys Ser Met Pro Pro Ile Trp Ala Glu Val Met Arg Phe
20 25 30

Leu Thr Asn Pro His Lys Pro Met Ile Leu Ala Leu Ser Arg Pro Asp
35 40 45

Pro Lys Lys Asn Ile Thr Thr Leu Val Lys Ala Phe Gly Glu Cys Arg
50 55 60

Pro Leu Arg Glu Leu Ala Asn Leu Thr Leu Ile Met Gly Asn Arg Asp
65 70 75 80

Asp Ile Asp Asp Met Ser Ala Gly Asn Ala Ser Val Leu Thr Thr Val
85 90 95

Leu Lys Leu Ile Asp
100

<210> 1473

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1473

Met Ile Val Asp Lys Val Trp Ile Gly Asp Val Lys Phe Val Gly Asp
1 5 10 15

Lys Lys Asn Ser Glu Leu Lys Ser Thr Ile Ser Glu Arg Val Met Ala
20 25 30

Ile Leu Ile Gln Gly Ile Phe Val Asn Thr Ala Ser Glu Val Val Lys
35 40 45

Gly Asp Asp Gly Lys Asn Thr Ile Leu Gly Leu Ala Thr Glu Thr Ala
50 55 60

Leu Leu Glu Phe Gly Leu Ser Leu Glu Glu His Leu
65 70 75

<210> 1474

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 1474

Leu Glu Ser Gly Cys Phe Ser Ala Ser Ile Asp Glu Ile Glu Thr Leu
1 5 10 15

Lys Asn Lys Ala Glu Glu Val Glu Glu Tyr Leu Asp Gly Arg Cys Val
20 25 30

Tyr Leu Val Gly Met Met Gly Cys Gly Lys Thr Thr Val Gly Arg Ile
35 40 45

Leu Ala Glu Thr Leu Gly Tyr Ser Phe Phe Asp Cys Asp Arg Leu Ile
50 55 60

Glu Gln Ala Val Gly Gly Ile Thr Val Ala Glu Ile Phe Glu Leu Arg
65 70 75 80

Gly Glu Ser Phe Phe Arg Asp Asn Glu Thr Glu Val Leu His Lys Leu
85 90 95

Ser Leu Met His Arg Leu Val Val Ser Thr Gly Gly Gly Ala Val Val
100 105 110

Arg Pro Ile Asn Trp Arg His Met His Lys Gly Ile Ser Val Trp Leu
115 120 125

Asp Val Pro Leu Glu Ala Leu Ala Lys Arg Ile Thr Thr Glu Gly Thr
130 135 140

Lys Ser Arg Pro Leu Leu His
145 150

<210> 1475
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1475
Met His His Gln Lys Phe Ile Glu Gly Lys Val Val Met Asp Val Gly
1 5 10 15

Cys Gly Thr Gly Ile Leu Ser Val Phe Cys Ala Arg Ala Gly Ala Lys
20 25 30

Cys Val Tyr Ala Val Glu Ala Ser Glu Met Ala Thr Gln Ala Arg Glu
35 40 45

Ile Val Lys Ala Asn Asn Leu Asp Asp Lys Val Val Val Val His Gly
50 55 60

Arg Val Glu Asp Val Glu Val Glu Asp Lys Val Asp Val Ile Ile Ser
65 70 75 80

Glu Trp Met Gly Tyr Met Leu Leu Tyr Glu Ser Met Leu Pro Ser Val
85 90 95

Leu Phe Ala Arg Asp
100

<210> 1476
<211> 176
<212> PRT
<213> Zea mays

<400> 1476
Gln Asp Phe His Asp Met Ser Glu Lys Met Leu Thr Glu Met Ile Asn
1 5 10 15

Arg Ile Val Lys Asp Val Gln Arg Arg Gly Ser Ser Met Val Val Tyr
20 25 30

Phe His Asn Leu Ser Gln Phe Asp Gly Ile Met Ile Leu Ser Phe Leu
35 40 45

Thr Lys Ser Tyr Lys Asn Cys His Ile Glu Pro Ile Met Arg Asn Asp
50 55 60

Cys Ile Tyr Ser Ile Lys Leu Tyr Lys Val Ser Lys Asn Gly Asp Lys
65 70 75 80

Arg Leu Val Leu Thr Phe Met Asp Ser Tyr Leu Leu Leu Lys Val Lys
85 90 95

Leu Ala Asp Leu Ala Asp Ser Phe Cys Pro Glu Leu Gly Gly Lys Gly
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100

105

110

Ser Phe Asp His Gln Asn Val Thr Val Asp Lys Leu Pro Ser Ile Arg
 115 120 125

Glu Asp Ser Leu Thr Tyr Leu Lys Gln Asp Ile Leu Ile Thr Ala Ala
 130 135 140

Val Met Gln Arg Ala Lys Ala Ile Ile Trp Glu Glu Tyr Gly Ile Asp
 145 150 155 160

Ile Leu Lys Val Leu Thr Ile Ser Ala Leu Ala Leu Lys Ile Phe Arg
 165 170 175

<210> 1477

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1477

Ile Ser Cys Lys Ser Cys Asn Asn Phe Lys Ile Thr Ile Glu Ala Ile
 1 5 10 15

Glu Glu Ala Tyr Glu Lys Gly Gln Gln Ala Asn Val Lys Ile Lys Gly
 20 25 30

Leu Ile Leu Thr Asn Pro Cys Asn Pro Leu Gly Thr Ile Leu Asp Arg
 35 40 45

Asp Thr Leu Lys Lys Ile Ser Thr Phe Thr Asn Glu His Asn Ile His
 50 55 60

Leu Val Cys Asp Glu Ile Tyr Ala Ala Thr Val Phe Asn Ser Pro Lys
 65 70 75 80

Phe Val Ser Ile Ala Glu Ile Ile Asn Glu Asp Asn Cys Ile Asn Lys
 85 90 95

Asp Leu Val His Ile Val Ser Ser Leu Ser Lys Asp Leu Gly Phe Pro
 100 105 110

Gly Phe Arg Val Gly Ile Val Tyr Ser Phe Asn Asp Asp Val Val Asn
 115 120 125

Cys Ala Arg Lys Met Ser Ser Phe Gly Leu Val Ser Thr Gln Thr Gln
 130 135 140

His Leu Leu Ala Phe Met Leu Ser Asp Asp Glu Phe Val Glu Glu Phe
 145 150 155 160

Leu Ile Glu Ser Ala Lys Arg Leu Arg Glu Arg Tyr Glu Lys Phe Thr
 165 170 175

Arg Gly Leu Glu Glu Ile Gly Ile Lys Cys Leu Glu Ser Asn Ala Gly
 180 185 190

Val Tyr Cys Trp Met Asp Leu Arg Ser Leu Leu Lys Glu Ala Thr Leu
195 200 205

Asp Ala Glu Met Ser Leu Trp Lys Leu Ile Ile Asn Glu Val Lys Leu
210 215 220

Asn Val
225

<210> 1478
<211> 276
<212> PRT
<213> Zea mays

<400> 1478
Ser Arg Leu Ala Trp Ser Arg Asn Tyr Ala Ala Lys Asp Ile Lys Phe
1 5 10 15

Gly Val Glu Ala Arg Ala Leu Met Leu Arg Gly Val Glu Glu Leu Ala
20 25 30

Asp Ala Val Lys Val Thr Met Gly Pro Lys Gly Arg Asn Val Val Ile
35 40 45

Glu Gln Ser Phe Gly Ala Pro Lys Val Thr Lys Asp Gly Val Thr Val
50 55 60

Ala Lys Ser Ile Glu Phe Lys Asp Arg Val Lys Asn Val Gly Ala Ser
65 70 75 80

Leu Val Lys Gln Val Ala Asn Ala Thr Asn Asp Thr Ala Gly Asp Gly
85 90 95

Thr Thr Cys Ala Thr Val Leu Thr Lys Ala Ile Phe Thr Glu Gly Cys
100 105 110

Lys Ser Val Ala Ala Gly Met Asn Ala Met Asp Leu Arg Arg Gly Ile
115 120 125

Ser Met Ala Val Asp Ala Val Val Thr Asn Leu Lys Gly Met Ala Arg
130 135 140

Met Ile Ser Thr Ser Glu Glu Ile Ala Gln Val Gly Thr Ile Ser Ala
145 150 155 160

Asn Gly Glu Arg Glu Ile Gly Glu Leu Ile Ala Lys Ala Met Glu Lys
165 170 175

Val Gly Lys Glu Gly Val Ile Thr Ile Ala Asp Gly Asn Thr Leu Tyr
180 185 190

Asn Glu Leu Glu Val Val Glu Gly Met Lys Leu Asp Arg Gly Tyr Ile
195 200 205

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Ser Pro Tyr Phe Ile Thr Asn Ser Lys Ala Gln Lys Cys Glu Leu Glu
210 215 220

Asp Pro Leu Ile Leu Ile His Asp Lys Lys Val Thr Asn Met His Ala
225 230 235 240

Val Val Lys Val Leu Glu Met Ala Leu Lys Lys Gln Arg Pro Leu Leu
245 250 255

Ile Val Ala Glu Asp Val Glu Ser Glu Ala Leu Gly Thr Leu Ile Ile
260 265 270

Asn Lys Leu Arg
275

<210> 1479
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1479
Gly Leu Asn Ala Ile Ile Val Leu Glu Met Glu Glu Glu Leu Asp Ile
1 5 10 15

Val Val Glu Gln Ser Ala Arg Leu Gly Val Glu Pro Val Ile Gly Val
20 25 30

Arg Ala Lys Leu Leu Thr Lys Ile Pro Gly His Phe Gly Ser Thr Ala
35 40 45

Gly Lys His Gly Lys Phe Gly Met Leu Ala Asp Lys Ile Tyr Glu Val
50 55 60

Ala Gly Lys Leu Lys Lys Met Gly Lys Leu His Trp
65 70 75

<210> 1480
<211> 176
<212> PRT
<213> Oryza sativa

<400> 1480
Lys His Arg Val Ser Leu His Asp Val Tyr Val Tyr His Gly Arg Arg
1 5 10 15

Val Ile Ala Lys Ser Leu Thr Leu Glu Ser Leu Lys Ala Asp Arg Asp
20 25 30

Ser Thr Phe Leu Ile Met Pro Arg Met Arg Gly Gly Cys Asn Asp Thr
35 40 45

Ile Gly Gly Phe Lys Cys Ile Pro Leu Glu Gln His Ile Arg Ser Leu
50 55 60

Gly Asp Ser Leu Phe Glu Ile Ile Trp Ile Pro Pro Asp Leu Arg Val
65 70 75 80

Ser Gly Phe Cys Ser Tyr Leu Ile Ile Leu Gly Lys Pro Ala Arg Lys
85 90 95

Ile Ile Cys Gln Leu Leu Lys Leu Leu Glu Ile Ile His Ala Ala Asn
100 105 110

Arg Phe Ala Ser Arg Phe Thr Ile Ala Asp Leu Val Phe Leu Pro Asp
115 120 125

Leu Gly Cys Ile Ala Phe Lys Lys Gly Val Lys Ile Arg Trp Asn Leu
130 135 140

Arg Arg Glu Glu Tyr Lys Leu Asn Met Gly Asp Val Ala Ser Ile Ile
145 150 155 160

Ser Cys Trp Phe Arg Phe Asn Arg Arg Lys Leu Glu Ala Leu Glu Ala
165 170 175

<210> 1481
<211> 276
<212> PRT
<213> Oryza sativa

<400> 1481
Met Ile Val Asp Lys Val Trp Ile Gly Asp Val Lys Phe Val Gly Asp
1 5 10 15

Lys Lys Asn Ser Glu Leu Lys Ser Thr Ile Ser Glu Arg Val Met Ala
20 25 30

Ile Leu Ile Gln Gly Ile Phe Val Asn Thr Ala Ser Glu Val Val Lys
35 40 45

Gly Asp Asp Gly Lys Asn Thr Ile Leu Gly Leu Ala Thr Glu Thr Ala
50 55 60

Leu Leu Glu Phe Gly Leu Ser Leu Glu Glu His Leu Tyr Asp Asp Tyr
65 70 75 80

Asn Lys Leu Thr Arg Ile Lys Val Asp Pro Phe Asn Ser Val Lys Lys
85 90 95

Lys Met Ser Val Thr Ile Gln Leu Pro Asn Gly Gly Ile Arg Thr Phe
100 105 110

Cys Lys Gly Ala Ser Glu Ile Ile Leu Glu Gln Cys Asn Thr Ile His
115 120 125

Asn Thr Asp Gly Asn Ile Val Pro Leu Ser Glu Met Gln Lys His Asn
130 135 140

Val Leu Asn Ile Ile Asn Ser Phe Ala Ser Glu Ala Leu Arg Thr Leu
145 150 155 160

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Cys Ile Ala Phe Lys Asp Met Asp Glu Phe Pro Asn Asp Gln Pro Ile
165 170 175

Ser Asp Asp Gly Tyr Thr Leu Ile Ala Val Phe Gly Ile Lys Asp Pro
180 185 190

Val Arg Pro Gly Val Lys Asp Ala Val Arg Thr Cys Met Ala Ala Gly
195 200 205

Ile Arg Val Arg Met Val Thr Gly Asp Asn Ile Asn Thr Ala Lys Ala
210 215 220

Ile Ala Lys Glu Cys Gly Ile Leu Thr Glu Asp Gly Ile Ala Ile Glu
225 230 235 240

Gly Gln Gln Leu Asn Asn Lys Ser Ser Asp Glu Leu Lys Glu Leu Leu
245 250 255

Pro Lys Ile Gln Val Ile Ala Arg Ser Leu Pro Met Asp Lys Tyr Lys
260 265 270

Leu Val Thr Ser
275

<210> 1482
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1482
Lys His Arg Val Ser Leu His Asp Val Tyr Val Tyr His Gly Arg Arg
1 5 10 15

Val Ile Ala Lys Ser Leu Thr Leu Glu Ser Leu Lys Ala Asp Arg Asp
20 25 30

Ser Thr Phe Leu Ile Met Pro Arg Met Arg Gly Gly Cys Asn Asp Thr
35 40 45

Ile Gly Gly Phe Lys Cys Ile Pro Leu Glu Gln His Ile Arg Ser Leu
50 55 60

Gly Asp Ser Leu Phe Glu Ile Ile Trp Ile Pro Pro
65 70 75

<210> 1483
<211> 276
<212> PRT
<213> Oryza sativa

<400> 1483
Ser Asp Val Asp Ala Ile Asp Glu Ala Gln Arg Arg Lys Ile Leu Val
1 5 10 15

Arg Val Lys Gln Tyr His Leu Pro Pro Glu Leu Ile Glu Glu Gly Phe
20 25 30

Cys Ile Ser Pro Asp Glu Leu Ala Ala Ile Ala Asn Met Arg Glu Asp
 35 40 45
 Tyr Thr Met Leu Arg Met His Gly Gly Ile Asn Gly Ile Ser Arg Lys
 50 55 60
 Ile Lys Ala Ser Leu Glu Asp Gly Ala Lys Glu Thr Asp Ile Ala Thr
 65 70 75 80
 Arg Gln Met Leu Tyr Gly Ala Asn Arg His Ala Glu Lys Pro Pro Arg
 85 90 95
 Ser Phe Trp Met Phe Val Trp Asp Ala Leu His Asp Leu Thr Leu Ile
 100 105 110
 Ile Leu Val Val Cys Ala Leu Val Ser Ile Val Val Gly Leu Ala Thr
 115 120 125
 Lys Gly Trp Pro Met Gly Ile Tyr Asp Gly Phe Gly Ile Ile Leu Ser
 130 135 140
 Ile Leu Leu Val Val Leu Val Thr Ala Thr Ser Asp Tyr Gln Gln Ala
 145 150 155 160
 Arg Lys Phe Met Glu Leu Asp Arg Glu Lys Gln Lys Ile Tyr Ile Arg
 165 170 175
 Val Thr Arg Asp Lys Lys Thr Lys Glu Val Leu Val His Asp Leu Val
 180 185 190
 Val Gly Asp Ile Leu His Leu Ser Ile Gly Asp Val Val Pro Ala Asp
 195 200 205
 Gly Leu Phe Ile Ser Gly Asp Cys Leu Met Ile Asp Glu Ser Ser Leu
 210 215 220
 Ser Gly Glu Ser Glu Pro Val Asn Ile Ser Glu Glu Arg Pro Phe Leu
 225 230 235 240
 His Ala Gly Asn Lys Val Val Asp Gly Ala Ala Lys Met Leu Val Thr
 245 250 255
 Ala Val Gly Thr Arg Thr Glu Trp Gly Lys Ile Met Gly Thr Leu Asn
 260 265 270
 Gly Asp Gly Val
 275

<210> 1484
 <211> 101
 <212> PRT
 <213> Zea mays

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<400> 1484

Pro Gln Phe Lys Gly Leu Asp Leu Glu Phe Asp Val Pro Leu Arg Glu
1 5 10 15

Leu Gly Phe His Gly Val Pro Tyr Lys Ala Ser Ala Phe Ile Ile Pro
20 25 30

Thr Ser Thr Cys Leu Val Glu Leu Ile Glu Thr Pro Phe Leu Val Val
35 40 45

Ser Leu Ser Glu Ile Glu Ile Val Asn Leu Glu Arg Val Gly Phe Gly
50 55 60

Thr Lys Asn Phe Asp Met Ala Ile Val Phe Lys Asp Phe Lys Lys Asp
65 70 75 80

Val Leu Arg Ile Asp Ser Ile Pro Ser Ala Ser Leu Asp Ala Ile Lys
85 90 95

Glu Trp Leu Asp Thr
100

<210> 1485

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 1485

Glu Val Glu Leu Lys Glu Val Lys Leu Lys Glu Gly Tyr Tyr Val Met
1 5 10 15

Asp Pro Ala Lys Ala Val Glu Ile Val Asp Glu Asn Thr Ile Cys Val
20 25 30

Ala Ala Ile Leu Gly Ser Thr Leu Thr Gly Glu Phe Glu Asp Val Lys
35 40 45

Leu Leu Asn Glu Leu Leu Thr Lys Lys Asn Lys Glu Thr Gly Trp Glu
50 55 60

Thr Pro Ile His Val Asp Ala Ala Ser Gly Gly Phe Ile Ala Pro Phe
65 70 75 80

Leu Trp Pro Asp Leu Glu Trp Asp Phe Arg Leu Pro Leu Val Lys Ser
85 90 95

Ile Asn Val Ser Gly His Lys Tyr Gly Leu Val Tyr Ala Gly Val Gly
100 105 110

Trp Val Ile Trp Arg Ser Lys Glu Asp Leu Pro Asp Glu Leu Val Phe
115 120 125

His Ile Asn Tyr Leu Gly Ser Asp Gln Pro Thr Phe Thr Leu Asn Phe
130 135 140

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Ser Lys Gly Ser Tyr Gln Ile Ile Ala Gln Tyr Tyr Gln Leu Ile Arg
145 150 155 160

Leu Gly Phe Glu Gly Tyr Lys Asn Val Met Lys Asn Cys Leu Ser Asn
165 170 175

Ala Lys Val Leu Thr Glu Gly Ile Thr Lys Met Gly Arg Phe Asp Ile
180 185 190

Val Ser Lys Asp Val Gly Val Pro Val Val Ala Phe Ser Leu Arg Asp
195 200 205

Ser Ser Lys Tyr Thr Val Phe Glu Val Ser Glu His Leu Arg Arg Phe
210 215 220

Gly Trp Ile Val Pro Ala Tyr Thr Met Pro Pro Asp Ala Glu His Ile
225 230 235 240

Ala Val Leu Arg Val Val Ile Arg Glu Asp Phe Ser His Ser Leu Ala
245 250 255

Glu Arg Leu Val Ser Asp Ile Glu Lys Ile Leu Ser Glu Leu Asp Thr
260 265 270

Gln Pro Pro Arg
275

<210> 1486

<211> 251

<212> PRT

<213> Solanum lycopersicum

<400> 1486

Arg Gly Ile Leu Val Ile Gly Ser Ile Gly Thr Gly Arg Ser Tyr Leu
1 5 10 15

Val Lys Tyr Leu Ala Thr Asn Ser Tyr Val Pro Phe Ile Thr Val Phe
20 25 30

Leu Asn Lys Phe Leu Asp Asn Lys Ser Lys Gly Phe Leu Leu Asp Glu
35 40 45

Ile Asp Ile Asp Asp Ser Asp Asp Ile Asp Asp Ser Asp Asn Leu Asp
50 55 60

Ala Ser Asp Asp Ile Asp Arg Asp Leu Asp Thr Glu Leu Glu Leu Leu
65 70 75 80

Thr Arg Met Asn Gly Leu Thr Val Asp Met Met Pro Glu Ile Asp Arg
85 90 95

Phe Tyr Ile Thr Leu Gln Phe Glu Leu Ala Lys Ala Met Ser Pro Cys
100 105 110

Ile Ile Trp Ile Pro Asn Ile His Asp Leu Asp Val Asn Glu Ser Asn

115 120 125
 Asp Leu Ser Leu Gly Leu Leu Val Asn His Leu Ser Arg Asp Cys Glu
 130 135 140
 Arg Cys Ser Thr Arg Asn Ile Leu Val Ile Ala Ser Thr His Ile Pro
 145 150 155 160
 Gln Lys Val Asp Pro Ala Leu Ile Ala Pro Asn Lys Leu Asn Thr Cys
 165 170 175
 Ile Lys Ile Arg Arg Leu Leu Ile Pro Gln Gln Arg Lys His Phe Phe
 180 185 190
 Thr Leu Ser Tyr Thr Arg Gly Phe His Leu Glu Lys Lys Met Phe His
 195 200 205
 Thr Asn Gly Phe Gly Ser Ile Thr Met Gly Ser Asn Ala Arg Asp Leu
 210 215 220
 Val Ala Leu Thr Asn Glu Val Leu Ser Ile Ser Ile Thr Gln Lys Lys
 225 230 235 240
 Ser Ile Ile Asp Thr Asn Thr Ile Arg Ser Ala
 245 250
 <210> 1487
 <211> 176
 <212> PRT
 <213> Oryza sativa
 <400> 1487
 Met Ile Val Asp Lys Val Trp Ile Gly Asp Val Lys Phe Val Gly Asp
 1 5 10 15
 Lys Lys Asn Ser Glu Leu Lys Ser Thr Ile Ser Glu Arg Val Met Ala
 20 25 30
 Ile Leu Ile Gln Gly Ile Phe Val Asn Thr Ala Ser Glu Val Val Lys
 35 40 45
 Gly Asp Asp Gly Lys Asn Thr Ile Leu Gly Leu Ala Thr Glu Thr Ala
 50 55 60
 Leu Leu Glu Phe Gly Leu Ser Leu Glu Glu His Leu Tyr Asp Asp Tyr
 65 70 75 80
 Asn Lys Leu Thr Arg Ile Lys Val Asp Pro Phe Asn Ser Val Lys Lys
 85 90 95
 Lys Met Ser Val Thr Ile Gln Leu Pro Asn Gly Gly Ile Arg Thr Phe
 100 105 110
 Cys Lys Gly Ala Ser Glu Ile Ile Leu Glu Gln Cys Asn Thr Ile His
 115 120 125

Asn Thr Asp Gly Asn Ile Val Pro Leu Ser Glu Met Gln Lys His Asn
130 135 140

Val Leu Asn Ile Ile Asn Ser Phe Ala Ser Glu Ala Leu Arg Thr Leu
145 150 155 160

Cys Ile Ala Phe Lys Asp Met Asp Glu Phe Pro Asn Asp Gln Pro Ile
165 170 175

<210> 1488
<211> 101
<212> PRT
<213> Zea mays

<400> 1488
Thr Pro Lys Ile Leu Ile Val Thr Arg Leu Leu Pro Asp Ala Ala Gly
1 5 10 15

Thr Thr Cys Gly Gln Arg Leu Glu Lys Val Ile Gly Thr Glu His Thr
20 25 30

Asp Ile Ile Arg Val Pro Phe Arg Asn Glu Asn Gly Ile Leu Arg Lys
35 40 45

Trp Ile Ser Arg Phe Asp Val Trp Pro Tyr Leu Glu Thr Tyr Thr Glu
50 55 60

Asp Val Ser Ser Glu Ile Met Lys Glu Met Gln Ala Lys Pro Asp Leu
65 70 75 80

Ile Ile Gly Asn Tyr Ser Asp Gly Asn Leu Val Ala Thr Leu Leu Ala
85 90 95

His Lys Leu Gly Val
100

<210> 1489
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1489
His Met Leu Trp Val Gly Glu Arg Thr Arg Gln Leu Asp Gly Ala His
1 5 10 15

Val Glu Phe Leu Arg Gly Val Ala Asn Pro Leu Gly Ile Lys Val Ser
20 25 30

Asp Lys Met Asn Pro Thr Glu Leu Val Lys Leu Ile Glu Ile Leu Asn
35 40 45

Pro Ser Asn Lys Pro Gly Arg Ile Thr Ile Ile Thr Arg Met Gly Ala
50 55 60

Glu Asn Met Arg Val Lys Leu Pro His Leu Ile Arg

65

70

75

<210> 1490

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1490

Arg Val Arg Val Cys Thr Pro Glu Asp Gly Ala Trp Asn Met Lys Asp
1 5 10 15Lys Lys Val Val Asn Gly Ala Thr Ile Lys Ser Trp Ala Cys Val Asn
20 25 30Leu Cys Glu Gly Leu Asp Asn Arg Val Val Glu Ala Phe Cys Leu Gln
35 40 45Leu Val Arg Thr Ser Lys Ile Thr Gly Leu Asp Phe Ala Asn Val Ser
50 55 60Leu Pro Ile Leu Lys Ala Asp Pro His Asn Val Lys
65 70 75

<210> 1491

<211> 101

<212> PRT

<213> Zea mays

<400> 1491

Lys Met Ala Phe Leu Asp Gly Asn Pro Pro Glu Arg Leu Cys Met Pro
1 5 10 15Ile Val Asp His Ile Arg Ser Arg Gly Gly Glu Val Arg Leu Asn Ser
20 25 30Arg Ile Lys Lys Ile Glu Leu Asn Pro Asp Gly Thr Val Lys His Phe
35 40 45Ala Leu Ser Asp Gly Thr Gln Ile Thr Gly Asp Ala Tyr Val Cys Ala
50 55 60Thr Pro Val Asp Ile Phe Lys Leu Leu Val Pro Gln Glu Trp Ser Glu
65 70 75 80Ile Thr Tyr Phe Lys Lys Leu Glu Lys Leu Val Gly Val Pro Val Ile
85 90 95Asn Val His Ile Trp
100

<210> 1492

<211> 76

<212> PRT

<213> Zea mays

<400> 1492

Ala Asp Ser Phe Cys Pro Glu Leu Gly Gly Lys Gly Ser Phe Asp His
1 5 10 15

Gln Asn Val Thr Val Asp Lys Leu Pro Ser Ile Arg Glu Asp Ser Leu
20 25 30

Thr Tyr Leu Lys Gln Asp Ile Leu Ile Thr Ala Ala Val Met Gln Arg
35 40 45

Ala Lys Ala Ile Ile Trp Glu Glu Tyr Gly Ile Asp Ile Leu Lys Val
50 55 60

Leu Thr Ile Ser Ala Leu Ala Leu Lys Ile Phe Arg
65 70 75

<210> 1493

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1493

Ile Leu Pro Gly Ser Ser Ser Leu Met Val Arg Asn Asn Ser Ile Val
1 5 10 15

Gly Val Asp Thr Gln Ile Thr Leu Asn Leu Arg Ser Arg Val Gly Gly
20 25 30

Leu Val Arg Val Glu Arg Lys Lys Lys Arg Ile Glu Leu Lys Ile Phe
35 40 45

Ser Gly Asp Ile His Phe Pro Gly Glu Thr Asp Lys Ile Ser Arg His
50 55 60

Thr Gly Val Leu Ile Pro Pro Gly Thr Gly Lys Arg Asn Ser Lys Glu
65 70 75 80

Tyr Lys Lys Val Gln Asn Trp Ile Tyr Val Gln Arg Ile Thr Pro Ser
85 90 95

Lys Lys Arg Phe Phe Val Leu Val Arg Pro Val Val Thr Tyr Glu Ile
100 105 110

Thr Asp Gly Ile Asn Leu Gly Thr Leu Phe Pro Pro Asp Pro
115 120 125

<210> 1494

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1494

Ile Val Ser Leu Arg Tyr Gln Arg Ile His Ile Leu Gln Ile Arg Asp
1 5 10 15

Ser Gly Asp Leu Val Asp Val Arg Ala Ile Gly Glu Phe Cys Arg Glu
20 25 30

Asp Asp Glu Leu Phe Leu Asn Ser Asn Ser Gln Val Leu Val Asn His
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35

40

45

Val Gly Asn Gly Phe His His Ser Leu Pro Gln Ser Glu Thr Ser Phe
50 55 60

Leu Ser Gly Ile Lys Gln Arg Leu Leu Ser Tyr Ile Phe Arg Gly Ile
65 70 75 80

Trp Asn Glu Ala Asp Gln Thr Met Arg Val Gln Cys Leu Lys Lys Lys
85 90 95

Phe Tyr Phe His Phe Gln Asp Tyr Ile Asp Leu Ile Ile Trp Lys Val
100 105 110

Gln Phe Leu Asp Arg His His Leu Leu Ile Lys Phe Gly Ser
115 120 125

<210> 1495

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1495

Glu Arg Trp Asp Asp Tyr Ala Ser Val Gly Tyr Lys Ser Glu Lys Val
1 5 10 15

Lys Val Phe Phe Ser Val Phe Tyr Lys Ser Ile Glu Glu Leu Ala Thr
20 25 30

Ile Ala Glu Ile Lys Gln Gly Arg Ser Val Lys Asn His Leu Ile Asn
35 40 45

Leu Trp Leu Glu Leu Met Lys Leu Met Leu Met Glu Arg Val Glu Trp
50 55 60

Cys Ser Gly Lys Thr Ile Pro Ser Ile Glu Glu Tyr Leu Tyr Val Thr
65 70 75 80

Ser Ile Thr Phe Cys Ala Lys Leu Ile Pro Leu Ser Thr Gln Tyr Phe
85 90 95

Leu Gly Ile Lys Ile
100

<210> 1496

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1496

Met Ser Ser Leu Val Leu Gln Cys Trp Lys Leu Ser Ser Pro Ser Leu
1 5 10 15

Ile Leu Gln Gln Asn Thr Ser Ile Ser Met Gly Ala Phe Lys Gly Ile
20 25 30

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His Lys Leu Gln Ile Pro Asn Ser Pro Leu Thr Val Ser Ala Arg Gly
35 40 45

Leu Asn Lys Ile Ser Cys Ser Leu Asn Leu Gln Thr Glu Lys Leu Cys
50 55 60

Tyr Glu Asp Asn Asp Asn Asp Leu Asp Glu Glu Leu Met Pro Lys His
65 70 75 80

Ile Ala Leu Ile Met Asp Gly Asn Arg Arg Trp Ala Lys Asp Lys Gly
85 90 95

Leu Glu Val Tyr Glu Gly His Lys His Ile Ile Pro Lys Leu Lys Glu
100 105 110

Ile Cys Asp Ile Ser Ser Lys Leu Gly Ile Gln Ile Ile Thr Ala Phe
115 120 125

Ala Phe Ser Thr Glu Asn Trp Lys Arg Ser Lys Glu Glu Val Asp Phe
130 135 140

Leu Leu Gln Met Phe Glu Glu Ile Tyr Asp Glu Phe Ser Arg Ser Gly
145 150 155 160

Val Arg Val Ser Ile Ile Gly Cys Lys Ser Asp Leu Pro Met Thr Leu
165 170 175

Gln Lys Cys Ile Ala Leu Thr Glu Glu Thr Thr Lys Gly Asn Lys Gly
180 185 190

Leu His Leu Val Ile Ala Leu Asn Tyr Gly Gly Tyr Tyr Asp Ile Leu
195 200 205

Gln Ala Thr Lys Ser Ile Val Asn Lys Ala Met Asn Gly Leu Leu Asp
210 215 220

Val Glu
225

<210> 1497
<211> 276
<212> PRT
<213> Oryza sativa

<400> 1497
Asp Val Ile Leu Cys Leu Leu Pro Leu Phe His Ile Tyr Ser Leu Asn
1 5 10 15

Ser Val Leu Leu Ala Gly Leu Arg Ala Gly Ser Thr Ile Val Ile Met
20 25 30

Arg Lys Phe Asp Leu Gly Ala Leu Val Asp Leu Val Arg Lys His Asn
35 40 45

Ile Thr Ile Ala Pro Phe Val Pro Pro Ile Val Val Glu Ile Ala Lys

50
 55
 60
 Ser Pro Arg Val Thr Ala Glu Asp Leu Ala Ser Ile Arg Met Val Met
 65 70 75 80
 Ser Gly Ala Ala Pro Met Gly Lys Asp Leu Gln Asp Ala Phe Met Ala
 85 90 95
 Lys Ile Pro Asn Ala Val Leu Gly Gln Gly Tyr Gly Met Thr Glu Ala
 100 105 110
 Gly Pro Val Leu Ala Met Cys Leu Ala Phe Ala Lys Glu Pro Phe Lys
 115 120 125
 Val Lys Ser Gly Ser Cys Gly Thr Val Val Arg Asn Ala Glu Leu Lys
 130 135 140
 Ile Val Asp Pro Asp Thr Gly Thr Ser Leu Gly Arg Asn Gln Ser Gly
 145 150 155 160
 Glu Ile Cys Ile Arg Gly Glu Gln Ile Met Lys Gly Tyr Leu Asn Asp
 165 170 175
 Pro Glu Ala Thr Lys Asn Thr Ile Asp Glu Asp Gly Trp Leu His Thr
 180 185 190
 Gly Asp Ile Gly Phe Val Asp Asp Asp Glu Ile Phe Ile Val Asp
 195 200 205
 Arg Leu Lys Glu Ile Ile Lys Tyr Lys Gly Phe Gln Val Pro Pro Ala
 210 215 220
 Glu Leu Glu Ala Leu Leu Ile Thr His Pro Glu Ile Lys Asp Ala Ala
 225 230 235 240
 Val Val Ser Met Lys Asp Asp Leu Ala Gly Glu Val Pro Val Ala Phe
 245 250 255
 Ile Val Arg Thr Glu Gly Ser Glu Ile Thr Glu Asp Glu Ile Lys Lys
 260 265 270
 Phe Val Ala Lys
 275
 <210> 1498
 <211> 151
 <212> PRT
 <213> Zea mays
 <400> 1498
 Lys Asn Leu Lys Ile Asn Val Trp Ile Ser Ala Lys Ser Phe His Gly
 1 5 10 15
 Tyr Ala Asp Val Ser Phe Asp Glu Thr Ser Asp Gly Gly Lys Gly Ile
 20 25 30

Thr Asp Leu Lys Pro Val Leu Gln Asn Ile Phe Gly Glu Asn Leu Val
35 40 45

Glu Lys Glu Glu Phe Leu His Thr Phe Ser Lys Glu Cys Glu Tyr Ile
50 55 60

Arg Thr Ala Val Thr Asn Gly Ser Ala Ile Lys His Asp Gly Ser Tyr
65 70 75 80

Glu Ser Asp Pro Ala Val Glu Ile Val Arg Val Glu Leu Gln Gly Ala
85 90 95

Ala Ala Phe Leu Tyr Ser Arg Leu Val Pro Leu Val Leu Leu Val
100 105 110

Glu Gly Ser Thr Pro Ile Asp Ile Gly Glu His Gly Trp Glu Met Leu
115 120 125

Leu Val Val Lys Lys Ala Thr Gln Glu Ala Gly Ser Lys Phe Glu Leu
130 135 140

Leu Gly Phe Ala Ala Val His
145 150

<210> 1499

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 1499

Val Cys Met Leu Leu Asp Leu Leu Glu Ala Pro Asp Ser Cys Thr Leu
1 5 10 15

Glu Lys Phe Leu Gly Arg Ile Pro Met Val Phe Asn Val Val Ile Leu
20 25 30

Ser Pro His Gly Tyr Phe Ala Gln Glu Asn Val Leu Gly Tyr Pro Asp
35 40 45

Thr Gly Gly Gln Val Val Tyr Ile Leu Asp Gln Val Pro Ala Leu Glu
50 55 60

Arg Glu Met Leu Lys Arg Ile Lys Glu Gln Gly Leu Asp Ile Ile Pro
65 70 75 80

Arg Ile Leu Ile Val Thr Arg Leu Leu Pro Asp Ala Val Gly Thr Thr
85 90 95

Cys Gly Gln Arg Leu Glu Lys Val Tyr Gly Thr Glu His Ser His Ile
100 105 110

Leu Arg Val Pro Phe Gly Thr Glu Lys Gly Ile Val Arg Lys Trp Ile
115 120 125

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Ser Arg Phe Glu Val Trp Pro Tyr Met Glu Thr Phe Ile Glu Asp Val
130 135 140

Ala Lys Glu Ile Ser Ala Glu
145 150

<210> 1500
<211> 76
<212> PRT
<213> Zea mays

<400> 1500
Ile His Ser Gly Thr Val Val Gly Lys Leu Glu Gly Glu Arg Glu Ile
1 5 10 15

Thr Leu Gly Phe Val Asp Leu Leu Arg Asp Asp Phe Ile Glu Lys Asp
20 25 30

Arg Ser Arg Gly Ile Phe Phe Thr Gln Asp Trp Val Ser Met Pro Gly
35 40 45

Val Ile Pro Val Ala Ser Gly Gly Ile His Val Trp His Met Pro Ala
50 55 60

Leu Thr Glu Ile Phe Gly Asp Asp Ser Val Leu Gln
65 70 75

<210> 1501
<211> 226
<212> PRT
<213> Solanum lycopersicum

<400> 1501
Lys Pro Leu Trp Arg Leu Val Leu Glu Gln Phe Asp Asp Thr Leu Val
1 5 10 15

Lys Ile Leu Leu Gly Ala Ala Phe Ile Ser Phe Val Leu Ala Tyr Val
20 25 30

Asn Gln Asp Glu Thr Gly Glu Ser Gly Phe Glu Ala Tyr Val Glu Pro
35 40 45

Leu Val Ile Leu Trp Ile Leu Val Leu Asn Ala Ile Val Gly Val Trp
50 55 60

Gln Glu Ser Asn Ala Glu Lys Ala Leu Glu Ala Leu Lys Glu Met Gln
65 70 75 80

Gly Glu Ser Ala Lys Val Leu Arg Asp Gly Tyr Leu Val Pro Asp Phe
85 90 95

Pro Ala Lys Glu Leu Val Pro Gly Asp Ile Val Glu Leu Arg Val Gly
100 105 110

Asp Lys Val Pro Ala Asp Met Arg Val Ala Thr Leu Lys Ser Ser Thr
115 120 125

Leu Arg Val Glu Gln Ser Ser Leu Thr Gly Glu Ser Met Pro Val Thr
130 135 140

Lys Ser Thr Asp Phe Leu Ala Thr Asp Asp Cys Glu Leu Gln Ala Lys
145 150 155 160

Glu Asn Met Val Phe Ala Gly Thr Thr Val Val Asn Gly Ser Cys Ile
165 170 175

Cys Ile Val Val Asn Thr Gly Met Cys Thr Glu Ile Gly Lys Ile Gln
180 185 190

Arg Gln Ile His Asp Ala Ser Met Glu Glu Ser Asp Thr Pro Leu Lys
195 200 205

Lys Lys Leu Asp Glu Phe Gly Asn Arg Leu Thr Phe Ala Ile Gly Val
210 215 220

Val Cys
225

<210> 1502
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1502
Asp Lys Val Met Gln Gly Tyr Ala Tyr Ile Leu Thr His Pro Gly Val
1 5 10 15

Pro Cys Ile Phe Tyr Asp His Val Phe Asp Trp Asn Leu Lys Gln Glu
20 25 30

Ile Ser Thr Leu Ala Ala Val Arg Ser Arg Asn Glu Ile His Pro Gly
35 40 45

Ser Lys Leu Lys Ile Leu Ala Ala Glu Gly Asp Val Tyr Val Ala Met
50 55 60

Ile Asp Asp Lys Val Ile Thr Lys Ile Gly Thr Arg
65 70 75

<210> 1503
<211> 176
<212> PRT
<213> Zea mays

<400> 1503
Ala Arg Phe Leu Ser Glu Ala Cys Asp Leu Val Phe Asp Ala Ala Ser
1 5 10 15

Gln Gly Lys Ser Phe Leu Ile Val Gly Thr Lys Lys Arg Ala Ala Asp
20 25 30

Leu Val Ala Ser Ala Ala Ile Arg Ser Arg Cys His Tyr Val Asn Lys
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Lys Trp Phe Ser Gly Met Leu Thr Asn Trp Ser Ile Thr Lys Thr Arg
 50 55 60

Leu Ser Gln Phe Arg Asp Leu Arg Ala Glu Glu Lys Met Gly Lys Phe
 65 70 75 80

His His Leu Pro Lys Arg Asp Ala Ala Ile Leu Lys Arg Lys Leu Ser
 85 90 95

Thr Leu Gln Arg Tyr Leu Gly Gly Ile Lys Tyr Met Thr Arg Leu Pro
 100 105 110

Asp Ile Val Ile Val Leu Asp Gln Gln Lys Glu Tyr Ile Ala Leu Gln
 115 120 125

Glu Cys Ala Ile Leu Gly Ile Pro Thr Ile Ser Leu Val Asp Thr Asn
 130 135 140

Cys Asp Pro Asp Leu Ala Asn Ile Ser Ile Pro Ala Asn Asp Asp Thr
 145 150 155 160

Met Thr Ser Ile Arg Leu Ile Leu Asn Lys Leu Val Phe Ala Ile Ser
 165 170 175

<210> 1504

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1504

Asp Ile Asn Pro Asn Lys Thr Asn Asn Ile Lys Lys Phe Glu Ser Pro
 1 5 10 15

Lys Lys Ile Phe Gln Ile Leu Lys Ser Arg Asn Thr Arg Val Ile Trp
 20 25 30

Lys Phe His Tyr Phe Leu Lys Leu Phe Ile Gln Arg Leu Tyr Ile Asn
 35 40 45

Leu Phe Leu Ser Ile Ile Asn Ile Pro Arg Ile Thr Thr Gln Leu Phe
 50 55 60

Leu Lys Ser Thr Asn Lys Leu Ile Glu Lys Phe Ile Ser Asn Asn Glu
 65 70 75 80

Ile Asn Gln Glu Lys Ile Asn Asn Gln Lys Lys Ile His Phe Met Phe
 85 90 95

Ile Ser Thr Ile Lys
 100

<210> 1505

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1505

Ile Lys Arg Ala Val Phe Ala Arg Glu Leu Gly Val Pro Ile Val Met
 1 5 10 15

His Asp Tyr Leu Thr Gly Gly Phe Thr Ala Asn Thr Thr Leu Ala His
 20 25 30

Tyr Cys Arg Asp Asn Gly Leu Leu Leu His Ile His Arg Ala Met His
 35 40 45

Ala Val Ile Asp Arg Gln Lys Asn His Gly Ile His Phe Arg Val Leu
 50 55 60

Ala Lys Ala Leu Arg Met Ser Gly Gly Asp His Ile His Ser Gly Thr
 65 70 75 80

Val Val Gly Lys Leu Glu Gly Glu Arg Asp Ile Thr Leu Gly Phe Val
 85 90 95

Asp Leu Leu Arg Asp Asp Phe Val Glu Gln Asp Arg Ser Arg Gly Ile
 100 105 110

Tyr Phe Thr Gln Asp Trp Val Ser Leu Pro Gly Val Leu Pro
 115 120 125

<210> 1506

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1506

Leu Glu Leu Ser Ala Val Leu Arg Leu Asn Asn Ile Glu Val Asn Met
 1 5 10 15

Val Tyr Pro Glu Pro Trp Cys Met Pro Arg Leu Phe Thr Glu Gly Ile
 20 25 30

Ala Ala Phe Tyr Glu Gly Tyr Tyr Lys Asn Lys Gly Val Asn Ile Ile
 35 40 45

Lys Gly Thr Val Ala Val Gly Phe Asp Thr His Pro Asn Gly Glu Val
 50 55 60

Lys Glu Val Lys Leu Lys Asp Gly Arg Val Leu Glu Ala Asp Ile Val
 65 70 75 80

Val Val Gly Val Gly Ala Arg Pro Leu Thr Thr Leu Phe Lys Gly Gln
 85 90 95

Val Glu Glu Glu Lys Gly Gly Ile Lys Thr Asp Ala Phe Phe Lys Thr
 100 105 110

Ser Val Pro Asp Val Tyr Ala Val Gly Asp Val Ala Thr Phe

115

120

125

<210> 1507

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1507

Arg Ser Leu Asp Lys Ala Lys Val Arg Ser Thr Gln Glu Lys Ile Arg
1 5 10 15

Val Ala Leu Tyr Val Gln Gln Ala Ala Leu Ile Phe Ser Asp Gly Ala
20 25 30

Lys Lys Lys Glu Tyr Lys Leu Thr Gly Asp Ile Ile Lys Ala Gly Tyr
35 40 45

Ala Ile Asn Pro Asp Glu Leu Ala Leu Ile Thr Ser Lys His Asp Ser
50 55 60

Lys Ala Leu Lys Met His Gly Gly Val Asp Gly Ile Ser Ile Lys Val
65 70 75 80

Arg Ser Ser Phe Asp His Gly Ile Tyr Ala Ser Glu Leu Asp Thr Arg
85 90 95

Gln Asn Ile Tyr Gly Val Asn Arg Tyr Ala Glu Lys Pro Ser Arg Ser
100 105 110

Phe Trp Met Phe Val Trp Asp Ala Leu Gln Asp Met Thr Leu Ile Ile
115 120 125

Leu Met Val Cys Ala Leu Leu Ser Val Ala Val Gly Leu Ala Thr Glu
130 135 140

Gly Trp Pro Lys Gly Met Tyr Asp Gly Leu Gly Ile Ile Leu Ser Ile
145 150 155 160

Phe Leu Val Val Met Val Thr Ala Val Ser Asp Tyr Lys Gln Ser Leu
165 170 175

Gln Phe Lys Glu Leu Asp Asn Glu Lys Lys Lys Ile Phe Ile His Val
180 185 190

Thr Arg Asp Gly Arg Arg Gln Lys Ile Ser Ile Tyr Asp Leu Val Val
195 200 205

Gly Asp Ile Val His Leu Ser Ile Gly Asp Gln Val Pro Ala Asp Gly
210 215 220

Leu Tyr Ile His Gly Tyr Ser Leu Leu Ile Asp Glu Ser Ser Leu Ser
225 230 235 240

Gly Glu Ser Asp Pro Val Tyr Val Ser Gln Asp Lys Pro Phe Ile Leu
245 250 255

Ala Gly Thr Lys Val Gln Asp Gly Ser Ala Lys Met Ile Val Thr Ala
260 265 270

Val Gly Met Arg
275

<210> 1508

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 1508

Gly Asp Ile Leu Ser Ile Pro Leu Val Ile Tyr Gln Arg Ser Asn Lys
1 5 10 15

Asn Thr Cys Met His Gln Lys Phe Arg Val Pro Arg Gly Lys Cys Ile
20 25 30

Lys Lys Gly Gln Ile Leu Ala Asp Gly Ala Ala Thr Val Gly Gly Glu
35 40 45

Leu Ala Leu Gly Lys Asn Val Leu Val Ala Tyr Met Pro Trp Glu Gly
50 55 60

Tyr Asn Ser Glu Asp Ala Val Leu Ile Ser Glu Arg Leu Val Tyr Glu
65 70 75 80

Asp Ile Tyr Thr Ser Phe His Ile Arg Lys Tyr Glu Ile His Thr His
85 90 95

Val Thr Ser Gln Gly Pro Glu Lys Val Thr Asn Glu Ile Pro His Leu
100 105 110

Glu Ala His Leu Leu Arg Asn Leu Asp Lys Lys Gly Ile Val Met Leu
115 120 125

Gly Ser Trp Val Glu Thr Gly Asp Ile Leu Val Gly Lys Leu Thr Pro
130 135 140

Gln Val Val Lys Glu Ser Ser
145 150

<210> 1509

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1509

Met Arg Ile Phe Val Phe Leu Val Leu Thr Val Ala Ile Gly Thr
1 5 10 15

Glu Asn Leu Asn Ser His Val Phe Pro Arg Pro Leu Ile Ile Glu Tyr
20 25 30

Pro Glu Lys Gln Leu Arg Asp Glu Leu Lys Cys Thr Thr Trp Arg Phe
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Val Val Glu Thr Asn Asn Leu Ser Pro Trp Lys Thr Ile Pro Glu Glu
50 55 60

Cys Ala Asp Tyr Val Lys Glu Tyr Met Val Gly Pro
65 70 75

<210> 1510

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1510

Arg Gln Leu Pro Glu Trp Tyr Ala Glu Lys Gly Ile Ser Leu Ile Leu
1 5 10 15

Ser Thr Glu Ile Val Lys Ala Asp Leu Ala Ser Lys Thr Leu Val Ser
20 25 30

Ala Ala Gly Glu Ser Phe Lys Tyr Gln Thr Leu Val Ile Ala Thr Gly
35 40 45

Thr Thr Val Leu Lys Leu Ser Asp Phe Gly Val Gln Gly Ala Asp Ser
50 55 60

Lys Asn Ile Phe Tyr Leu Arg Glu Ile Asp Asp Ala Asp Gln Leu Val
65 70 75 80

Glu Ala Leu Lys Ala Lys Lys Asn Gly Lys Ala Val Val Val Gly Gly
85 90 95

Gly Tyr Ile Gly Leu Glu Leu Ser Ala Val Leu Arg Leu Asn Asn Ile
100 105 110

Glu Val Asn Met Val Tyr Pro Glu Pro Trp Cys Met Pro Arg Leu Phe
115 120 125

Thr Glu Gly Ile Ala Ala Phe Tyr Glu Gly Tyr Tyr Lys Asn Lys Gly
130 135 140

Val Asn Ile Ile Lys Gly Thr Val Ala Val Gly Phe Asp Thr His Pro
145 150 155 160

Asn Gly Glu Val Lys Glu Val Lys Leu Lys Asp Gly Arg Val Leu Glu
165 170 175

Ala Asp Ile Val Val Val Gly Val Gly Ala Arg Pro Leu Thr Thr Leu
180 185 190

Phe Lys Gly Gln Val Glu Glu Glu Lys Gly Gly Ile Lys Thr Asp Ala
195 200 205

Phe Phe Lys Thr Ser Val Pro Asp Val Tyr Ala Val Gly Asp Val Ala
210 215 220

Thr Phe
225

<210> 1511
<211> 176
<212> PRT
<213> Solanum lycopersicum

<400> 1511
Glu Val Glu Leu Lys Glu Val Lys Leu Lys Glu Gly Tyr Tyr Val Met
1 5 10 15

Asp Pro Ala Lys Ala Val Glu Ile Val Asp Glu Asn Thr Ile Cys Val
20 25 30

Ala Ala Ile Leu Gly Ser Thr Leu Thr Gly Glu Phe Glu Asp Val Lys
35 40 45

Leu Leu Asn Glu Leu Leu Thr Lys Lys Asn Lys Glu Thr Gly Trp Glu
50 55 60

Thr Pro Ile His Val Asp Ala Ala Ser Gly Gly Phe Ile Ala Pro Phe
65 70 75 80

Leu Trp Pro Asp Leu Glu Trp Asp Phe Arg Leu Pro Leu Val Lys Ser
85 90 95

Ile Asn Val Ser Gly His Lys Tyr Gly Leu Val Tyr Ala Gly Val Gly
100 105 110

Trp Val Ile Trp Arg Ser Lys Glu Asp Leu Pro Asp Glu Leu Val Phe
115 120 125

His Ile Asn Tyr Leu Gly Ser Asp Gln Pro Thr Phe Thr Leu Asn Phe
130 135 140

Ser Lys Gly Ser Tyr Gln Ile Ile Ala Gln Tyr Tyr Gln Leu Ile Arg
145 150 155 160

Leu Gly Phe Glu Gly Tyr Lys Asn Val Met Lys Asn Cys Leu Ser Asn
165 170 175

<210> 1512
<211> 101
<212> PRT
<213> Zea mays

<400> 1512
Gln Lys Arg Ile Val Gly Phe Phe His Val Glu Gly Arg His Thr Gly
1 5 10 15

Gln Arg Leu Ser Gln Thr Phe Thr Ala Ile Met Val Lys Trp Asn Ile
20 25 30

Glu Lys Lys Leu Phe Ala Leu Ser Leu Asp Asn Ala Ser Ala Asn Glu
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Val Ala Val His Asp Ile Ile Glu Asp Leu Gln Asp Thr Asp Ser Asn
50 55 60

Leu Val Cys Asp Gly Ala Phe Phe His Val Arg Cys Ala Cys His Ile
65 70 75 80

Leu Asn Leu Val Ala Lys Asp Gly Leu Ala Val Ile Ala Gly Thr Ile
85 90 95

Glu Lys Ile Lys Ala
100

<210> 1513

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1513

Met Ile Glu Arg Ser Thr Asn Leu Asp Trp Tyr Lys Gly Pro Thr Leu
1 5 10 15

Leu Glu Ala Leu Asp Gln Ile Asn Glu Pro Lys Arg Pro Ser Asp Lys
20 25 30

Pro Leu Arg Leu Pro Leu Gln Asp Val Tyr Lys Ile Gly Gly Ile Gly
35 40 45

Thr Val Pro Val Gly Arg Val Glu Thr Gly Val Ile Lys Pro Gly Met
50 55 60

Val Val Thr Phe Gly Pro Thr Gly Leu Thr Thr Glu Val Lys Ser Val
65 70 75 80

Glu Met His His Glu Ala Leu Gln Glu Ala Leu Pro Gly Asp Asn Val
85 90 95

Gly Phe Asn Val Lys
100

<210> 1514

<211> 251

<212> PRT

<213> Solanum lycopersicum

<400> 1514

Glu Leu Lys Glu Lys Phe Lys Arg Met Cys Asp Lys Ser Met Ile Lys
1 5 10 15

Lys Arg Tyr Met His Leu Thr Glu Glu Ile Leu Lys Glu Asn Pro Asn
20 25 30

Met Cys Ala Tyr Met Ala Pro Ser Leu Asp Ala Arg Gln Asp Ile Val
35 40 45

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Val Val Glu Val Pro Lys Leu Gly Lys Arg Gly Thr Gln Lys Ala Ile
50 55 60

Lys Glu Trp Gly Gln Pro Lys Ser Lys Ile Thr His Leu Val Phe Cys
65 70 75 80

Thr Thr Ser Gly Val Asp Met Pro Ala Cys Asp Tyr Gln Leu Ala Lys
85 90 95

Leu Leu Pro Val Arg Pro Ser Val Lys Arg Leu Met Met Tyr Gln Gln
100 105 110

Gly Cys Phe Ala Gly Gly Thr Val Leu Arg Leu Ala Lys Asp Leu Ala
115 120 125

Glu Asn Asn Lys Gly Ala Arg Val Leu Val Val Cys Ser Glu Ile Thr
130 135 140

Ala Val Thr Phe Arg Gly Pro Ser Glu Ser His Leu Asp Ser Leu Val
145 150 155 160

Gly Gln Ala Leu Phe Gly Asp Gly Ala Ala Ala Ile Ile Ile Gly Ser
165 170 175

Asp Pro Ile Ile Gly Val Glu Arg Pro Leu Phe Glu Leu Val Ser Ala
180 185 190

Ala Gln Thr Leu Val Pro Asp Ser Glu Gly Ala Ile Asp Gly His Leu
195 200 205

Arg Glu Val Gly Leu Thr Phe His Leu Leu Lys Asp Val Pro Gly Leu
210 215 220

Ile Ser Lys Asn Ile Glu Lys Ser Leu Leu Glu Ala Phe Gln Pro Leu
225 230 235 240

Gly Ile Ser Asp Trp Asn Ser Leu Phe Trp Ile
245 250

<210> 1515

<211> 76

<212> PRT

<213> Zea mays

<400> 1515

Asp Val Asp Ala Val Val Tyr Leu Met Leu Val Asn Asp Leu Ile His
1 5 10 15

Gly Leu Tyr Pro Glu Ala Val Thr Ile Gly Glu Asp Val Ser Gly Met
20 25 30

Pro Thr Phe Ala Leu Pro Val His Asp Gly Gly Val Gly Phe Asp Tyr
35 40 45

Arg Met His Met Ala Val Ala Asp Lys Trp Ile Asp Leu Leu Lys Gln

50

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Ser Asp Glu Thr Trp Lys Met Gly Asp Ile Val His
65 70 75

<210> 1516

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1516

Thr Lys Val Lys Val Glu Pro Phe Asn Ser Val Lys Lys Lys Met Ala
1 5 10 15

Val Leu Ile Ser Leu Pro Asn Gly Thr Ser Arg Trp Phe Cys Lys Gly
20 25 30

Ala Ser Glu Ile Ile Leu Gln Met Cys Asp Met Met Val Asp Gly Asp
35 40 45

Gly Asn Ala Ile Pro Leu Ser Glu Ala Gln Arg Lys Asn Ile Leu Asp
50 55 60

Thr Ile Asn Ser Phe Ala Ser Asp Ala Leu Arg Thr Leu Cys Leu Ala
65 70 75 80

Tyr Lys Glu Val Asp Asp Asp Ile Asp Asp Asn Ala Asp Ser Pro Thr
85 90 95

Ser Gly Phe Thr Leu Ile Ala Ile Phe Gly Ile Lys Asp Pro Val Arg
100 105 110

Pro Gly Val Lys Asp Ala Val Lys Thr Cys Met Ser Ala Gly Ile Thr
115 120 125

Val Arg Met Val Thr Gly Asp Asn Ile Asn Thr Ala Lys Ala Ile Ala
130 135 140

Lys Glu Cys Gly Ile Leu Thr Glu Asp Gly Val Ala Ile Glu Gly Pro
145 150 155 160

Glu Phe His Ser Lys Ser Thr Glu Glu Met Arg Asp Leu Ile Leu Asn
165 170 175

Ile Gln Val Met Ala Arg Ser Leu Pro Leu Asp Lys His Thr Leu Val
180 185 190

Thr Asn Leu Arg Gly Met Phe Asp Glu Val Val Ser Val Thr Gly Asp
195 200 205

Gly Thr Asn Asp Ala Pro Ala Leu His Glu Ala Asp Ile Gly Leu Ala
210 215 220

Met Gly Ile Ala Gly Thr Glu Val Ala Lys Glu Ser Ala Asp Val Ile
225 230 235 240

Val Leu Asp Asp Asn Phe Thr Thr Ile Ile Asn Val Ala Arg Trp Gly
245 250 255

Arg Ala Val Tyr Ile Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr
260 265 270

Val Asn Ile Val
275

<210> 1517
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1517
Phe Ile Met Ile Lys Pro Asp Gly Val Gln Arg Gly Leu Val Gly Glu
1 5 10 15

Ile Ile Ser Arg Phe Glu Lys Lys Gly Phe Ser Leu Lys Gly Leu Lys
20 25 30

Leu Ile Thr Val Asp Arg Ala Phe Ala Glu Lys His Tyr Ala Asp Leu
35 40 45

Ser Ala Lys Pro Phe Phe Asn Gly Leu Val Glu Tyr Ile Val Ser Gly
50 55 60

Pro Val Val Ala Met Val Trp Glu Gly Lys Gly Val
65 70 75

<210> 1518
<211> 176
<212> PRT
<213> Oryza sativa

<400> 1518
Phe Val Ala Asp Ser Gly Asn His Ala Asn Ala Glu Gly Phe Gly Pro
1 5 10 15

Lys Leu Val Ser Val Ser Ile Ser Ile Gly Gly Met Leu Val Phe Ala
20 25 30

Met Met Leu Gly Leu Val Thr Asp Ser Ile Ser Glu Lys Phe Asp Ser
35 40 45

Leu Arg Lys Gly Arg Ser Glu Val Ile Glu Gln Ser His Thr Leu Val
50 55 60

Leu Gly Trp Ser Asp Lys Leu Gly Ser Leu Leu Asn Gln Ile Ala Ile
65 70 75 80

Ala Asn Glu Ser Leu Gly Gly Gly Thr Ile Val Val Met Ala Glu Lys
85 90 95

Asp Lys Glu Glu Met Glu Ala Asp Ile Ala Lys Met Glu Phe Asp Leu
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Lys Gly Thr Ala Ile Ile Cys Arg Ser Gly Ser Pro Leu Ile Leu Ala
 115 120 125

Asp Leu Lys Lys Val Ser Val Ser Lys Ala Arg Ala Ile Val Val Leu
 130 135 140

Ala Glu Glu Gly Asn Ala Asp Gln Ser Asp Ala Arg Ala Leu Arg Thr
 145 150 155 160

Val Leu Ser Leu Thr Gly Val Lys Glu Gly Leu Arg Gly His Ile Val
 165 170 175

<210> 1519

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1519

Ile Ile Ala Gln Tyr Tyr Gln Leu Ile Arg Leu Gly Phe Glu Gly Tyr
 1 5 10 15

Lys Asn Val Met Lys Asn Cys Leu Ser Asn Ala Lys Val Leu Thr Glu
 20 25 30

Gly Ile Thr Lys Met Gly Arg Phe Asp Ile Val Ser Lys Asp Val Gly
 35 40 45

Val Pro Val Val Ala Phe Ser Leu Arg Asp Ser Ser Lys Tyr Thr Val
 50 55 60

Phe Glu Val Ser Glu His Leu Arg Arg Phe Gly Trp Ile Val Pro Ala
 65 70 75 80

Tyr Thr Met Pro Pro Asp Ala Glu His Ile Ala Val Leu Arg Val Val
 85 90 95

Ile Arg Glu Asp Phe
 100

<210> 1520

<211> 151

<212> PRT

<213> Zea mays

<400> 1520

Leu Ala Tyr Leu Lys Arg Lys Val Asp Ala Gly Ala Asp Leu Ile Val
 1 5 10 15

Thr Gln Leu Phe Tyr Asp Thr Asp Ile Phe Leu Lys Phe Val Asn Asp
 20 25 30

Cys Arg Gln Ile Gly Ile Thr Cys Pro Ile Val Pro Gly Ile Met Pro
 35 40 45

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Ile Asn Asn Tyr Lys Gly Phe Leu Arg Met Thr Gly Phe Cys Lys Thr
50 55 60

Lys Ile Pro Ser Glu Ile Thr Ala Ala Leu Asp Pro Ile Lys Asp Asn
65 70 75 80

Glu Glu Ala Val Arg Gln Tyr Gly Ile His Leu Gly Thr Glu Met Cys
85 90 95

Lys Lys Ile Leu Ala Thr Gly Ile Lys Thr Leu His Leu Tyr Thr Leu
100 105 110

Asn Met Asp Lys Ser Ala Ile Gly Ile Leu Met Asn Leu Gly Leu Ile
115 120 125

Glu Glu Ser Lys Val Ser Arg Pro Leu Pro Trp Arg Pro Ala Thr Asn
130 135 140

Val Phe Arg Val Lys Glu Asp
145 150

<210> 1521

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1521

Ser Arg Leu Glu Val Val Gly Glu Tyr His Leu Gly Glu Phe Val Asn
1 5 10 15

Arg Phe Arg His Gly Ser Leu Val Met Arg Leu Pro Asp Ser Asp Val
20 25 30

Gly Gln Ile Pro Thr Val Ile Phe Gly Thr Val Asn Gly Val Ile Gly
35 40 45

Val Ile Ala Ser Leu Pro His Asp Gln Tyr Leu Phe Leu Glu Lys Leu
50 55 60

Gln Thr Asn Leu Arg Lys Val Ile Lys Gly Val Gly Gly Leu Ser His
65 70 75 80

Glu Gln Trp Arg Ser Phe Tyr Asn Glu Lys Lys Thr Val Asp Ala Lys
85 90 95

Asn Phe Leu Asp Gly
100

<210> 1522

<211> 76

<212> PRT

<213> Zea mays

<400> 1522

Glu Ile Lys Ala Thr Asp Ile Arg Val Leu Cys Val Arg Arg Leu Val
1 5 10 15

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Tyr Trp Thr Arg Phe Phe Ile Ile Leu Thr Ala Phe Ser Asn Ala Gln
20 25 30

Ile Asp Ala Ile Ser Ser Lys Met Arg Asp Ile Gly Glu Lys Gln Phe
35 40 45

Ser Lys Val Ala Ser Gly Asp Thr Lys Pro Asn Ser Trp Thr Leu Leu
50 55 60

Asp Phe Gly Asp Val Val Val His Ile Phe Leu Pro
65 70 75

<210> 1523
<211> 101
<212> PRT
<213> Zea mays

<400> 1523
Met Gly Leu Thr Phe Thr Lys Leu Phe Ser Arg Leu Phe Ala Lys Lys
1 5 10 15

Glu Met Arg Ile Leu Met Val Gly Leu Asp Ala Ala Gly Lys Thr Thr
20 25 30

Ile Leu Tyr Lys Leu Lys Leu Gly Glu Ile Val Thr Thr Ile Pro Thr
35 40 45

Ile Gly Phe Asn Val Glu Thr Val Glu Tyr Lys Asn Ile Ser Phe Thr
50 55 60

Val Trp Asp Val Gly Gly Gln Asp Lys Ile Arg Pro Leu Trp Arg His
65 70 75 80

Tyr Phe Gln Asn Thr Gln Gly Leu Ile Phe Val Val Asp Ser Asn Asp
85 90 95

Arg Asp Arg Val Val
100

<210> 1524
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1524
Met Gly Leu Thr Phe Thr Lys Leu Phe Ser Arg Leu Phe Ala Lys Lys
1 5 10 15

Glu Met Arg Ile Leu Met Val Gly Leu Asp Ala Ala Gly Lys Thr Thr
20 25 30

Ile Leu Tyr Lys Leu Lys Leu Gly Glu Ile Val Thr Thr Ile Pro Thr
35 40 45

Ile Gly Phe Asn Val Glu Thr Val Glu Tyr Lys Asn Ile Ser Phe Thr
50 55 60

Val Trp Asp Val Gly Gly Gln Asp Lys Ile Arg Pro Leu Trp Arg His
65 70 75 80

Tyr Phe Gln Asn Thr Gln Gly Leu Ile Phe Val Val Asp Ser Asn Asp
85 90 95

Arg Glu Arg Val Val
100

<210> 1525
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1525
Met Gly Leu Thr Phe Thr Lys Leu Phe Ser Arg Leu Phe Ala Lys Lys
1 5 10 15

Glu Met Arg Ile Leu Met Val Gly Leu Asp Ala Ala Gly Lys Thr Thr
20 25 30

Ile Leu Tyr Lys Leu Lys Leu Gly Glu Ile Val Thr Thr Ile Pro Thr
35 40 45

Ile Gly Phe Asn Val Glu Thr Val Glu Tyr Lys Asn Ile Ser Phe Thr
50 55 60

Val Trp Asp Val Gly Gly Gln Asp Lys Ile Arg Pro Leu Trp Arg His
65 70 75 80

Tyr Phe Gln Asn Thr Gln Gly Leu Ile Phe Val Val Asp Ser Asn Asp
85 90 95

Arg Glu Arg Val Val
100

<210> 1526
<211> 201
<212> PRT
<213> Solanum lycopersicum

<400> 1526
Asp Trp Gly Pro Gly Gly Gly Pro Asp Leu Ile Val Asp Asp Gly Gly
1 5 10 15

Asp Ala Thr Leu Leu Ile His Glu Gly Val Lys Ala Glu Glu Glu Phe
20 25 30

Ala Lys Asn Gly Thr Val Pro Asp Pro Thr Ser Thr Asp Asn Val Glu
35 40 45

Phe Gln Leu Val Leu Thr Ile Ile Lys Glu Ser Leu Lys Thr Asp Pro
50 55 60

Leu Arg Tyr Thr Lys Met Lys Glu Arg Leu Val Gly Val Ser Glu Glu
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<212> PRT

<213> *Oryza sativa*

<400> 1528

Arg Lys Leu Cys Gly Val Val Lys Asn Pro Lys Arg Arg Phe Arg Phe
 1 5 10 15

Thr Ala Asn Leu Asp Lys Arg Gly Glu Ala Gln Ala Ile Lys His Ala
 20 25 30

Asn His Glu Lys Leu Arg Val Ala Val Leu Val Ser Lys Ala Ala Leu
 35 40 45

Gln Phe Ile Gln Gly Leu Ser Leu Arg Ser Glu Tyr Val Val Pro Glu
 50 55 60

Glu Val Lys Ala Ala Gly Phe Gln Ile Cys Ala Asp Glu Leu Gly Ser
 65 70 75 80

Ile Val Glu Gly His Asp Ser Lys Lys Leu Ile Thr His Gly Gly Val
 85 90 95

Thr Gly Ile Ala Asp Lys Leu Ala Thr Ser Pro Ala Asp Gly Leu Ser
 100 105 110

Thr Ala Glu Glu Ser Ile Lys Arg Arg Gln Asp Val Tyr Gly Leu Asn
 115 120 125

Lys Phe Thr Glu Ser Glu Val Arg Ser Phe Trp Val Phe Val Trp Glu
 130 135 140

Ala Leu Gln Asp Thr Thr Leu Ile Ile Leu Ala Val Cys Ala Phe Val
 145 150 155 160

Ser Leu Val Val Gly Ile Ala Met Glu Gly Trp Pro Lys Gly Ala His
 165 170 175

Asp Gly Leu Gly Ile Val Ala Ser Ile Leu Leu Val Val Phe Val Thr
 180 185 190

Ala Thr Ser Asp Tyr Arg Gln Ser Leu
 195 200

<210> 1529

<211> 101

<212> PRT

<213> *Solanum lycopersicum*

<400> 1529

Thr Arg Gln Leu Asp Gly Ala His Val Glu Phe Leu Arg Gly Val Ala
 1 5 10 15

Asn Pro Leu Gly Ile Lys Val Ser Gln Lys Met Asp Pro Lys Glu Leu
 20 25 30

Ile Lys Leu Ile Asp Ile Leu Asn Pro Ala Asn Lys Pro Gly Arg Ile

35

40

45

Thr Val Ile Val Arg Met Gly Ala Glu Asn Met Arg Val Lys Leu Ser
 50 55 60

His Leu Val Arg Ala Val Arg Gly Ala Gly Gln Ile Val Thr Trp Val
 65 70 75 80

Cys Asp Pro Met His Gly Asn Thr Ile Lys Ala Pro Cys Gly Leu Lys
 85 90 95

Thr Arg Ala Phe Asp
 100

<210> 1530

<211> 151

<212> PRT

<213> Zea mays

<400> 1530

Met Thr Lys Asp Glu Thr Leu Leu Val Phe Thr Leu Val Val Ser Ser
 1 5 10 15

Val Ser Ile Phe Leu Phe Gly Ile Leu Leu Phe Met Val Leu Ile Ser
 20 25 30

Ala Thr Arg Asp Phe Arg Glu Arg Thr Lys Ser Lys Leu Val Lys Ile
 35 40 45

Met Ile Trp Ala Gly Ile Val Val Ile Thr Phe Ala Ile Ala Val Arg
 50 55 60

Ile Tyr Pro Ile Phe Ile Phe Leu Leu Lys Glu Arg Ile Lys Pro Leu
 65 70 75 80

Val Glu Ala Leu Tyr Asp Lys Leu Pro Trp Ile Trp Glu Val Ser Leu
 85 90 95

Ser Arg Tyr Trp Asp Arg Leu Ile Asp Phe Leu Asp Arg Tyr Leu Trp
 100 105 110

Ala Cys Ala Gln Arg Ile Gln Thr Gly Ile Arg Lys Gln Lys Gly Glu
 115 120 125

Phe Val Val Thr Phe Ser Cys Arg Val Lys Lys Arg Leu Tyr Ala Arg
 130 135 140

Ala Ile Glu Val Gly Ile His
 145 150

<210> 1531

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1531

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Ile Val Asp Ile Ala Leu Ser Glu Asp Lys Asn Ile Asp Phe Lys Ile
1 5 10 15

Asn Met Phe Lys Ala His Ser Leu Phe Phe Lys Phe Leu Tyr Ala Glu
20 25 30

Thr Ser Glu Glu Cys Ile Val Ser Ile Val Glu Val Leu Pro Arg Ile
35 40 45

Leu Lys His Ser Ser Arg Asp Val Leu Leu Asp Met Lys Phe Gln Trp
50 55 60

Val Gln Cys Val Asp Phe Leu Leu Leu His Glu Met Lys Ala Val Arg
65 70 75 80

Asp Ala Phe Ser Ser Val Val Ser Cys Phe Leu Glu Thr Asn Ala Met
85 90 95

Asp Ile Leu Phe Ser Asp Gly Thr Gly Met Ser Gly Gly Thr Ser Arg
100 105 110

Val Lys Phe Met Asp Lys Ile Lys Ser Ala Phe Thr Glu Ala Glu Asp
115 120 125

Pro Gln Ile Leu Leu Thr Leu Leu Glu Ser Thr Ala Ala Ile Val Lys
130 135 140

Ala Ser Asp Ile His Gly Glu Val Phe Phe Cys Ser Phe Val Leu Leu
145 150 155 160

Ile Gly Gln Leu Gly Asn His Asp Tyr Ile Val Arg Val Thr Ala Leu
165 170 175

<210> 1532

<211> 76

<212> PRT

<213> Zea mays

<400> 1532

Asp Asp Ile Thr Arg Leu Arg Leu Ile Thr Ala Val Lys Thr Pro Tyr
1 5 10 15

Leu Pro Asp Gly Arg Phe Asp Leu Glu Ala Tyr Asp Ser Leu Ile Asn
20 25 30

Met Gln Ile Glu Gly Gly Ala Glu Gly Val Ile Val Gly Gly Thr Thr
35 40 45

Gly Glu Gly His Leu Met Ser Trp Asp Glu His Ile Met Leu Ile Gly
50 55 60

His Thr Val Asn Cys Phe Gly Ser Arg Ile Lys Val
65 70 75

<210> 1533

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1533

Cys Ile Gly Ile Val Gly Ile Lys Asp Pro Val Arg Pro Gly Val Arg
1 5 10 15

Glu Ser Val Ala Thr Cys Arg Ser Ala Gly Ile Met Val Arg Met Val
20 25 30

Thr Gly Asp Asn Ile Asn Thr Ala Lys Ala Ile Ala Arg Glu Cys Gly
35 40 45

Ile Leu Thr Glu Asp Gly Leu Ala Ile Glu Gly Pro Glu Phe Arg Glu
50 55 60

Lys Ser Leu Asp Glu Leu Leu Lys Leu Ile Pro Lys Ile Gln Val Met
65 70 75 80

Ala Arg Ser Ser Pro Leu Asp Lys His Thr Leu Val Lys His Leu Arg
85 90 95

Thr Thr Phe Asn Glu Val Val Ala Val Thr Gly Asp Gly Thr Asn Asp
100 105 110

Ala Pro Ala Leu His Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala
115 120 125

Gly Thr Glu Val Ala Lys Glu Ser Ala Asp Val Ile Ile Leu Asp Asp
130 135 140

Asn Phe Ser Thr Ile Val Thr Val Ala Lys Trp Gly Arg Ser Val Tyr
145 150 155 160

Val Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val Asn Val Val
165 170 175

<210> 1534

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1534

Phe Gly Ile His Glu Glu Met Leu Lys Asp Val Val Arg Thr Lys Ser
1 5 10 15

Tyr Gln Asn Val Ile Thr Gln Asn Ser Phe Leu Phe Lys Asp Lys Ile
20 25 30

Val Leu Asp Val Gly Ala Gly Thr Gly Ile Leu Ser Leu Phe Cys Ala
35 40 45

Lys Ala Gly Ala Lys His Val Tyr Ala Ile Glu Cys Ser Gln Met Ala
50 55 60

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Asp Met Ala Lys Glu Ile Val Lys Thr Asn Gly Tyr Ser Asn Val Ile
65 70 75 80

Thr Val Ile Lys Gly Lys Val Glu Glu Ile Glu Leu Pro Val Pro Lys
85 90 95

Val Asp Val Ile Ile Ser Glu Trp Met Gly Tyr Phe Leu Leu Phe Glu
100 105 110

Asn Met Leu Asn Thr Val Leu Tyr Ala Arg Asp Lys Trp Leu
115 120 125

<210> 1535

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1535

Met Glu Glu Phe Val Asp Val Ala Ile Glu Ala Ala Lys Lys Ala Gly
1 5 10 15

Glu Ile Ile Arg His Gly Phe Tyr Lys Ser Lys His Ile Glu His Lys
20 25 30

Gly Val Val Asp Leu Val Thr Glu Thr Asp Lys Ala Cys Glu Val Leu
35 40 45

Ile Phe Asn His Leu Lys Gln Cys Phe Pro Ser His Lys Phe Ile Gly
50 55 60

Glu Glu Thr Thr Ala Ala Ala Ser Gly Asn Phe Glu Leu Thr Asp Glu
65 70 75 80

Pro Thr Trp Ile Val Asp Pro Leu Asp Gly Thr Thr Asn Phe Val His
85 90 95

Gly Phe Pro Phe Val Cys Val Ser Ile Gly Leu Thr Ile Glu Lys Lys
100 105 110

Pro Val Val Gly Val Val Tyr Asn Pro Ile Ile Asp Glu Leu Phe Thr
115 120 125

Ala Ile Tyr Gly Arg Gly Ala Phe Leu Asn Gly Lys Ser Ile Arg Val
130 135 140

Ser Ser Glu Ser Gln Leu Val Lys Ala Leu Val Ala Thr Glu Val Gly
145 150 155 160

Thr Asn Arg Asp Lys Ala Ile Val Asp Ala Thr Thr Gly Arg Ile Asn
165 170 175

Arg Val Ile Phe Lys Val Arg Ser Leu Arg Met Ser Gly Ser Cys Ala
180 185 190

Leu Asn Leu Cys Gly Val Ala Cys Gly Arg Leu Asp Leu Phe Tyr Glu

195

200

205

Ile Glu Phe Gly Gly Pro Trp Asp Val Ala Ala Gly Ala Leu Ile Val
 210 215 220

Ile Glu
 225

<210> 1536
 <211> 151
 <212> PRT
 <213> Oryza sativa

<400> 1536
 Ser Asp Val Asp Ala Ile Asp Glu Ala Gln Arg Arg Lys Ile Leu Val
 1 5 10 15

Arg Val Lys Gln Tyr His Leu Pro Pro Glu Leu Ile Glu Glu Gly Phe
 20 25 30

Cys Ile Ser Pro Asp Glu Leu Ala Ala Ile Ala Asn Met Arg Glu Asp
 35 40 45

Tyr Thr Met Leu Arg Met His Gly Gly Ile Asn Gly Ile Ser Arg Lys
 50 55 60

Ile Lys Ala Ser Leu Glu Asp Gly Ala Lys Glu Thr Asp Ile Ala Thr
 65 70 75 80

Arg Gln Met Leu Tyr Gly Ala Asn Arg His Ala Glu Lys Pro Pro Arg
 85 90 95

Ser Phe Trp Met Phe Val Trp Asp Ala Leu His Asp Leu Thr Leu Ile
 100 105 110

Ile Leu Val Val Cys Ala Leu Val Ser Ile Val Val Gly Leu Ala Thr
 115 120 125

Lys Gly Trp Pro Met Gly Ile Tyr Asp Gly Phe Gly Ile Ile Leu Ser
 130 135 140

Ile Leu Leu Val Val Leu Val
 145 150

<210> 1537
 <211> 251
 <212> PRT
 <213> Zea mays

<400> 1537
 Val Arg Phe Arg Val Asp Asp Gly Cys Val Val Glu Gly Gly Thr Val
 1 5 10 15

Cys Ala Glu Ser Gly Ser Trp Thr Glu Ile Lys Gly Val Phe Arg Leu
 20 25 30

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Lys Arg Asn Ala Arg Val Met Glu Val Tyr Val Gln Gly Ala Val Ala
35 40 45

Gly Ile Asp Val Lys Val Thr Asp Pro Gln Val Phe Ala Thr Asn Val
50 55 60

Ile Gln Asn Leu Ala Tyr Val Asp Phe Phe Thr Lys His Phe Asp Trp
65 70 75 80

Ala Val Phe Glu Lys Glu Phe Arg Trp Tyr His Val Glu Asp Ala Ala
85 90 95

Lys Val Phe Asp Lys Met Leu Thr Lys Gly Glu Glu Ala Pro Ser Val
100 105 110

Gln Arg Gly Val Val Met Thr Ala Val Ala His Asn Leu Leu Val Gln
115 120 125

Ala Leu Phe Met Asp Gly Arg Ala Ser Asp Ala Tyr Val Val Leu Glu
130 135 140

Glu Met Gln Asn Asn Gly Pro Phe Pro Asp Val Phe Thr Tyr Thr Leu
145 150 155 160

Lys Val Leu Lys Asn Gly Gln Trp Ala Glu Glu Glu Ser Thr Ile Leu
165 170 175

Val Pro Gly Asp Ile Ile Gly Val Lys Leu Gly Asp Ile Ile Ser Ala
180 185 190

Asp Thr Arg Leu Leu Glu Gly Asp Pro Leu Lys Ile Asp Gln Ser Ala
195 200 205

Leu Thr Gly Asn Phe Cys Ile Cys Ser Ile Val Ala Gly Met Leu Val
210 215 220

Glu Phe Ile Val Met Tyr Pro Ile Gln Asp Met Val Tyr Arg Pro Arg
225 230 235 240

Ile Asp Lys Leu Leu Val Leu Leu Ile Gly Gly
245 250

<210> 1538
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1538
Thr Val Gly Glu Ala Cys Gln Lys Tyr Gly Trp Ile Phe Lys Arg Pro
1 5 10 15

Gln Gly Leu Phe Phe Ser Leu Lys Glu Lys Gly Lys Ile His Glu Val
20 25 30

Leu Lys Asn Trp Pro Glu Lys Lys Ile Gln Val Ile Val Val Thr Asp
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35

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45

Gly Glu Arg Ile Leu Gly Leu Gly Asp Leu Gly Cys Gln Gly Met Gly
 50 55 60

Ile Pro Val Gly Lys Leu Ser Leu Tyr Ser Ala Leu
 65 70 75

<210> 1539

<211> 101

<212> PRT

<213> *Oryza sativa*

<400> 1539

Thr Ser Gly Leu Phe Tyr Asp Cys Ser Ala His Met Leu Trp Val Gly
 1 5 10 15

Glu Arg Thr Arg Gln Leu Asp Gly Ala His Val Glu Phe Leu Arg Gly
 20 25 30

Val Ala Asn Pro Leu Gly Ile Lys Val Ser Asp Lys Met Asn Pro Arg
 35 40 45

Asp Leu Val Lys Leu Ile Glu Ile Leu Asn Pro Ser Asn Lys Pro Gly
 50 55 60

Arg Ile Thr Ile Ile Thr Arg Met Gly Ala Glu Asn Met Arg Val Lys
 65 70 75 80

Leu Pro His Leu Ile Arg Ala Val Arg Asn Ser Gly Gln Ile Val Thr
 85 90 95

Trp Ile Thr Asp Pro
 100

<210> 1540

<211> 151

<212> PRT

<213> *Solanum lycopersicum*

<400> 1540

Ile Val Ile Gly Ser Gly Ile Gly Gly Leu Val Ala Ala Thr Gln Leu
 1 5 10 15

Ala Val Lys Gly Ala Lys Val Leu Val Leu Glu Lys Tyr Val Ile Pro
 20 25 30

Gly Gly Ser Ser Gly Phe Tyr Glu Arg Asp Gly Tyr Lys Phe Asp Val
 35 40 45

Gly Ser Ser Val Met Phe Gly Phe Ser Asp Lys Gly Asn Leu Asn Leu
 50 55 60

Ile Thr Gln Ala Leu Ala Ala Val Gly Arg Lys Leu Glu Val Ile Pro
 65 70 75 80

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Asp Pro Thr Thr Val His Phe His Leu Pro Asn Asp Leu Ser Val Arg
85 90 95

Ile His Arg Glu Tyr Asp Asp Phe Ile Glu Glu Leu Val Ser Lys Phe
100 105 110

Pro His Glu Lys Glu Gly Ile Ile Lys Phe Tyr Ser Glu Cys Trp Lys
115 120 125

Ile Phe Asn Ser Leu Asn Ser Leu Glu Leu Lys Ser Leu Glu Glu Pro
130 135 140

Ile Tyr Leu Phe Gly Gln Phe
145 150

<210> 1541

<211> 126

<212> PRT

<213> Zea mays

<400> 1541

Cys Gln Asn Lys Ser Tyr Met Cys Val Thr Ile His Trp Ile Asp Asp
1 5 10 15

Asp Trp Cys Leu Gln Lys Arg Ile Val Gly Phe Phe His Val Glu Gly
20 25 30

Arg His Thr Gly Gln Arg Leu Ser Gln Thr Phe Thr Ala Ile Met Val
35 40 45

Lys Trp Asn Ile Glu Lys Lys Leu Phe Ala Leu Ser Leu Asp Asn Ala
50 55 60

Ser Ala Asn Glu Val Ala Val His Asp Ile Ile Glu Asp Leu Gln Asp
65 70 75 80

Thr Asp Ser Asn Leu Val Cys Asp Gly Ala Phe Phe His Val Arg Cys
85 90 95

Ala Cys His Ile Leu Asn Leu Val Ala Lys Asp Gly Leu Ala Val Ile
100 105 110

Ala Gly Thr Ile Glu Lys Ile Lys Ala Ile Val Leu Ala Val
115 120 125

<210> 1542

<211> 176

<212> PRT

<213> Zea mays

<400> 1542

Glu Lys Ile Glu Lys Met Phe Lys Gly Glu Lys Ile Asn Ser Thr Glu
1 5 10 15

Asn Arg Ser Val Leu His Val Ala Leu Arg Ala Pro Arg Asp Ala Val
20 25 30

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Ile Asn Ser Asp Gly Val Asn Val Val Pro Glu Val Trp Ser Val Lys
35 40 45

Asp Lys Ile Lys Gln Phe Ser Glu Thr Phe Arg Ser Gly Ser Trp Val
50 55 60

Gly Ala Thr Gly Lys Pro Leu Thr Asn Val Val Ser Val Gly Ile Gly
65 70 75 80

Gly Ser Phe Leu Gly Pro Leu Phe Val His Thr Ala Leu Gln Thr Asp
85 90 95

Pro Glu Ala Ala Glu Cys Ala Lys Gly Arg Gln Leu Arg Phe Leu Ala
100 105 110

Asn Val Asp Pro Val Asp Val Ala Arg Ser Ile Lys Asp Leu Asp Pro
115 120 125

Glu Thr Thr Leu Val Val Val Val Ser Lys Thr Phe Thr Thr Ala Glu
130 135 140

Thr Met Leu Asn Ala Arg Thr Leu Lys Glu Trp Ile Val Ser Ser Leu
145 150 155 160

Gly Pro Gln Ala Val Ala Lys His Met Ile Ala Val Ser Thr Asn Leu
165 170 175

<210> 1543
<211> 101
<212> PRT
<213> Zea mays

<400> 1543
Val Val Asn Ile Cys His Phe Met Gly Val Met His Arg Asp Leu Lys
1 5 10 15

Pro Glu Asn Phe Leu Leu Ala Thr Met Glu Glu Asn Ala Met Leu Lys
20 25 30

Ala Thr Asp Phe Gly Leu Ser Val Phe Ile Glu Glu Gly Lys Met Tyr
35 40 45

Arg Asp Ile Val Gly Ser Ala Tyr Tyr Val Ala Pro Glu Val Leu Arg
50 55 60

Arg Ser Tyr Gly Lys Glu Ile Asp Val Trp Ser Ala Gly Val Ile Leu
65 70 75 80

Tyr Ile Leu Leu Ser Gly Val Pro Pro Phe Trp Ala Glu Ile Glu Lys
85 90 95

Gly Ile Phe Asp Ala
100

<210> 1544

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1544

Arg Ser Leu Asp Lys Ala Lys Val Arg Ser Thr Gln Glu Lys Ile Arg
1 5 10 15

Val Ala Leu Tyr Val Gln Gln Ala Ala Leu Ile Phe Ser Asp Gly Ala
20 25 30

Lys Lys Lys Glu Tyr Lys Leu Thr Gly Asp Ile Ile Lys Ala Gly Tyr
35 40 45

Ala Ile Asn Pro Asp Glu Leu Ala Leu Ile Thr Ser Lys His Asp Ser
50 55 60

Lys Ala Leu Lys Met His Gly Gly Val Asp Gly Ile Ser Ile Lys Val
65 70 75 80

Arg Ser Ser Phe Asp His Gly Ile Tyr Ala Ser Glu Leu Asp Thr Arg
85 90 95

Gln Asn Ile Tyr Gly Val Asn Arg Tyr Ala Glu Lys Pro Ser Arg Ser
100 105 110

Phe Trp Met Phe Val Trp Asp Ala Leu Gln Asp Met Thr Leu Ile Ile
115 120 125

Leu Met Val Cys Ala Leu Leu Ser Val Ala Val Gly Leu Ala Thr Glu
130 135 140

Gly Trp Pro Lys Gly Met Tyr Asp Gly Leu Gly Ile Ile Leu Ser Ile
145 150 155 160

Phe Leu Val Val Met Val Thr Ala Val Ser Asp Tyr Lys Gln Ser Leu
165 170 175

<210> 1545

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1545

Lys Ile Val Val Gly Ile Ser Tyr Ala Ala Lys Ile Pro Leu Lys Ser
1 5 10 15

Val Ala Leu Ala Leu Gln Gly Ser Glu Ser Asp His Ala Gln Asp Ala
20 25 30

Leu Arg Val Leu Asp Ile Val Leu Arg Gln Gln Gln Ala Lys Arg Gly
35 40 45

Cys Leu Leu Val Arg Gln Ser Phe Phe Ser Asp Asp Phe Arg Asn Leu
50 55 60

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Val Asp Leu Thr Gly Gly Val Ser Gly Cys Arg Gly Leu His Ser Ser
65 70 75 80

Phe Arg Thr Thr Ile Gly Gly Leu Ser Leu Asn Met Asp Val Ser Thr
85 90 95

Thr Met Ile Val Thr Pro Gly Pro Val Phe Asp Phe Leu Leu Thr Asn
100 105 110

Gln Asn Val Arg Asp Ile Arg Asp Ile Asp Trp Pro Arg Ala Lys Lys
115 120 125

Met Leu Lys Asn Leu Arg Val Lys Ala Ile His Asn Asn Met Glu Phe
130 135 140

Lys Ile Ile Gly Leu Ser Asp
145 150

<210> 1546
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1546
Lys Gly Pro Asn Phe Gly Thr Lys Val Ser Asn Tyr Pro Pro Cys Pro
1 5 10 15

Lys Pro Asp Leu Ile Lys Gly Leu Arg Ala His Thr Asp Ala Gly Gly
20 25 30

Ile Ile Leu Leu Phe Gln Asp Asp Lys Val Ser Gly Leu Gln Leu Leu
35 40 45

Lys Asp Gly Arg Trp Ile Asp Val Pro Pro Met Arg His Ser Ile Val
50 55 60

Val Asn Leu Gly Asp Gln Leu Glu Val Ile Thr Asn
65 70 75

<210> 1547
<211> 76
<212> PRT
<213> Zea mays

<400> 1547
Glu Arg Leu Pro Leu Thr Gly Val Asp Val Val Ser Leu Asp Trp Thr
1 5 10 15

Val Asp Met Ala Glu Gly Arg Lys Arg Leu Gly Ser Asn Thr Ala Val
20 25 30

Gln Gly Asn Val Asp Pro Gly Val Leu Phe Gly Ser Lys Glu Phe Ile
35 40 45

Thr Arg Arg Ile Tyr Asp Thr Val Gln Lys Ala Gly Asn Val Gly His
50 55 60

Val Leu Asn Leu Gly His Gly Ile Lys Val Gly Thr
65 70 75

<210> 1548
<211> 201
<212> PRT
<213> Zea mays

<400> 1548
Pro Ala Pro Ile Asn Gly Ile Trp Ala Ile Leu Arg Asn Asn Glu Met
1 5 10 15

Leu Thr Trp Pro Glu Lys Val Lys Phe Ala Ile Gly Leu Leu Pro Ala
20 25 30

Met Val Gly Gly Gln Pro Tyr Val Glu Ala Gln Asp Gly Leu Thr Val
35 40 45

Ser Glu Trp Met Lys Lys Gln Gly Val Pro Asp Arg Val Asn Asp Glu
50 55 60

Val Phe Ile Ala Met Ser Lys Ala Leu Asn Phe Ile Asn Pro Asp Glu
65 70 75 80

Leu Ser Met Gln Cys Ile Leu Ile Ala Leu Asn Arg Phe Leu Gln Glu
85 90 95

Lys His Gly Ser Lys Met Ala Phe Leu Asp Gly Asn Pro Pro Glu Arg
100 105 110

Leu Cys Met Pro Ile Val Asp His Ile Arg Ser Arg Gly Gly Glu Val
115 120 125

Arg Leu Asn Ser Arg Ile Lys Lys Ile Glu Leu Asn Pro Asp Gly Thr
130 135 140

Val Lys His Phe Ala Leu Ser Asp Gly Thr Gln Ile Thr Gly Asp Ala
145 150 155 160

Tyr Val Cys Ala Thr Pro Val Asp Ile Phe Lys Leu Leu Val Pro Gln
165 170 175

Glu Trp Ser Glu Ile Thr Tyr Phe Lys Lys Leu Glu Lys Leu Val Gly
180 185 190

Val Pro Val Ile Asn Val His Ile Trp
195 200

<210> 1549
<211> 126
<212> PRT
<213> Zea mays

<400> 1549
Ile Lys Gln Cys Gly Leu Asp Ile Thr Pro Lys Ile Leu Ile Val Thr

<212> PRT

<213> Zea mays

<400> 1551

Thr Leu Ala Ile Ile His Leu Gly Gln Phe Ile Cys Glu Asn Leu Cys
 1 5 10 15

Leu Phe Lys Leu His Ile Lys Lys Ser Gly Gln Ile Phe Ile Val Asn
 20 25 30

Met Asp Ser Phe Val Leu Arg Ala Ala Lys Pro Tyr Leu Ala Thr Ile
 35 40 45

Gly Ala Thr Val His Gly His Tyr Gly Lys Ile Leu Tyr Lys Gly Asp
 50 55 60

Arg Leu Val Thr Phe Ile Tyr Glu Lys Ser Arg Ser Ser Asp Ile Thr
 65 70 75 80

Gln Gly Leu Pro Lys Val Glu Gln Ile Phe Glu Ala Arg Ser Ile Asp
 85 90 95

Ser Leu Ser Pro Asn Leu Glu Arg Arg Ile Glu Asp Trp Asn Glu Arg
 100 105 110

Ile Pro Arg Ile Leu Gly Val Pro Trp Gly Phe Leu Ile Gly
 115 120 125

<210> 1552

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1552

Asp Gly Ile Trp Thr Trp His Arg Met Asn Arg Leu Phe Asn Trp Leu
 1 5 10 15

Pro Leu Ala Ala Leu Ile Glu Lys Lys Ile Ile Cys Met His Gly Gly
 20 25 30

Ile Gly Arg Ser Ile Asn His Val Glu Gln Ile Glu Asn Leu Gln Arg
 35 40 45

Pro Ile Thr Met Glu Ala Gly Ser Val Val Leu Met Asp Leu Leu Trp
 50 55 60

Ser Asp Pro Thr Glu Asn Asp Ser Val Glu Gly Leu
 65 70 75

<210> 1553

<211> 101

<212> PRT

<213> Zea mays

<400> 1553

Val Pro Phe Gly Val Leu Leu Ser Gly Gly Leu Asp Ser Ser Leu Val
 1 5 10 15

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Ala Ser Val Ala Ser Arg His Leu Asn Glu Thr Lys Val Asp Arg Gln
 20 25 30
 Trp Gly Asn Lys Leu His Thr Phe Cys Ile Gly Leu Lys Gly Ser Pro
 35 40 45
 Asp Leu Lys Ala Ala Arg Glu Val Ala Asp Tyr Leu Ser Thr Val His
 50 55 60
 His Glu Phe His Phe Thr Val Gln Glu Gly Ile Asp Ala Leu Glu Glu
 65 70 75 80
 Val Ile Tyr His Ile Glu Thr Tyr Asp Val Thr Thr Ile Arg Ala Ser
 85 90 95
 Thr Pro Met Phe Leu
 100

<210> 1554
 <211> 101
 <212> PRT
 <213> Oryza sativa

<400> 1554
 Gly Val Asn Arg Tyr Ala Glu Lys Pro Ser Arg Ser Phe Trp Met Phe
 1 5 10 15

Val Trp Asp Ala Leu Gln Asp Met Thr Leu Ile Ile Leu Met Val Cys
 20 25 30

Ala Leu Leu Ser Val Ala Val Gly Leu Ala Thr Glu Gly Trp Pro Lys
 35 40 45

Gly Met Tyr Asp Gly Leu Gly Ile Ile Leu Ser Ile Phe Leu Val Val
 50 55 60

Met Val Thr Ala Val Ser Asp Tyr Lys Gln Ser Leu Gln Phe Lys Glu
 65 70 75 80

Leu Asp Asn Glu Lys Lys Lys Ile Phe Ile His Val Thr Arg Asp Gly
 85 90 95

Arg Arg Gln Lys Ile
 100

<210> 1555
 <211> 151
 <212> PRT
 <213> Oryza sativa

<400> 1555
 Ala Tyr Ser His Ile Gly Val His Glu Glu Met Leu Lys Asp His Val
 1 5 10 15

Arg Thr Asn Thr Tyr Arg Asn Ala Ile Met His His Gln Asp Leu Ile
 20 25 30

Ser Gly Lys Val Val Leu Asp Val Gly Cys Gly Thr Gly Val Leu Ser
35 40 45

Ile Phe Cys Ala Phe Ala Gly Ala Ala Arg Val Tyr Ala Val Asp Ala
50 55 60

Ser Asp Ile Ala Leu Gln Ala Met Glu Ile Val Arg Glu Asn Glu Leu
65 70 75 80

Ser Asp Lys Val Ile Val Leu His Gly Arg Ile Glu Asp Val Glu Ile
85 90 95

Glu Glu Lys Val Asp Val Ile Ile Ser Glu Trp Met Gly Tyr Met Leu
100 105 110

Leu Tyr Glu Ser Met Leu Gly Ser Val Ile Phe Ala Arg Asp Lys Trp
115 120 125

Leu Lys Pro Gly Gly Leu Ile Leu Pro Ser His Ala Ser Leu Tyr Leu
130 135 140

Ala Pro Ile Thr Asn Ser His
145 150

<210> 1556
<211> 76
<212> PRT
<213> Zea mays

<400> 1556
Glu Cys Ala Lys Gly Arg Gln Leu Arg Phe Leu Ala Asn Val Asp Pro
1 5 10 15

Val Asp Val Ala Arg Ser Ile Lys Asp Leu Asp Pro Glu Thr Thr Leu
20 25 30

Val Val Val Val Ser Lys Thr Phe Thr Thr Ala Glu Thr Met Leu Asn
35 40 45

Ala Arg Thr Leu Lys Glu Trp Ile Val Ser Ser Leu Gly Pro Gln Ala
50 55 60

Val Ala Lys His Met Ile Ala Val Ser Thr Asn Leu
65 70 75

<210> 1557
<211> 176
<212> PRT
<213> Oryza sativa

<400> 1557
Leu Ile Ala Ile Phe Gly Ile Lys Asp Pro Val Arg Pro Gly Val Lys
1 5 10 15

Asp Ala Val Lys Thr Cys Met Ser Ala Gly Ile Thr Val Arg Met Val
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Thr Gly Asp Asn Ile Asn Thr Ala Lys Ala Ile Ala Lys Glu Cys Gly
 35 40 45

Ile Leu Thr Glu Asp Gly Val Ala Ile Glu Gly Pro Glu Phe His Ser
 50 55 60

Lys Ser Thr Glu Glu Met Arg Asp Leu Ile Leu Asn Ile Gln Val Met
 65 70 75 80

Ala Arg Ser Leu Pro Leu Asp Lys His Thr Leu Val Thr Asn Leu Arg
 85 90 95

Gly Met Phe Asp Glu Val Val Ser Val Thr Gly Asp Gly Thr Asn Asp
 100 105 110

Ala Pro Ala Leu His Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala
 115 120 125

Gly Thr Glu Val Ala Lys Glu Ser Ala Asp Val Ile Val Leu Asp Asp
 130 135 140

Asn Phe Thr Thr Ile Ile Asn Val Ala Arg Trp Gly Arg Ala Val Tyr
 145 150 155 160

Ile Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val Asn Ile Val
 165 170 175

<210> 1558

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1558

Ala His Thr Asp Ala Gly Gly Ile Ile Leu Leu Phe Gln Asp Asp Lys
 1 5 10 15

Val Ser Gly Leu Gln Leu Leu Lys Asp Glu Gln Trp Ile Asp Val Pro
 20 25 30

Pro Met Arg His Ser Ile Val Val Asn Leu Gly Asp Gln Leu Glu Val
 35 40 45

Ile Thr Asn Gly Lys Tyr Lys Ser Val Met His Arg Val Ile Ala Gln
 50 55 60

Thr Asp Gly Thr Arg Met Ser Leu Ala Ser Phe Tyr
 65 70 75

<210> 1559

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1559

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Ala His Thr Asp Ala Gly Gly Ile Ile Leu Leu Phe Gln Asp Asp Lys
1 5 10 15

Val Ser Gly Leu Gln Leu Leu Lys Asp Glu Gln Trp Ile Asp Val Pro
20 25 30

Pro Met Arg His Ser Ile Val Val Asn Leu Gly Asp Gln Leu Glu Val
35 40 45

Ile Thr Asn Gly Lys Tyr Lys Ser Val Leu His Arg Val Ile Ala Gln
50 55 60

Thr Asp Gly Thr Arg Met Ser Leu Ala Ser Phe Tyr
65 70 75

<210> 1560
<211> 126
<212> PRT
<213> Zea mays

<400> 1560
Arg Asp Met Gly Ile Gly Lys Asp Gly Val Leu Pro Trp Lys Leu Pro
1 5 10 15

Gly Asp Leu Lys Phe Phe Lys Glu Leu Thr Leu Thr Thr Ser Asp Pro
20 25 30

Val Lys Lys Asn Ala Val Ile Met Gly Arg Lys Thr Trp Glu Ser Ile
35 40 45

Pro Val Lys Ser Arg Pro Leu Pro Gly Arg Leu Asn Val Ile Leu Thr
50 55 60

Arg Ser Gly Ser Phe Asp Phe Ala Thr Val Glu Asn Val Val Ile Cys
65 70 75 80

Gly Ser Met Glu Ser Ala Leu Glu Leu Leu Ala Ser Thr Pro Tyr Cys
85 90 95

Leu Ser Ile Glu Lys Val Phe Val Ile Gly Gly Gly Gln Val Leu Arg
100 105 110

Glu Tyr Leu Lys Gly Pro Ala Cys Glu Ala Ile His Leu Thr
115 120 125

<210> 1561
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1561
Lys Val Met Gln Gly Tyr Ala Tyr Ile Leu Thr His Pro Gly Ile Pro
1 5 10 15

Cys Ile Phe Tyr Asp His Val Phe Asp Trp Asn Leu Gln His Glu Ile
20 25 30

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Ala Thr Leu Ala Glu Ile Arg Ser Arg Asn Gly Ile His Ala Glu Ser
35 40 45

Thr Leu Asp Ile Leu Lys Ala Glu Gly Asp Ile Tyr Val Ala Met Ile
50 55 60

Asp Gly Lys Val Ile Thr Lys Leu Gly Pro Arg Tyr
65 70 75

<210> 1562

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1562

Met Ser Leu Gly Gly Ile Val Asp Ala Ile Leu Gly Lys Asp Asp Arg
1 5 10 15

Pro Lys Val Lys Gly Arg Val Ile Leu Met Lys Lys Asn Val Leu Asp
20 25 30

Phe Ile Asn Ile Gly Ala Ser Val Val Asp Gly Ile Ser Asp Leu Leu
35 40 45

Gly Gln Lys Val Ser Ile Gln Leu Ile Ser Gly Ser Val Asn Tyr Asp
50 55 60

Gly Leu Glu Gly Lys Leu Ser Asn Pro Ala Tyr Leu Glu Ser Trp Leu
65 70 75 80

Thr Asp Ile Thr Pro Ile Thr Ala Gly Glu Ser Thr Phe Ser Val Thr
85 90 95

Phe Asp Trp Asp Arg Asp Glu Phe Gly Val Pro Gly Ala Phe Ile Ile
100 105 110

Lys Asn Leu His Leu Asn Glu Phe Phe Leu Lys Ser Leu Thr
115 120 125

<210> 1563

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1563

Asp Glu Gln Val Ala Asp Asn Ile Ile Gly Val Leu Phe Ala Ala Gln
1 5 10 15

Asp Thr Thr Ala Ser Val Leu Thr Trp Ile Val Lys Tyr Leu His Asp
20 25 30

His Pro Lys Leu Leu Glu Ala Val Arg Ala Glu Gln Ala Ala Ile Arg
35 40 45

Ala Ala Asn Asp Gly Gly Arg Leu Pro Leu Thr Trp Ala Gln Thr Arg
50 55 60

Ser Met Ala Leu Thr His Lys Val Ile Leu Glu Ser Leu Arg Met Ala
65 70 75 80

Ser Ile Ile Ser Phe Thr Phe Arg Glu Ala Val Ala Asp Val Glu Tyr
85 90 95

Lys Gly Phe Leu Ile
100

<210> 1564

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1564

Phe Val Trp Asp Ala Leu His Asp Leu Thr Leu Ile Ile Leu Val Val
1 5 10 15

Cys Ala Leu Val Ser Ile Val Val Gly Leu Ala Thr Lys Gly Trp Pro
20 25 30

Met Gly Ile Tyr Asp Gly Phe Gly Ile Ile Leu Ser Ile Leu Leu Val
35 40 45

Val Leu Val Thr Ala Thr Ser Asp Tyr Gln Gln Ala Arg Lys Phe Met
50 55 60

Glu Leu Asp Arg Glu Lys Gln Lys Ile Tyr Ile Arg Val Thr Arg Asp
65 70 75 80

Lys Lys Thr Lys Glu Val Leu Val His Asp Leu Val Val Gly Asp Ile
85 90 95

Leu His Leu Ser Ile Gly Asp Val Val Pro Ala Asp Gly Leu Phe Ile
100 105 110

Ser Gly Asp Cys Leu Met Ile Asp Glu Ser Ser Leu Ser Gly Glu Ser
115 120 125

Glu Pro Val Asn Ile Ser Glu Glu Arg Pro Phe Leu His Ala Gly Asn
130 135 140

Lys Val Val Asp Gly Ala Ala Lys Met Leu Val Thr Ala Val Gly Thr
145 150 155 160

Arg Thr Glu Trp Gly Lys Ile Met Gly Thr Leu Asn Gly Asp Gly Val
165 170 175

<210> 1565

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1565

Tyr Glu Gly Val Phe Val Lys Val Cys Glu Ile Thr Leu Ser Val Leu
Page 882

1 5 10 15
 Arg Thr His Lys Glu Ala Leu Met Thr Val Leu Glu Thr Phe Ile His
 20 25 30
 Asp Pro Leu Val Glu Trp Thr Lys Ser His Lys Ser Ser Gly Val Glu
 35 40 45
 Val Arg Asn Pro His Ala Gln Arg Ala Ile Ser Asn Ile Thr Glu Arg
 50 55 60
 Leu Gln Gly Val Val Val Gly Val Asn Ala Ala Pro
 65 70 75

 <210> 1566
 <211> 201
 <212> PRT
 <213> Oryza sativa

 <400> 1566
 Gly Val Asn Arg Tyr Ala Glu Lys Pro Ser Arg Ser Phe Trp Met Phe
 1 5 10 15
 Val Trp Asp Ala Leu Gln Asp Met Thr Leu Ile Ile Leu Met Val Cys
 20 25 30
 Ala Leu Leu Ser Val Ala Val Gly Leu Ala Thr Glu Gly Trp Pro Lys
 35 40 45
 Gly Met Tyr Asp Gly Leu Gly Ile Ile Leu Ser Ile Phe Leu Val Val
 50 55 60
 Met Val Thr Ala Val Ser Asp Tyr Lys Gln Ser Leu Gln Phe Lys Glu
 65 70 75 80
 Leu Asp Asn Glu Lys Lys Lys Ile Phe Ile His Val Thr Arg Asp Gly
 85 90 95
 Arg Arg Gln Lys Ile Ser Ile Tyr Asp Leu Val Val Gly Asp Ile Val
 100 105 110
 His Leu Ser Ile Gly Asp Gln Val Pro Ala Asp Gly Leu Tyr Ile His
 115 120 125
 Gly Tyr Ser Leu Leu Ile Asp Glu Ser Ser Leu Ser Gly Glu Ser Asp
 130 135 140
 Pro Val Tyr Val Ser Gln Asp Lys Pro Phe Ile Leu Ala Gly Thr Lys
 145 150 155 160
 Val Gln Asp Gly Ser Ala Lys Met Ile Val Thr Ala Val Gly Met Arg
 165 170 175
 Thr Glu Trp Gly Lys Leu Met Ser Thr Leu Ser Glu Gly Gly Glu Asp
 180 185 190

Glu Thr Pro Leu Gln Val Lys Leu Asn
195 200

<210> 1567
<211> 126
<212> PRT
<213> Zea mays

<400> 1567
Val Asp Ile Asp Gly Asp Gly Ser Phe Leu Met Asn Ile Gln Glu Leu
1 5 10 15

Ala Met Ile Arg Ile Glu Asn Leu Pro Val Lys Val Phe Val Leu Asn
20 25 30

Asn Gln His Leu Gly Met Val Val Gln Trp Glu Asp Arg Phe Tyr Lys
35 40 45

Ala Asn Arg Ala His Thr Phe Leu Gly Asn Pro Glu Asn Glu Ser Glu
50 55 60

Ile Tyr Pro Asp Phe Val Ala Ile Ala Lys Gly Phe Asn Ile Pro Ala
65 70 75 80

Val Arg Val Thr Lys Lys Ser Glu Val His Ala Ala Ile Lys Lys Met
85 90 95

Leu Glu Ala Pro Gly Pro Tyr Leu Leu Asp Ile Ile Val Pro His Gln
100 105 110

Glu His Val Leu Pro Met Ile Pro Ser Gly Gly Ala Phe Lys
115 120 125

<210> 1568
<211> 201
<212> PRT
<213> Solanum lycopersicum

<400> 1568
Thr Ile Thr Gly Ile Gln Glu Ser Val His Glu Ile Leu Met Asn Leu
1 5 10 15

Lys Glu Ile Val Leu Arg Ser Asn Leu Tyr Gly Thr Ser Glu Ala Ser
20 25 30

Ile Cys Val Lys Gly Pro Gly Tyr Val Thr Ala Gln Asp Ile Ile Leu
35 40 45

Pro Pro Tyr Val Glu Ile Val Asp Asn Thr Gln His Ile Ala Ser Leu
50 55 60

Thr Glu Pro Ile Asp Phe Cys Ile Gly Leu Gln Ile Glu Arg Asn Arg
65 70 75 80

Gly Tyr Leu Ile Lys Thr Pro His Asn Phe Gln Asp Gly Ser Tyr Pro
Page 884

Ile Asp Ala Val Phe Met Pro Val Arg Asn Ala Asn His Ser Ile His
100 105 110

Ser Tyr Gly Asn Gly Asn Glu Lys Gln Glu Ile Leu Phe Ile Glu Ile
115 120 125

Trp Thr Asn Gly Ser Leu Thr Pro Lys Glu Ala Leu His Asp Ala Ser
130 135 140

Arg Asn Leu Ile Asp Leu Phe Ile Pro Phe Leu His Met Glu Glu Asp
145 150 155 160

Asn Leu Tyr Leu Gln Asp Asn Gln His Thr Val Pro Leu Ser Pro Phe
165 170 175

Thr Phe His Asp Lys Leu Ala Lys Leu Ile Lys Asn Lys Lys Lys Ile
180 185 190

Ala Leu Lys Ser Ile Phe Ile Asp Gln
195 200

<210> 1569

<211> 126

<212> PRT

<213> Zea mays

<400> 1569

Val Ile Val Pro Lys Asp Ser Pro Gln Pro Thr Met Leu Arg Ile Leu
1 5 10 15

Lys Gly Gln Ser Ser Val Ile His Val Arg Met Lys Arg His Ala Met
20 25 30

Ser Glu Met Pro Lys Ser Asp Glu Asp Val Ser Lys Trp Cys Lys Asp
35 40 45

Ile Phe Val Ala Lys Asp Ala Leu Leu Asp Lys His Leu Ala Thr Gly
50 55 60

Thr Phe Asp Glu Glu Ile Arg Pro Ile Gly Arg Pro Val Lys Ser Leu
65 70 75 80

Leu Val Thr Leu Phe Trp Ser Cys Leu Leu Leu Phe Gly Ala Ile Glu
85 90 95

Phe Phe Lys Trp Thr Gln Leu Leu Ser Thr Trp Arg Gly Val Ala Phe
100 105 110

Thr Ala Ala Gly Met Ala Leu Val Thr Gly Val Met His Val
115 120 125

<210> 1570

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 1570

Trp Asn Lys Cys Ile Pro Arg Ile Leu Gly Ile Pro Trp Gly Phe Leu
 1 5 10 15

Ile Gly Ala Glu Leu Thr Ile Ala Gln Ser Arg Ile Ser Leu Val Asn
 20 25 30

Lys Ile Gln Gln Val Tyr Arg Ser Gln Gly Val Gln Ile His Asn Arg
 35 40 45

His Ile Glu Ile Ile Val Arg Gln Ile Thr Ser Lys Val Leu Ile Ser
 50 55 60

Glu Asp Gly Met Ser Asn Val Phe Ser Pro Gly Glu Leu Ile Gly Leu
 65 70 75 80

Leu Arg Ala Glu Arg Met Gly Arg Ala Leu Glu Glu Ala Ile Cys Tyr
 85 90 95

Arg Val Val Leu Leu Gly Ile Thr Arg Ala Ser Leu Asn Thr Gln Ser
 100 105 110

Phe Ile Ser Glu Ala Ser Phe Gln Glu Thr Ala Arg Val Leu Ala Lys
 115 120 125

Ala Ala Leu Arg Gly Arg Ile Asp Trp Leu Lys Gly Leu Lys Glu Asn
 130 135 140

Val Val Leu Gly Gly Val Ile Pro Val Gly Thr Gly Phe Lys Gly Leu
 145 150 155 160

Val His Pro Ser Lys Gln His Asn Asn Ile Pro Leu Glu Thr Lys Lys
 165 170 175

Thr Asn Leu Phe Glu Gly Glu Met Arg Asp Ile Leu Phe His His Arg
 180 185 190

Lys Leu Phe Asp Ser Cys Leu Ser Lys
 195 200

<210> 1571

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1571

Asp Lys Leu Ala Thr Ser Pro Ala Asp Gly Leu Ser Thr Ala Glu Glu
 1 5 10 15

Ser Ile Lys Arg Arg Gln Asp Val Tyr Gly Leu Asn Lys Phe Thr Glu
 20 25 30

Ser Glu Val Arg Ser Phe Trp Val Phe Val Trp Glu Ala Leu Gln Asp
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35

40

45

Thr Thr Leu Ile Ile Leu Ala Val Cys Ala Phe Val Ser Leu Val Val
50 55 60

Gly Ile Ala Met Glu Gly Trp Pro Lys Gly Ala His Asp Gly Leu Gly
65 70 75 80

Ile Val Ala Ser Ile Leu Leu Val Val Phe Val Thr Ala Thr Ser Asp
85 90 95

Tyr Arg Gln Ser Leu Gln Phe Lys Asp Leu Asp Lys Glu Lys Lys Lys
100 105 110

Ile Gln Val Gln Val Thr Arg Asn Gly Phe Arg Gln Arg Leu Ser Ile
115 120 125

Tyr Asp Leu Leu Pro Gly Asp Val Val His Leu Ala Ile Gly Asp Gln
130 135 140

Val Pro Ala Asp Gly Leu Phe Ile Ser Gly Phe Ser Leu Leu Ile Asn
145 150 155 160

Glu Ser Ser Leu Thr Gly Glu Ser Glu Pro Val Val Val Asn Glu Asp
165 170 175

Asn Pro Phe Leu Leu Ser Gly Thr Lys Val Gln Asp Gly Ser Cys Lys
180 185 190

Met Leu Ile Thr Thr Val Gly Met Arg
195 200

<210> 1572

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1572

Ile Val Arg Arg Gly Val Ser Lys Ser Glu Glu Lys Thr Gln Val Ala
1 5 10 15

Ile Lys Thr Leu Arg Arg Leu Gly Pro Ala Met Ala Gly Met Lys Gln
20 25 30

Gly Thr Lys Pro Val Pro Gly Ser Gly Leu Pro Met Trp Lys Gln Val
35 40 45

Ser Ile Ser Asp Ala Leu Leu Thr Asn Glu Ile Leu Val Met Arg Arg
50 55 60

Ile Val Glu Ser Val Ala Pro His Pro Asn Val Ile Asn Leu His Asp
65 70 75 80

Val Tyr Glu Asp Val His Gly Val His Leu Val Leu Glu Leu Cys Ser
85 90 95

Gly Gly Glu Leu Phe
100

<210> 1573
<211> 201
<212> PRT
<213> Oryza sativa

<400> 1573
Leu Cys Val Leu Pro Met Phe His Val Tyr Ser Leu His Ser Ile Leu
1 5 10 15

Leu Cys Gly Met Arg Ala Gly Ala Ala Ile Val Val Met Lys Arg Phe
20 25 30

Asp Thr Val Lys Met Leu Gln Leu Val Glu Arg His Gly Val Thr Ile
35 40 45

Ala Pro Leu Val Pro Pro Ile Val Val Glu Met Ala Lys Ser Asp Ala
50 55 60

Leu Asp Arg His Asp Leu Ser Ser Ile Arg Met Val Ile Ser Gly Ala
65 70 75 80

Ala Pro Met Gly Lys Glu Leu Gln Asp Ile Val His Ala Lys Leu Pro
85 90 95

Asn Ala Val Leu Gly Gln Gly Tyr Gly Met Thr Glu Ala Gly Pro Val
100 105 110

Leu Ser Met Cys Met Ala Phe Ala Lys Glu Pro Thr Pro Val Lys Ser
115 120 125

Gly Ala Cys Gly Thr Val Val Arg Asn Ala Glu Leu Lys Ile Val Asp
130 135 140

Pro Asp Thr Gly Leu Ser Leu Pro Arg Asn Gln Pro Gly Glu Ile Cys
145 150 155 160

Ile Arg Gly Lys Gln Ile Met Lys Gly Tyr Leu Asn Asn Pro Glu Ala
165 170 175

Thr Glu Lys Thr Ile Asp Lys Asp Gly Trp Leu His Thr Gly Asp Ile
180 185 190

Gly Phe Val Asp Asp Asp Asp Glu Ile
195 200

<210> 1574
<211> 176
<212> PRT
<213> Solanum lycopersicum

<400> 1574
Pro Ile Asn Val Asn Asp Ser Val Thr Lys Ser Lys Phe Asp Asn Leu
Page 888

1 5 10 15
 Tyr Gly Cys Arg His Ser Leu Pro Asp Gly Leu Met Arg Ala Thr Asp
 20 25 30
 Val Met Ile Ala Gly Lys Val Ala Leu Val Ala Gly Tyr Gly Asp Val
 35 40 45
 Gly Lys Gly Cys Ala Ala Ala Met Lys Gln Ala Gly Ala Arg Val Ile
 50 55 60
 Val Thr Glu Ile Asp Pro Ile Cys Ala Leu Gln Ala Thr Met Glu Gly
 65 70 75 80
 Leu Gln Val Leu Phe Leu Glu Asp Val Val Ser Glu Val Asp Ile Phe
 85 90 95
 Val Thr Thr Thr Gly Asn Lys Asp Ile Ile Met Val Asp His Met Arg
 100 105 110
 Lys Met Lys Asn Asn Ala Ile Val Cys Asn Ile Gly His Phe Asp Asn
 115 120 125
 Glu Ile Asp Met His Gly Leu Glu Thr Phe Pro Gly Val Lys Arg Ile
 130 135 140
 Thr Ile Lys Pro Gln Thr Asp Arg Trp Val Phe Pro Asp Thr Asn Ser
 145 150 155 160
 Gly Ile Ile Val Leu Ala Glu Gly Arg Leu Met Asn Leu Gly Cys Ala
 165 170 175
 <210> 1575
 <211> 151
 <212> PRT
 <213> Oryza sativa
 <400> 1575
 Cys Lys Arg Leu Leu Pro Ala Ala Gly Asp Gly His Ile Leu Val Met
 1 5 10 15
 Asn Asp Lys Ser Leu Gln Phe Ala Cys Lys Leu Cys Asn Tyr Tyr Asp
 20 25 30
 Pro Thr Lys Ile Ile Ala Cys Thr Pro Gly Pro His Ser Phe Glu Ser
 35 40 45
 Asp Ser Val Thr Lys Gly Leu Lys Ile Leu Gln Asn Leu Ala Asp Pro
 50 55 60
 Ser Tyr Leu Phe Ile Gly Gly Glu His Lys Leu Ser Val Pro Trp Thr
 65 70 75 80
 Lys Leu Ser Arg Val Phe Trp Phe Ala Asp Ile Asp Ser Asn Glu Ser
 85 90 95

Ile Ser Glu Gln Val Val Leu Gln Lys Phe Phe Gln His Ile Ala Ile
 100 105 110

Lys Thr Leu Ser Glu Lys Met Ser Asp Leu Gln Val Ile Val Ile Met
 115 120 125

Asn Asn Ala Lys Phe Val Gln Leu Gln Val Glu Arg Leu Ala Arg Glu
 130 135 140

Cys Phe Leu Phe Leu Gly Glu
 145 150

<210> 1576

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 1576

Ala Ile Gly Asp Glu Lys Arg Leu Met Gln Ile Leu Leu Asn Val Val
 1 5 10 15

Gly Asn Ala Val Lys Phe Ser Lys Glu Gly Ser Val Ser Val Ser Ala
 20 25 30

Val Asn Ala Lys Ser Glu Ser Leu Ile Asp Pro Arg Ala Pro Glu Phe
 35 40 45

Phe Pro Val Gln Ser Glu Asn His Phe Tyr Leu Arg Val Gln Val Lys
 50 55 60

Asp Thr Gly Ser Gly Ile Asn Pro Gln Asp Phe Pro Lys Leu Phe Cys
 65 70 75 80

Lys Phe Ala Gln Asn Gln Glu Pro Ala Thr Lys Asn Ser Ala Gly Thr
 85 90 95

Gly Leu Gly Leu Ala Ile Cys Lys Arg Phe Val Asn Leu Met Glu Gly
 100 105 110

His Ile Trp Ile Glu Ser Glu Gly Val Gly Lys Gly Ser Thr Ala Ile
 115 120 125

Phe Ile Val Lys Leu Gly Ile Pro Gly Arg Leu Asn Glu Ser Lys Leu
 130 135 140

Pro Phe Thr Ala Gly Leu Pro Ala Asn His Met Gln Met Thr Phe Gln
 145 150 155 160

Gly Leu Lys Val Leu Val Met Asp Asp Asn Gly Phe Ser Arg Met Val
 165 170 175

Thr Lys Ser Leu Leu Val His Leu Gly Cys Asp Val Thr Thr Ile Gly
 180 185 190

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Ser Gly Asp Glu Cys Leu Arg Ile Leu Thr Arg Glu His Lys Val Leu
195 200 205

Ile Met Asp Ala Ser Ile Thr Gly Met Asn Cys Tyr Asp Val Ala Val
210 215 220

Ser Val His Glu Lys Phe Gly Lys Arg Leu Glu Arg Pro Leu Ile Val
225 230 235 240

Ala Leu Thr Gly Asn Thr Asp Gln Val Thr Lys Glu Asn Cys Leu Arg
245 250 255

Val Gly Met Asp Gly Val Ile Leu Lys Pro Val Ser Ile Asp Lys Met
260 265 270

Arg Ser Val Leu
275

<210> 1577
<211> 126
<212> PRT
<213> Solanum lycopersicum

<400> 1577
Ile Cys Ile Val Val Asn Thr Gly Met Cys Thr Glu Ile Gly Lys Ile
1 5 10 15

Gln Arg Gln Ile His Asp Ala Ser Met Glu Glu Ser Asp Thr Pro Leu
20 25 30

Lys Lys Lys Leu Asp Glu Phe Gly Asn Arg Leu Thr Phe Ala Ile Gly
35 40 45

Val Val Cys Leu Val Val Trp Ala Ile Asn Tyr Lys Tyr Phe Leu Ser
50 55 60

Trp Glu Val Val Asp Asp Trp Pro Ser Asp Phe Arg Phe Ser Phe Glu
65 70 75 80

Lys Cys Ala Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val Ala Ala
85 90 95

Ile Pro Glu Gly Leu Pro Ser Val Ile Thr Thr Cys Leu Ala Leu Gly
100 105 110

Thr Arg Lys Met Ala Gln Lys Asn Ala Ile Val Arg Lys Leu
115 120 125

<210> 1578
<211> 151
<212> PRT
<213> Zea mays

<400> 1578
Ile Gln Pro Ala Arg Arg His Thr Lys Asn Thr Asn Met Ala Lys His
1 5 10 15

Thr Thr Lys Gly Thr Gly His Ser Met Phe Ile Ser Pro Arg Lys Ile
20 25 30

Ala His Ile Pro Gln Ile Asn Cys Glu Lys Gln Lys Leu Val Leu Glu
35 40 45

Val Arg Ser Ile Tyr Asn Asp Ser Trp Arg Val Arg Gly Val Leu Pro
50 55 60

Phe Met Ile Asn Asp Phe Ile Asn Gln Leu Asn Leu Thr Gly Lys Tyr
65 70 75 80

Arg Phe Gly Pro Val Val Tyr Tyr Gln Ile Asn Ile Lys Glu Ile Pro
85 90 95

Pro Leu Ile Tyr Asp Val Ile Arg Met Glu Ala Ser Lys Gly Tyr Leu
100 105 110

Trp Leu Asp Glu Arg Asn Leu Asp Thr His Ser Leu Ile Gly Val Tyr
115 120 125

Lys Cys Arg Val Pro Met Asp Leu Leu Val Leu Lys Gly Leu Ser Asn
130 135 140

Val Ile Leu Thr Thr Val Asn
145 150

<210> 1579

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1579

Asp Lys Val Met Gln Gly Tyr Ala Tyr Ile Leu Thr His Pro Gly Val
1 5 10 15

Pro Cys Ile Phe Tyr Asp His Val Phe Asp Trp Asn Leu Lys Gln Glu
20 25 30

Ile Ser Thr Leu Ala Ala Val Arg Ser Arg Asn Gly Ile His Pro Gly
35 40 45

Ser Lys Leu Asn Ile Leu Ala Ala Asp Gly Asp Val Tyr Val Ala Met
50 55 60

Ile Asp Asp Lys Val Ile Thr Lys Ile Gly Thr Arg
65 70 75

<210> 1580

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 1580

Glu Val Pro Lys Leu Gly Lys Glu Ala Ala Gln Lys Ala Ile Lys Glu

1 5 10 15
 Trp Gly Gln Pro Lys Ser Lys Ile Thr His Val Val Phe Cys Thr Thr
 20 25 30
 Ser Gly Val Asp Met Pro Gly Ala Asp Tyr Gln Leu Thr Lys Leu Leu
 35 40 45
 Gly Leu Arg Pro Ser Val Lys Arg Leu Met Met Tyr Gln Gln Gly Cys
 50 55 60
 Phe Ala Gly Gly Thr Val Ile Arg Leu Ala Lys Asp Leu Ala Glu Asn
 65 70 75 80
 Asn Lys Gly Ala Arg Val Leu Val Val Cys Ser Glu Ile Thr Ala Val
 85 90 95
 Thr Phe Arg Gly Pro Ser Asp Thr His Leu Asp Ser Met Val Gly Gln
 100 105 110
 Ala Leu Phe Gly Asp Arg Ala Ala Ala Met Ile Ile Gly Ser Asp Pro
 115 120 125
 Leu Pro Glu Val Glu Arg Pro Leu Phe Glu Leu Val Ser Ala Ala Gln
 130 135 140
 Thr Leu Leu Pro Asp Ser Glu Gly Ala Ile Asp Gly His Leu Arg Glu
 145 150 155 160
 Val Gly Leu Thr Phe His Leu Leu Lys Asp Val Pro Gly Leu Ile Ser
 165 170 175
 Lys Asn Ile Glu Lys Ser Leu Ile Glu Ala Phe Gln Pro Leu Gly Ile
 180 185 190
 Ser Asp Trp Asn Ser Ile Phe Trp Ile
 195 200

 <210> 1581
 <211> 126
 <212> PRT
 <213> Zea mays

 <400> 1581
 Gln Lys Phe Thr Lys Gln Tyr Gly Leu Tyr Tyr Asn Leu Val Glu Trp
 1 5 10 15
 Ile Ile Asp Leu Pro Ile Tyr Asp Phe His Asn His Ser Phe Phe Pro
 20 25 30
 Ser Thr Gly Ile Thr Pro Ile Gly Glu Ile Thr His Val Ile Leu His
 35 40 45
 Asn Phe Tyr Gln Asn Thr Val Asp Ser Leu Leu Glu Ser Trp Tyr Pro
 50 55 60

Gly Ile Thr Tyr Ser Arg Tyr Gly His Glu Leu Phe Ile Leu Cys Lys
65 70 75 80

Gln Thr Asp Glu Phe Thr Ile Asp Asp Cys Asp Ile Asp Asn Ile Leu
85 90 95

Glu Val Leu Asp Leu Tyr Ser Val Asp Ile Asn Trp Ser Ser Asp Gly
100 105 110

Leu Leu Met Ala Asp Asn Asn Asp Lys Ala Leu Ile Leu His
115 120 125

<210> 1582

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1582

Ile Leu Ala Asp Trp Ile Ile Glu Val His His Lys Phe Glu Leu Met
1 5 10 15

Pro Glu Thr Leu Tyr Leu Ser Met Tyr Val Ile Asp Arg Tyr Leu Ser
20 25 30

Met Gln Gln Val Gln Arg Arg Glu Leu Gln Leu Val Gly Val Ser Ala
35 40 45

Met Leu Ile Ala Cys Lys Tyr Glu Glu Ile Trp Ala Pro Glu Val Asn
50 55 60

Asp Phe Ile Leu Ile Ser Asp Ser Ala Tyr Thr Arg Glu Gln Ile Leu
65 70 75 80

Ala Met Glu Lys Gly Ile Leu Asn Lys Leu Gln Trp Asn Leu Thr Val
85 90 95

Pro Thr Ala Tyr Val
100

<210> 1583

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1583

Asn Ile Tyr Gly Val Asn Arg Tyr Ala Glu Lys Pro Ser Arg Ser Phe
1 5 10 15

Trp Met Phe Val Trp Asp Ala Phe Gln Asp Met Thr Leu Ile Ile Leu
20 25 30

Met Val Cys Ala Leu Leu Ser Val Ala Val Gly Leu Ala Thr Glu Gly
35 40 45

Trp Pro Lys Gly Met Tyr Asp Gly Leu Gly Ile Ile Leu Ser Ile Phe
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50

55

60

Leu Val Val Met Val Thr Ala Val Ser Asp Tyr Lys Gln Ser Leu Gln
65 70 75 80

Phe Lys Glu Leu Asp Asn Glu Lys Lys Lys Ile Phe Ile His Val Thr
85 90 95

Arg Asp Gly Arg Arg Gln Lys Ile Ser Ile Tyr Asp Leu Val Val Gly
100 105 110

Asp Ile Val His Leu Ser Ile Gly Asp Gln Val Pro Ala Asp Gly Leu
115 120 125

Tyr Ile His Gly Tyr Ser Leu Leu Ile Asp Glu Ser Ser Leu Ser Gly
130 135 140

Glu Ser Asp Pro Val Tyr Val Ser Gln Asp Lys Pro Phe Ile Leu Ala
145 150 155 160

Gly Thr Lys Val Gln Asp Gly Ser Ala Lys Met Ile Val Thr Ala Val
165 170 175

Gly Met Arg Thr Glu Trp Gly Lys Leu Met Ser Thr Leu Ser Glu Gly
180 185 190

Gly Glu Asp Glu Thr Pro Leu Gln Val
195 200

<210> 1584

<211> 76

<212> PRT

<213> *Oryza sativa*

<400> 1584

Pro Val Ser Gly Val Arg Ile Pro Tyr Gln Glu Lys Arg Met Phe Gly
1 5 10 15

Phe Val Ser Phe Leu Tyr Thr Glu Thr Val Arg Leu Ile Leu Ser Lys
20 25 30

Gly Thr Ala His Phe Ile Cys Gly Leu Arg Val Leu Val Lys Arg Tyr
35 40 45

Met Glu Lys Ser Glu Leu Arg Met Thr Trp Leu Lys Ser Val Ser Gly
50 55 60

Ser Gln Val Asp Ser Cys Leu Lys Val Thr Ile Gly
65 70 75

<210> 1585

<211> 126

<212> PRT

<213> *Solanum lycopersicum*

<400> 1585

Met Arg Gly His Gln Phe Lys Ser Trp Ile Phe Glu Leu Arg Glu Ile
1 5 10 15

Leu Arg Glu Ile Lys Asn Ser His His Phe Leu Asp Ser Trp Thr Gln
20 25 30

Phe Asn Ser Val Gly Ser Phe Ile His Ile Phe Phe His Gln Glu Arg
35 40 45

Phe Leu Lys Leu Phe Asp Pro Arg Ile Trp Ser Ile Leu Leu Ser Arg
50 55 60

Asn Ser Gln Gly Ser Pro Ser Asn Arg Tyr Phe Thr Ile Lys Gly Val
65 70 75 80

Ile Leu Phe Val Val Ala Val Leu Ile Tyr Arg Ile Asn Asn Arg Asn
85 90 95

Met Val Glu Arg Lys Asn Leu Tyr Leu Ile Gly Leu Leu Pro Ile Pro
100 105 110

Met Asn Ser Ile Gly Pro Arg Asn Asp Thr Leu Glu Glu Ser
115 120 125

<210> 1586

<211> 201

<212> PRT

<213> Zea mays

<400> 1586

Gln Leu Ser Val Ser Gly Gln Asn Trp Gly Gly Ile Asp Ile Asp Gly
1 5 10 15

Asn Met Leu Thr Phe Met Val Gly Ser Lys Gln Ala Phe Glu Val Ser
20 25 30

Leu Pro Asp Val Ala Gln Thr Gln Met Gln Gly Lys Thr Asp Val Leu
35 40 45

Leu Glu Leu His Val Asp Asp Thr Thr Gly Ala Asn Glu Lys Asp Ser
50 55 60

Leu Met Asp Leu Ser Phe His Val Pro Thr Ser Asn Thr Gln Phe Val
65 70 75 80

Gly Asp Glu Ser Arg Pro Pro Ala His Ile Leu Trp Glu Thr Ile Leu
85 90 95

Lys Phe Ala Asp Val Gly Ser Ser Glu Glu Pro Val Val Thr Phe Glu
100 105 110

Gly Ile Ala Ile Leu Thr Pro Arg Gly Arg Tyr Ser Val Glu Leu His
115 120 125

Leu Ser Phe Leu Arg Leu Gln Gly Gln Ala Asn Asp Phe Lys Ile Gln

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130 135 140

Tyr Ser Ser Ile Val Arg Leu Phe Leu Leu Pro Lys Ser Asn Asn Pro
145 150 155 160

His Thr Phe Val Val Ile Thr Leu Asp Pro Pro Ile Arg Lys Gly Gln
165 170 175

Thr Leu Tyr Pro His Ile Val Ile Gln Phe Glu Thr Glu Ala Val Val
180 185 190

Glu Arg Asp Leu Ala Leu Ser Lys Glu
195 200

<210> 1587
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1587
Gly Ser Ala Gly Thr Ile Cys Thr Asp Lys Thr Gly Thr Leu Thr Thr
1 5 10 15

Asn Tyr Met Val Val Asp Lys Ile Trp Ile Ser Glu Val Ser Lys Ser
20 25 30

Val Thr Ser Asn Thr Ile Ser Gly Glu Leu Asn Ser Val Val Ser Ser
35 40 45

Arg Thr Leu Ser Leu Leu Leu Gln Gly Ile Phe Glu Asn Thr Ser Ala
50 55 60

Glu Val Val Lys Glu Lys Asp Gly Lys Gln Thr Val Leu Gly Thr Pro
65 70 75 80

Thr Glu Arg Ala Ile Leu Glu Phe Gly Leu Gly Leu Glu Gly Val His
85 90 95

Asp Ala Glu Tyr Ser
100

<210> 1588
<211> 276
<212> PRT
<213> Solanum lycopersicum

<400> 1588
Lys Phe Ala Glu Arg Gly Leu Arg Ser Leu Gly Val Ala Tyr Gln Glu
1 5 10 15

Val Pro Glu Gly Arg Lys Glu Ser Ser Gly Gly Pro Trp Gln Phe Ile
20 25 30

Gly Leu Leu Pro Leu Phe Asp Pro Pro Arg His Asp Ser Ala Glu Thr
35 40 45

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Ile Arg Arg Ala Leu Asn Leu Gly Val Asn Val Lys Met Ile Thr Gly
50 55 60

Asp Gln Leu Ala Ile Gly Lys Glu Thr Gly Arg Arg Leu Gly Met Gly
65 70 75 80

Thr Asn Met Tyr Pro Ser Ser Ala Leu Leu Gly Gln Thr Lys Asp Glu
85 90 95

Ser Ile Ala Ser Leu Pro Ile Asp Glu Leu Ile Glu Lys Ala Asp Gly
100 105 110

Phe Ala Gly Val Phe Pro Glu His Lys Tyr Glu Ile Val Lys Arg Leu
115 120 125

Gln Ala Arg Lys His Ile Cys Gly Met Thr Gly Asp Gly Val Asn Asp
130 135 140

Ala Pro Ala Leu Lys Lys Ala Asp Ile Gly Ile Ala Val Asp Asp Ala
145 150 155 160

Thr Asp Ala Ala Arg Ser Ala Ser Asp Ile Val Leu Thr Glu Pro Gly
165 170 175

Leu Ser Val Ile Ile Ser Ala Val Leu Thr Ser Arg Ala Ile Phe Gln
180 185 190

Arg Met Lys Asn Tyr Thr Ile Tyr Ala Val Ser Ile Thr Ile Arg Ile
195 200 205

Val Leu Gly Phe Met Leu Leu Ala Leu Ile Trp Lys Phe Asp Phe Pro
210 215 220

Pro Phe Met Val Leu Ile Ile Ala Ile Leu Asn Asp Gly Thr Ile Met
225 230 235 240

Thr Ile Ser Lys Asp Arg Val Lys Pro Ser Pro Leu Pro Asp Ser Trp
245 250 255

Lys Leu Ala Glu Ile Phe Thr Thr Gly Val Val Leu Gly Gly Tyr Leu
260 265 270

Ala Met Met Thr
275

<210> 1589

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1589

Glu Ser Phe Phe Thr Gln Leu Tyr Ser Val Thr Leu Ala Ser Ser Gly
1 5 10 15

Glu Leu Ile Cys Lys Asp Phe Phe Leu Tyr Met Glu Ser Asn Gln Phe
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20

25

30

Gly Leu Phe Ala Thr Ser Thr Ala Gln Ile His Asp Ala Pro Pro Thr
 35 40 45

Gly Gly Ala Ile Gln Gly Val Pro Ser Val Glu Lys Ile Thr Phe His
 50 55 60

Leu Leu Arg Leu Val Asp Gly Ala Ile Leu Asp Glu Arg Val Phe His
 65 70 75 80

Asn Asp Tyr Val Asn Leu Ala His Ser Ile Gly Ala Phe Leu Tyr Asp
 85 90 95

Asp Leu Leu Ala Ile Val Ser Leu Arg Tyr Gln Arg Ile His Ile Leu
 100 105 110

Gln Ile Arg Asp Ser Gly Asp Leu Val Asp Val Arg Ala Ile Gly Glu
 115 120 125

Phe Cys Arg Glu Asp Asp Glu Leu Phe Leu Asn Ser Asn Ser Gln Val
 130 135 140

Leu Val Asn His Val Gly Asn Gly Phe His His Ser Leu Pro Gln Ser
 145 150 155 160

Glu Thr Ser Phe Leu Ser Gly Ile Lys Gln Arg Leu Leu Ser Tyr Ile
 165 170 175

Phe Arg Gly Ile Trp Asn Glu Ala Asp Gln Thr Met Arg Val Gln Cys
 180 185 190

Leu Lys Lys Lys Phe Tyr Phe His Phe Gln Asp Tyr Ile Asp Leu Ile
 195 200 205

Ile Trp Lys Val Gln Phe Leu Asp Arg His His Leu Leu Ile Lys Phe
 210 215 220

Gly Ser
 225

<210> 1590

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1590

Asn Ile Tyr Gly Val Asn Arg Tyr Ala Glu Lys Pro Ser Arg Ser Phe
 1 5 10 15

Trp Met Phe Val Trp Asp Ala Phe Gln Asp Met Thr Leu Ile Ile Leu
 20 25 30

Met Val Cys Ala Leu Leu Ser Val Ala Val Gly Leu Ala Thr Glu Gly
 35 40 45

Trp Pro Lys Gly Met Tyr Asp Gly Leu Gly Ile Ile Leu Ser Ile Phe
50 55 60

Leu Val Val Met Val Thr Ala Val Ser Asp Tyr Lys Gln Ser Leu Gln
65 70 75 80

Phe Lys Glu Leu Asp Asn Glu Lys Lys Lys Ile Phe Ile His Val Thr
85 90 95

Arg Asp Gly Arg Arg
100

<210> 1591
<211> 151
<212> PRT
<213> Zea mays

<400> 1591
Ser Thr Ser Thr Phe Ala Asn Phe Ile His Gln Lys Asp Ala Phe Thr
1 5 10 15

Ala Ile Gln Leu Val Asp Phe Ile Asn Lys Leu Glu Asn Ala Ser Ser
20 25 30

Ile Pro Ile Tyr Ala Val His Asp Asn Phe Ile Thr Met Pro Glu Tyr
35 40 45

Ala Ser Ile Leu Pro Thr Leu Tyr Arg Asp Ser Ile Phe Arg Met Gly
50 55 60

His Pro Leu Ile Ile Ile Asn Lys Phe Leu Phe Asp His Ile Leu Ile
65 70 75 80

Pro Ala Ile Gln Asn Glu His Pro Gln Asn Lys His Leu Phe Ser Val
85 90 95

Glu Glu Arg Ser Met Leu Asp Arg Met Met Ile Asp Leu Gln Asn Pro
100 105 110

Leu Ile Pro Asp Phe Gly Ser Val Asp Ile Thr Lys Ala Arg Ile Lys
115 120 125

Ser Ile Val Ile Pro Lys Asp Leu Leu Leu Lys Cys Phe Ser Cys Leu
130 135 140

Trp Met Ser Lys Thr Lys Lys
145 150

<210> 1592
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1592
Val Ile Lys Ser Ile Glu Lys Ile Leu Val His Gly Glu Tyr Val Asp
Page 900

1 5 10 15

Thr Asn Tyr Ser Asp Lys Val Thr Val Thr Lys Tyr Thr Leu Asp Ser
20 25 30

Thr Ser Ala Cys Phe Ile Asn Asn Arg Asn Asp Asn Met Asp Val Asn
35 40 45

Val Thr Leu Asp Gly Thr Thr His Leu Leu Pro Ala Trp Ser Val Ser
50 55 60

Ile Leu Pro Asp Cys Lys Thr Val Ala Phe Asn Ser
65 70 75

<210> 1593

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1593

Phe Val Ser Lys Ile Leu Ala Glu Lys Ala Ala Met Glu Glu Ala Arg
1 5 10 15

Lys Asn Asn Ile Asp Phe Ile Ser Ile Ile Pro Pro Leu Val Val Gly
20 25 30

Pro Phe Ile Thr Ser Thr Phe Pro Pro Ser Leu Ile Thr Ala Leu Ser
35 40 45

Leu Ile Thr Ala His Tyr Gly Ile Ile Lys Gln Gly Gln Tyr Val His
50 55 60

Leu Asp Asp Leu Cys Glu Ala His Ile Phe Leu Tyr Glu His Pro Lys
65 70 75 80

Ala Glu Gly Arg Phe Ile Cys Ser Ser His His Ala Ile Ile Tyr Asp
85 90 95

Val Ala Lys Met Val Arg Gln Lys Trp Pro Glu Tyr Tyr Val Pro Thr
100 105 110

Glu Phe Lys Gly Ile Asp Lys Asp Leu Ala Leu Val Ser Phe
115 120 125

<210> 1594

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1594

Asp Phe Phe Ala Leu Pro Leu Phe Ala Val Phe Phe Leu Val Val Arg
1 5 10 15

Tyr Leu Leu Asp Cys Phe Val Phe Glu Trp Ile Gly Arg Lys Leu Ile
20 25 30

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Phe Gly Lys Glu Lys Val Asp Tyr Glu Lys Glu Glu Thr Arg Lys Lys
35 40 45

Ile Arg Lys Phe Lys Glu Ser Ala Trp Lys Cys Val Tyr Phe Leu Ser
50 55 60

Gly Glu Ile Leu Ser Leu Ser Val Thr Tyr Asn Glu Pro Trp Phe Thr
65 70 75 80

Asn Thr Lys Tyr Phe Trp Val Gly Pro Gly Asp Gln Val Trp Pro Asp
85 90 95

Gln Lys Ile Lys Trp Lys Leu Lys Ala Val Tyr Met Tyr Ala Ala Gly
100 105 110

Phe Tyr Thr Tyr Ser Ile Phe Ala Leu Met Phe Trp Glu Thr Arg Arg
115 120 125

Ser Asp Phe Gly Val Ser Met Ser His His Val Ala Thr Val Ala Leu
130 135 140

Ile Val Leu Ser Tyr Val Phe Arg Phe Ala Arg Val Gly Ser Val Val
145 150 155 160

Leu Ala Ile His Asp Ala Ser Asp Val Phe Leu Glu Val Gly Lys Met
165 170 175

Ala Lys Tyr Ser His Cys Asp Leu Leu Ala Asn Val Ala Phe Leu Leu
180 185 190

Phe Val Val Ser Trp Val Leu Leu Arg Leu Thr Tyr Phe Pro Phe Trp
195 200 205

Ile Leu Arg Ser Thr Ser Tyr Glu Val Leu Leu Thr Leu Asp Lys Lys
210 215 220

Lys His Asn Phe Asp Gly Pro Ile Tyr Tyr Tyr Val Phe Asn Ser Leu
225 230 235 240

Leu Phe Ser Leu Leu Val Leu His Ile Tyr Trp Trp Val Leu Ile Tyr
245 250 255

Arg Met Leu Val Arg Gln Ile Lys Thr Arg Asn Val Gly Asp Asp Val
260 265 270

Arg Ser Asp Ser
275

<210> 1595

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1595

Arg Ile Leu Pro Ala Pro Trp Leu Lys Phe His Asp Ser Gly Glu Thr

1 5 10 15
 Thr Glu Phe Leu Pro Gln Leu Gly Ile Trp Asn Met Met His Lys Lys
 20 25 30
 Met Ile Asn Gly Gly Arg Val Lys Ser Trp Ala Cys Val Asn Phe Cys
 35 40 45
 Trp Ser Val Arg Glu Tyr Ala Ala Arg Asn Phe Cys Tyr Asp Leu Gly
 50 55 60
 Phe Met Cys Arg Glu Ser Gly Met Val Phe Ser Val Lys Pro Val Leu
 65 70 75 80
 Pro Leu Val Ile Ala Lys Pro Gly Cys Val Glu Ser Ala Leu Arg Thr
 85 90 95
 Leu His Asp Asp Val Met Asp Ile Leu Arg Pro Gln Gly Arg Lys Leu
 100 105 110
 Asp Leu Leu Ile Val Ile Leu Pro Asn Asn Asn Gly Ser Leu Tyr Gly
 115 120 125
 Asp Val Lys Arg Ile Cys Glu Thr Asp Ile Gly Leu Ile Ser Gln Cys
 130 135 140
 Cys Leu Ala Lys His Val Leu
 145 150
 <210> 1596
 <211> 176
 <212> PRT
 <213> Solanum lycopersicum
 <400> 1596
 Ala Val Gly Met Trp Thr Asp Ile Ser Val Arg Ile Tyr Ser Leu Pro
 1 5 10 15
 Asp Leu Asn Leu Ile Thr Lys Glu Gln Leu Gly Gly Glu Ile Ile Pro
 20 25 30
 Arg Ser Val Leu Met Cys Ser Phe Glu Gly Ile Ser Tyr Leu Leu Cys
 35 40 45
 Ala Leu Gly Asp Gly His Leu Leu Asn Phe Val Leu Ser Met Ser Thr
 50 55 60
 Gly Glu Leu Thr Asp Arg Lys Lys Val Ser Leu Gly Thr Gln Pro Ile
 65 70 75 80
 Thr Leu Arg Thr Phe Ser Ser Lys Asp Thr Thr His Val Phe Ala Ala
 85 90 95
 Ser Asp Arg Pro Thr Val Ile Tyr Ser Ser Asn Lys Lys Leu Leu Tyr
 100 105 110

Ser Asn Val Asn Leu Lys Glu Val Ser His Met Cys Pro Phe Asn Val
115 120 125

Ala Ala Phe Pro Asp Ser Leu Ala Ile Ala Lys Glu Gly Glu Leu Thr
130 135 140

Ile Gly Thr Ile Asp Glu Ile Gln Lys Leu His Ile Arg Ser Ile Pro
145 150 155 160

Leu Gly Glu His Ala Arg Arg Ile Ser His Gln Glu Gln Thr Arg Thr
165 170 175

<210> 1597

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 1597

Cys Glu Asp Leu Ile Phe Asn His Leu Lys Gln His Phe Pro Ser His
1 5 10 15

Lys Phe Ile Gly Glu Glu Thr Ser Ala Ala Thr Gly Asp Phe Asp Leu
20 25 30

Thr Asp Glu Pro Thr Trp Ile Val Asp Pro Val Asp Gly Thr Thr Asn
35 40 45

Phe Val His Gly Phe Pro Ser Val Cys Val Ser Ile Gly Leu Thr Ile
50 55 60

Gly Lys Ile Pro Thr Val Gly Val Val Tyr Asp Pro Ile Ile Asp Glu
65 70 75 80

Leu Phe Thr Gly Ile Asn Gly Lys Gly Ala Tyr Leu Asn Gly Lys Pro
85 90 95

Ile Lys Val Ser Ser Gln Ser Glu Leu Val Lys Ser Leu Leu Gly Thr
100 105 110

Glu Val Gly Thr Thr Arg Asp Asn Leu Thr Val Glu Thr Thr Thr Arg
115 120 125

Arg Ile Asn Asn Leu Leu Phe Lys Val Arg Ser Leu Arg Met Cys Gly
130 135 140

Ser Cys Ala Leu Asp Leu Cys
145 150

<210> 1598

<211> 76

<212> PRT

<213> Zea mays

<400> 1598

Asp Ala Gly Thr Ser Asn Val Thr Val Thr Val Ser Asp Lys Asp Val
Page 904

1 5 10 15
 Leu Leu Glu Val Gln Cys Arg Trp Glu Glu Leu Leu Met Thr Arg Val
 20 25 30
 Phe Asp Ala Ile Lys Ser Leu His Leu Asp Val Leu Ser Val Gln Ala
 35 40 45
 Ser Ala Pro Asp Gly Phe Met Gly Leu Lys Ile Arg Ala Gln Phe Ala
 50 55 60
 Gly Ser Gly Ala Val Val Pro Trp Met Ile Ser Glu
 65 70 75

 <210> 1599
 <211> 176
 <212> PRT
 <213> Oryza sativa

 <400> 1599
 Ser Gly Met Tyr Asp Gly Val Gly Ile Met Leu Thr Ile Leu Leu Val
 1 5 10 15

 Val Met Ile Thr Ala Ala Ser Asp Tyr Lys Gln Ser Leu Gln Phe Arg
 20 25 30

 Asp Leu Asp Lys Glu Lys Lys Lys Ile Asp Val Gln Val Thr Arg Asp
 35 40 45

 Gly Tyr Arg Gln Lys Val Ser Ile Tyr Asp Ile Val Val Gly Asp Ile
 50 55 60

 Val His Leu Ser Ile Gly Asp Gln Val Pro Ala Asp Gly Leu Phe Ile
 65 70 75 80

 Asp Gly Tyr Ser Phe Val Val Asp Glu Ser Asn Leu Ser Gly Glu Ser
 85 90 95

 Glu Pro Val His Val Ser Thr Ala Asn Arg Phe Leu Leu Gly Gly Thr
 100 105 110

 Lys Val Gln Asp Gly Ser Ala Arg Met Leu Val Thr Ala Val Gly Met
 115 120 125

 Arg Thr Glu Trp Gly Asn Leu Met Glu Thr Leu Ser Gln Gly Gly Glu
 130 135 140

 Asp Glu Thr Pro Leu Gln Val Lys Leu Asn Gly Val Ala Thr Ile Ile
 145 150 155 160

 Gly Lys Ile Gly Leu Ala Phe Ala Val Leu Thr Phe Thr Val Leu Met
 165 170 175

<210> 1600
 <211> 176

<212> PRT

<213> Zea mays

<400> 1600

Arg Met Ala Ser Thr Pro Gly Val Ser Ala Thr Leu Phe Asp Ala Leu
1 5 10 15

Ala Lys Ala Asn Ile Asn Val Arg Ala Ile Ala Gln Gly Cys Ser Glu
20 25 30

Tyr Asn Ile Thr Ile Val Leu Lys Gln Glu Asp Cys Val Arg Ala Leu
35 40 45

Arg Ala Ala His Ser Arg Phe Phe Leu Ser Lys Thr Thr Leu Ala Val
50 55 60

Gly Ile Ile Gly Pro Gly Leu Ile Gly Arg Thr Leu Leu Asn Gln Leu
65 70 75 80

Lys Asp Gln Ala Ala Val Leu Lys Glu Asn Met Asn Ile Asp Leu Arg
85 90 95

Val Met Gly Ile Ala Gly Ser Arg Thr Met Leu Leu Ser Asp Ile Gly
100 105 110

Val Asp Leu Thr Gln Trp Lys Glu Lys Leu Gln Thr Glu Ala Glu Pro
115 120 125

Ala Asn Leu Asp Lys Phe Val His His Leu Ser Glu Asn His Phe Phe
130 135 140

Pro Asn Arg Val Leu Val Asp Cys Thr Ala Asp Thr Ser Val Ala Ser
145 150 155 160

His Tyr Tyr Asp Trp Leu Lys Lys Gly Ile His Val Ile Thr Pro Asn
165 170 175

<210> 1601

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1601

Thr Gln Met Gly Leu Gln Leu Asn Ile Asp Val Ser Ser Ser Val Phe
1 5 10 15

Ile Lys Pro Val Pro Val Val Asp Tyr Val Ala Gln Leu Leu Asn Glu
20 25 30

Asp Ile Leu Leu Asp Arg Pro Leu Cys Ser Thr Glu Phe Leu Lys Ile
35 40 45

Lys Glu Ala Leu Glu Gly Leu Lys Val Gln Ile Asn Gly Ile Leu Phe
50 55 60

Asn Thr Tyr His Val Gln Asp Leu Val His Gln Ala Ala Ser Phe Pro
Page 906

<210> 1603

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1603

Cys Cys Leu Thr Lys His Val Phe Lys Met Ser Lys Gln Tyr Leu Ala
 1 5 10 15

Asn Val Ala Leu Lys Ile Asn Val Lys Val Gly Gly Arg Asn Thr Val
 20 25 30

Leu Val Asp Ala Leu Thr Arg Arg Ile Pro Leu Val Ser Asp Arg Pro
 35 40 45

Thr Ile Ile Phe Gly Ala Asp Val Thr His Pro His Pro Gly Glu Asp
 50 55 60

Ser Ser Pro Ser Ile Ala Ala Val Val Ala Ser Gln Asp Trp Pro Glu
 65 70 75 80

Val Thr Lys Tyr Ala Gly Leu Val Ser Ala Gln Ala His Arg Gln Glu
 85 90 95

Leu Ile Gln Asp Leu Phe Lys Val Trp Gln Asp Pro His Arg Gly Thr
 100 105 110

Val Thr Gly Gly Met Ile Lys Glu Leu Leu Ile Ser Phe Lys
 115 120 125

<210> 1604

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1604

Phe Ser Val Ser Ala Glu Glu Leu Ala Ser Ile Val Arg Gly His Asp
 1 5 10 15

Thr Lys Ser Leu Arg Phe His Asn Gly Val Asp Gly Ile Ala Arg Lys
 20 25 30

Val Ala Val Ser Leu Ala Asp Gly Val Lys Ser Asp Asp Ala Gly Leu
 35 40 45

Arg Ala Glu Val Tyr Gly Ala Asn Gln Tyr Thr Glu Lys Pro Pro Arg
 50 55 60

Thr Phe Trp Met Phe Leu Trp Asp Ala Ser Gln Asp Met Thr Leu Leu
 65 70 75 80

Leu Leu Ala Phe Cys Ala Ala Val Ser Val Ala Ile Gly Leu Ala Thr
 85 90 95

Glu Gly Trp Pro Ser Gly Met Tyr Asp Gly Val Gly Ile Met Leu Thr
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100

105

110

Ile Leu Leu Val Val Met Ile Thr Ala Ala Ser Asp Tyr Lys Gln Ser
 115 120 125

Leu Gln Phe Arg Asp Leu Asp Lys Glu Lys Lys Lys Ile Asp Val Gln
 130 135 140

Val Thr Arg Asp Gly Tyr Arg Gln Lys Val Ser Ile Tyr Asp Ile Val
 145 150 155 160

Val Gly Asp Ile Val His Leu Ser Ile Gly Asp Gln Val Pro Ala Asp
 165 170 175

Gly Leu Phe Ile Asp Gly Tyr Ser Phe Val Val Asp Glu Ser Asn Leu
 180 185 190

Ser Gly Glu Ser Glu Pro Val His Val Ser Thr Ala Asn Arg Phe Leu
 195 200 205

Leu Gly Gly Thr Lys Val Gln Asp Gly Ser Ala Arg Met Leu Val Thr
 210 215 220

Ala Val Gly Met Arg Thr Glu Trp Gly Asn Leu Met Glu Thr Leu Ser
 225 230 235 240

Gln Gly Gly Glu Asp Glu Thr Pro Leu Gln Val Lys Leu Asn Gly Val
 245 250 255

Ala Thr Ile Ile Gly Lys Ile Gly Leu Ala Phe Ala Val Leu Thr Phe
 260 265 270

Thr Val Leu Met
 275

<210> 1605

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1605

Ser Ala Gly Gly Pro Trp Gln Phe Ile Ala Leu Leu Pro Leu Phe Asp
 1 5 10 15

Pro Pro Arg His Asp Ser Ala Glu Thr Ile Arg Arg Ala Leu Asn Leu
 20 25 30

Gly Val Asn Val Lys Met Ile Thr Gly Asp Gln Leu Ala Ile Gly Lys
 35 40 45

Glu Thr Gly Arg Arg Leu Gly Met Gly Thr Asn Met Tyr Pro Ser Ser
 50 55 60

Ala Leu Leu Gly Gln Thr Lys Asp Glu Ser Ile Ala Ala Leu Pro Ile
 65 70 75 80

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Asp Glu Leu Ile Glu Lys Ala Asp Gly Phe Ala Gly Val Phe Pro Glu
 85 90 95
 His Lys Tyr Glu Ile Val Lys Arg Leu Gln Ala Arg Lys His Ile Cys
 100 105 110
 Gly Met Thr Gly Asp Gly Val Asn Asp Ala Pro Ala Leu Lys Lys Ala
 115 120 125
 Asp Ile Gly Ile Ala Val Asp Asp Ala Thr Asp Ala Ala Arg Ser Ala
 130 135 140
 Ser Asp Ile Val Leu Thr Glu Pro Gly Leu Ser Val Ile Ile Ser Ala
 145 150 155 160
 Val Leu Thr Ser Arg Ala Ile Phe Gln Arg Met Lys Asn Tyr Thr Ile
 165 170 175
 Tyr Ala Val Ser Ile Thr Ile Arg Ile Val Leu Gly Phe Met Leu Leu
 180 185 190
 Ala Leu Ile Trp Lys Phe Asp Phe Pro Pro Phe Met Val Leu Ile Ile
 195 200 205
 Ala Ile Leu Asn Asp Gly Thr Ile Met Thr Ile Ser Lys Asp Arg Val
 210 215 220
 Lys Pro
 225

 <210> 1606
 <211> 276
 <212> PRT
 <213> Solanum lycopersicum

 <400> 1606
 Leu Asp Ile Gly Thr Phe Asn Leu His Ala Leu Phe Arg Glu Val His
 1 5 10 15
 Ser Leu Ile Lys Pro Ile Ala Ser Val Lys Lys Leu Phe Val Thr Leu
 20 25 30
 Ser Leu Ser Ser Asp Leu Pro Glu Tyr Val Ile Gly Asp Glu Lys Arg
 35 40 45
 Leu Met Gln Ile Leu Leu Asn Val Val Gly Asn Ala Val Lys Phe Ser
 50 55 60
 Lys Glu Gly Asn Val Ser Ile Ser Ala Phe Val Ala Lys Ser Asp Ser
 65 70 75 80
 Leu Arg Asp Pro Arg Ala Pro Glu Phe Phe Ala Val Pro Ser Glu Asn
 85 90 95

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His Phe Tyr Leu Arg Val Gln Ile Lys Asp Thr Gly Ile Gly Ile Thr
100 105 110

Pro Gln Asp Ile Pro Asn Leu Phe Ser Lys Phe Thr Gln Ser Gln Ala
115 120 125

Leu Ala Thr Thr Asn Ser Gly Gly Thr Gly Leu Gly Leu Ala Ile Cys
130 135 140

Lys Arg Phe Val Asn Leu Met Glu Gly His Ile Trp Ile Glu Ser Glu
145 150 155 160

Gly Leu Gly Lys Gly Ser Thr Ala Ile Phe Ile Ile Lys Leu Gly Ile
165 170 175

Pro Gly Arg Ala Asn Glu Ser Lys Leu Pro Phe Val Thr Lys Leu Pro
180 185 190

Ala Asn His Thr Gln Met Ser Phe Gln Gly Leu Lys Val Leu Val Met
195 200 205

Asp Glu Asn Gly Val Ser Arg Met Val Thr Lys Gly Leu Leu Thr His
210 215 220

Leu Gly Cys Asp Val Thr Thr Val Gly Ser Arg Asp Glu Cys Leu Arg
225 230 235 240

Val Val Thr His Glu His Lys Val Val Ile Met Asp Val Ser Met Gln
245 250 255

Gly Ile Asp Cys Tyr Glu Val Ala Val Val Ile His Glu Arg Phe Gly
260 265 270

Lys Arg His Gly
275

<210> 1607

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 1607

Ala Ala Leu Met Ala Arg Leu Ala Pro Lys Ala Lys Val Leu Arg Asp
1 5 10 15

Gly Lys Trp Asp Glu Glu Asp Ala Ser Val Leu Val Pro Gly Asp Ile
20 25 30

Ile Ser Ile Lys Leu Gly Asp Ile Ile Pro Ala Asp Ala Arg Leu Leu
35 40 45

Glu Gly Asp Pro Leu Lys Ile Asp Gln Ser Ala Leu Thr Gly Glu Ser
50 55 60

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Leu Pro Val Thr Lys Gly Pro Gly Asp Gly Val Tyr Ser Gly Ser Thr
65 70 75 80

Cys Lys Gln Gly Glu Ile Glu Ala Val Val Ile Ala Thr Gly Val His
85 90 95

Thr Phe Phe Gly Lys Ala Ala His Leu Val Asp Ser Thr Asn Gln Val
100 105 110

Gly His Phe Gln Lys Val Leu Thr Ala Ile Gly Asn Phe Cys Ile Cys
115 120 125

Ser Ile Ala Val Gly Met Ile Ile Glu Ile Ile Val Met Tyr Pro Ile
130 135 140

Gln His Arg Lys Tyr Arg Pro Gly Ile Asp Asn Leu Leu Val Leu Leu
145 150 155 160

Ile Gly Gly Ile Pro Ile Ala Met Pro Thr Val Leu Ser Val Thr Met
165 170 175

Ala Ile Gly Ser His Arg Leu Ala Gln Gln Gly Ala Ile Thr Lys Arg
180 185 190

Met Thr Ala Ile Glu Glu Met Ala Gly Met Asp Val Leu Cys Ser Asp
195 200 205

Lys Thr Gly Thr Leu Thr Leu Asn Lys Leu Thr Val Asp Lys Ala Leu
210 215 220

Ile Glu Val Phe Ala Lys Gly Ile Asp Ala Asp Thr Val Val Leu Met
225 230 235 240

Ala Ala Arg Ala Ser Arg Ile Glu Asn Gln Asp Ala Ile Asp Thr Ala
245 250 255

Ile Val Gly Met Leu Ala Asp Pro Lys Glu Ala Arg Ala Gly Ile Arg
260 265 270

Glu Ile His Phe
275

<210> 1608

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1608

Trp Phe His Pro Lys Ser Val Glu Glu Phe His Arg Leu Phe Asp Ser
1 5 10 15

Asn Leu Phe Asp Glu Arg Ser Val Lys Ile Val Ala Ser Asn Thr Gly
20 25 30

Ser Gly Val Tyr Lys Asp Gln Asp Leu His Asp Lys Tyr Ile Asn Ile
Page 912

35

40

45

Ser Gln Ile Leu Glu Leu Ser Ala Ile Asn Arg Ser Ser Lys Gly Val
50 55 60

Glu Ile Gly Ala Val Val Ser Ile Ser Lys Ala Ile Glu Ile Leu Ser
65 70 75 80

Asp Gly Gly Ala Val Phe Arg Lys Ile Ala Asp His Leu Ser Lys Val
85 90 95

Ala Ser Ser Phe Val Gln Asn Thr Ala Thr Ile Gly Gly Asn Ile Ile
100 105 110

Met Ala Gln Arg Leu Ser Phe Pro Ser Asp Ile Ala Thr Val Leu Leu
115 120 125

Ala Ala Gly Ser Thr Val Thr Ile Gln Val Ala Ala Lys Arg Met Cys
130 135 140

Ile Thr Leu Glu Glu Phe Leu
145 150

<210> 1609

<211> 126

<212> PRT

<213> Zea mays

<400> 1609

Leu Ser Trp Thr Ile Asp Gln Val Asp Ser Ser Pro Leu Leu Val Ala
1 5 10 15

Ala Gly Ser Asn Arg Ile Ile Arg Val Ile Asn Cys Ala Thr Glu Lys
20 25 30

Leu Asp Lys Ser Leu Val Gly His Gly Gly Ser Ile His Glu Ile Arg
35 40 45

Thr His Ala Ser Lys Pro Ser Leu Ile Ile Ser Ala Ser Lys Asp Glu
50 55 60

Ser Ile Arg Leu Trp Asn Val His Thr Gly Ile Cys Ile Leu Val Phe
65 70 75 80

Ala Gly Ala Gly Gly His Arg His Asp Val Leu Ser Val Asp Phe His
85 90 95

Pro Thr Glu Val Gly Ile Phe Ala Ser Cys Gly Met Asp Asn Thr Val
100 105 110

Lys Ile Trp Ser Met Lys Glu Phe Trp Ile Tyr Val Glu Lys
115 120 125

<210> 1610

<211> 251

<212> PRT

<213> Zea mays

<400> 1610

Ile Gln Pro Ala Arg Arg His Thr Lys Asn Thr Asn Met Ala Lys His
 1 5 10 15

Thr Thr Lys Gly Thr Gly His Ser Met Phe Ile Ser Pro Arg Lys Ile
 20 25 30

Ala His Ile Pro Gln Ile Asn Cys Glu Lys Gln Lys Leu Val Leu Glu
 35 40 45

Val Arg Ser Ile Tyr Asn Asp Ser Trp Arg Val Arg Gly Val Leu Pro
 50 55 60

Phe Met Ile Asn Asp Phe Ile Asn Gln Leu Asn Leu Thr Gly Lys Tyr
 65 70 75 80

Arg Phe Gly Pro Val Val Tyr Tyr Gln Ile Asn Ile Lys Glu Ile Pro
 85 90 95

Pro Leu Ile Tyr Asp Val Ile Arg Met Glu Ala Ser Lys Gly Tyr Leu
 100 105 110

Trp Leu Asp Glu Arg Asn Leu Asp Thr His Ser Leu Ile Gly Val Tyr
 115 120 125

Lys Cys Arg Val Pro Met Asp Leu Leu Val Leu Lys Gly Leu Ser Asn
 130 135 140

Val Ile Leu Thr Thr Val Asn Lys Ala Gln Pro Asn Ile Ser Lys Phe
 145 150 155 160

Lys Asp Leu Lys Ala Met His Tyr Ala Phe Leu Asn Arg Gln Glu Asn
 165 170 175

Val Val Lys Val Val Ser Ile Asp Leu Ser Asp Cys Met Asp Tyr Ile
 180 185 190

Pro Thr Ser Arg Ile Leu Thr Ser Gln Lys Phe Thr Lys Gln Tyr Gly
 195 200 205

Leu Tyr Tyr Asn Leu Val Glu Trp Ile Ile Asp Leu Pro Ile Tyr Asp
 210 215 220

Phe His Asn His Ser Phe Phe Pro Ser Thr Gly Ile Thr Pro Ile Gly
 225 230 235 240

Glu Ile Thr His Val Ile Leu His Asn Phe Tyr
 245 250

<210> 1611

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1611

His Leu Glu Lys Lys Met Phe His Thr Asn Gly Phe Gly Ser Ile Thr
 1 5 10 15

Met Gly Ser Asn Ala Arg Asp Leu Val Ala Leu Thr Asn Glu Val Leu
 20 25 30

Ser Ile Ser Ile Thr Gln Lys Lys Ser Ile Ile Asp Thr Asn Thr Ile
 35 40 45

Arg Ser Ala Leu His Arg Gln Thr Trp Asp Leu Arg Ser Gln Val Arg
 50 55 60

Ser Val Gln Asp His Gly Ile Leu Phe Tyr Gln Ile Gly Arg Ala Val
 65 70 75 80

Ala Gln Asn Val Leu Leu Ser Asn Cys Pro Ile Asp Pro Ile Ser Ile
 85 90 95

Tyr Met Lys Lys Lys
 100

<210> 1612

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 1612

Leu Gln Phe Glu Leu Ala Lys Ala Met Ser Pro Cys Ile Ile Trp Ile
 1 5 10 15

Pro Asn Ile His Asp Leu Asp Val Asn Glu Ser Asn Asp Leu Ser Leu
 20 25 30

Gly Leu Leu Val Asn His Leu Ser Arg Asp Cys Glu Arg Cys Ser Thr
 35 40 45

Arg Asn Ile Leu Val Ile Ala Ser Thr His Ile Pro Gln Lys Val Asp
 50 55 60

Pro Ala Leu Ile Ala Pro Asn Lys Leu Asn Thr Cys Ile Lys Ile Arg
 65 70 75 80

Arg Leu Leu Ile Pro Gln Gln Arg Lys His Phe Phe Thr Leu Ser Tyr
 85 90 95

Thr Arg Gly Phe His Leu Glu Lys Lys Met Phe His Thr Asn Gly Phe
 100 105 110

Gly Ser Ile Thr Met Gly Ser Asn Ala Arg Asp Leu Val Ala Leu Thr
 115 120 125

Asn Glu Val Leu Ser Ile Ser Ile Thr Gln Lys Lys Ser Ile Ile Asp
 130 135 140

Thr Asn Thr Ile Arg Ser Ala Leu His Arg Gln Thr Trp Asp Leu Arg
145 150 155 160

Ser Gln Val Arg Ser Val Gln Asp His Gly Ile Leu Phe Tyr Gln Ile
165 170 175

Gly Arg Ala Val Ala Gln Asn Val Leu Leu Ser Asn Cys Pro Ile Asp
180 185 190

Pro Ile Ser Ile Tyr Met Lys Lys Lys
195 200

<210> 1613

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1613

Arg Thr Gln Trp Gly Lys Leu Met Ala Thr Leu Ser Glu Gly Gly Asp
1 5 10 15

Asp Glu Thr Pro Leu Gln Val Lys Leu Asn Gly Val Ala Thr Ile Ile
20 25 30

Gly Lys Ile Gly Leu Phe Phe Ala Val Ile Thr Phe Ile Val Leu Ser
35 40 45

Gln Gly Leu Ile Ser Lys Lys Tyr His Glu Gly Leu Leu Leu Ser Trp
50 55 60

Ser Gly Asp Asp Ala Leu Glu Met Leu Glu His Phe Ala Ile Ala Val
65 70 75 80

Thr Ile Val Val Val Ala Val Pro Glu Gly Leu Pro Leu Ala Val Thr
85 90 95

Leu Ser Leu Ala Phe Ala Met Lys Lys Met Met Asn Asp Lys Ala Leu
100 105 110

Val Arg His Leu Ala Ala Cys Glu Thr Met Gly Ser Ala Thr Thr Ile
115 120 125

Cys Ser Asp Lys Thr Gly Thr Leu Thr Thr Asn His Met Thr Val Val
130 135 140

Lys Ala Cys Ile Cys Gly Asn Ile Lys Glu Val Asn Asn Pro Lys Asn
145 150 155 160

Ala Ser Asp Leu Cys Ser Glu Leu Pro Glu Thr Val Val Lys Thr Leu
165 170 175

Leu Glu Ser Ile Phe Asn Asn Thr Gly Gly Glu Val Val Ile Asp Gln
180 185 190

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Asp Gly Lys Tyr Gln Ile Leu Gly Thr Pro Thr Glu Thr Ala Leu Leu
195 200 205

Glu Phe Ala Leu Ser Leu Gly Gly Asn Phe Lys Ala Lys Arg Asp Glu
210 215 220

Thr Lys Ile Val Lys Met Glu Pro Phe Asn Ser Thr Lys Lys Arg Met
225 230 235 240

Cys Val Val Leu Lys Leu Pro Gly Gly Gly Cys Arg Ala His Cys Lys
245 250 255

Gly Ala Ser Glu Ile Val Leu Ala Ala Cys Asp Lys Phe Met Asp Glu
260 265 270

Thr Gly Ala Val
275

<210> 1614
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1614
Lys Arg Ile Cys Glu Thr Asp Leu Gly Leu Val Ser Gln Cys Cys Leu
1 5 10 15

Thr Lys His Val Phe Lys Met Ser Lys Gln Tyr Leu Ala Asn Val Ala
20 25 30

Leu Lys Ile Asn Val Lys Val Gly Gly Arg Asn Thr Val Leu Val Asp
35 40 45

Ala Leu Thr Arg Arg Ile Pro Leu Val Ser Asp Arg Pro Thr Ile Ile
50 55 60

Phe Gly Ala Asp Val Thr His Pro His Pro Gly Glu Asp Ser Ser Pro
65 70 75 80

Ser Ile Ala Ala Val Val Ala Ser Gln Asp Trp Pro Glu Val Thr Lys
85 90 95

Tyr Ala Gly Leu Val
100

<210> 1615
<211> 251
<212> PRT
<213> Oryza sativa

<400> 1615
Ala Leu Arg Thr Leu Cys Leu Ala Tyr Lys Glu Val Asp Asp Ile
1 5 10 15

Asp Asp Asn Ala Asp Ser Pro Thr Ser Gly Phe Thr Leu Ile Ala Ile
20 25 30

Phe Gly Ile Lys Asp Pro Val Arg Pro Gly Val Lys Asp Ala Val Lys
35 40 45

Thr Cys Met Ser Ala Gly Ile Thr Val Arg Met Val Thr Gly Asp Asn
50 55 60

Ile Asn Thr Ala Lys Ala Ile Ala Lys Glu Cys Gly Ile Leu Thr Glu
65 70 75 80

Asp Gly Val Ala Ile Glu Gly Pro Glu Phe His Ser Lys Ser Pro Glu
85 90 95

Glu Met Arg Asp Leu Ile Pro Asn Ile Gln Val Met Ala Arg Ser Leu
100 105 110

Pro Leu Asp Lys His Thr Leu Val Thr Asn Leu Arg Gly Met Phe Asp
115 120 125

Glu Val Val Ser Val Thr Gly Asp Gly Thr Asn Asp Ala Pro Ala Leu
130 135 140

His Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala Gly Thr Glu Val
145 150 155 160

Ala Lys Glu Ser Ala Asp Val Ile Val Leu Asp Asp Asn Phe Thr Thr
165 170 175

Ile Ile Asn Val Ala Arg Trp Gly Arg Ala Val Tyr Ile Asn Ile Gln
180 185 190

Lys Phe Val Gln Phe Gln Leu Thr Val Asn Ile Val Ala Leu Val Ile
195 200 205

Asn Phe Val Ser Ala Cys Ile Thr Gly Ser Ala Pro Leu Thr Ala Val
210 215 220

Gln Leu Leu Trp Val Asn Met Ile Met Asp Thr Leu Gly Ala Leu Ala
225 230 235 240

Leu Ala Thr Glu Pro Pro Asn Asp Glu Met Met
245 250

<210> 1616

<211> 176

<212> PRT

<213> Zea mays

<400> 1616

Asp Val Ile Arg Met Glu Ala Ser Lys Gly Tyr Leu Trp Leu Asp Glu
1 5 10 15

Arg Asn Leu Asp Thr His Ser Leu Ile Gly Val Tyr Lys Cys Arg Val
20 25 30

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Pro Met Asp Leu Leu Val Leu Lys Gly Leu Ser Asn Val Ile Leu Thr
35 40 45

Thr Val Asn Lys Ala Gln Pro Asn Ile Ser Lys Phe Lys Asp Leu Lys
50 55 60

Ala Met His Tyr Ala Phe Leu Asn Arg Gln Glu Asn Val Val Lys Val
65 70 75 80

Val Ser Ile Asp Leu Ser Asp Cys Met Asp Tyr Ile Pro Thr Ser Arg
85 90 95

Ile Leu Thr Ser Gln Lys Phe Thr Lys Gln Tyr Gly Leu Tyr Tyr Asn
100 105 110

Leu Val Glu Trp Ile Ile Asp Leu Pro Ile Tyr Asp Phe His Asn His
115 120 125

Ser Phe Phe Pro Ser Thr Gly Ile Thr Pro Ile Gly Glu Ile Thr His
130 135 140

Val Ile Leu His Asn Phe Tyr Gln Asn Thr Val Asp Ser Leu Leu Glu
145 150 155 160

Ser Trp Tyr Pro Gly Ile Thr Tyr Ser Arg Tyr Gly His Glu Leu Phe
165 170 175

<210> 1617
<211> 151
<212> PRT
<213> Oryza sativa

<400> 1617
Val Asp Ala Arg Arg Arg Gln Glu Asp Lys Lys Ile Ala Ser Gly Val
1 5 10 15

Gly Pro Val Pro Pro Ser Ser Thr Gly Ser Leu Thr Thr Ala Thr Glu
20 25 30

Glu Lys Pro Trp Trp Asp Met Leu Pro Val Val Leu Ile Gln Tyr Ala
35 40 45

Arg Gly Leu His Arg Gly His Lys Asn Leu Phe Gln Ala Leu Pro Arg
50 55 60

Leu Leu Thr Leu Trp Phe Glu Phe Gly Ser Ile Tyr Ile Gln Asp Gly
65 70 75 80

Ser Ser Phe Asn Lys Pro Met Lys Glu Val His Ile Arg Leu Leu Gly
85 90 95

Ile Met Arg Gly Cys Leu Lys Asp Leu Pro Pro Tyr Gln Trp Leu Thr
100 105 110

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Val Leu Ser Gln Leu Ile Ser Arg Ile Cys His Gln Asn Ile Glu Val
115 120 125

Val Lys Leu Val Lys Cys Ile Val Thr Ser Ile Leu Arg Glu Tyr Pro
130 135 140

Gln Gln Ala Leu Trp Met Met
145 150

<210> 1618

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1618

Val Leu Thr Phe Leu Val Leu Leu Ala Arg Phe Leu Ala Asp Lys Gly
1 5 10 15

Met His Val Gly Leu Leu Asn Trp Ser Ala Asn Asp Ala Leu Thr Ile
20 25 30

Val Asn Tyr Phe Ala Ile Ala Val Thr Ile Ile Val Val Ala Val Pro
35 40 45

Glu Gly Leu Pro Leu Ala Val Thr Leu Ser Leu Ala Phe Ala Met Lys
50 55 60

Lys Leu Met His Asp Lys Ala Leu Val Arg His Leu Ala Ala Cys Glu
65 70 75 80

Thr Met Gly Ser Ala Ser Cys Ile Cys Thr Asp Lys Thr Gly Thr Leu
85 90 95

Thr Thr Asn His Met Ile Val Asp Lys Val Trp Ile Gly Asp Val Lys
100 105 110

Phe Val Gly Asp Lys Lys Asn Ser Glu Leu Lys Ser Thr Ile Ser Glu
115 120 125

Arg Val Met Ala Ile Leu Ile Gln Gly Ile Phe Val Asn Thr Ala Ser
130 135 140

Glu Val Val Lys Gly Asp Asp Gly Lys Asn Thr Ile Leu Gly Leu Ala
145 150 155 160

Thr Glu Thr Ala Leu Leu Glu Phe Gly Leu Ser Leu Glu Glu His Leu
165 170 175

Tyr Asp Asp Tyr Asn Lys Leu Thr Arg Ile Lys Val Asp Pro Phe Asn
180 185 190

Ser Val Lys Lys Lys Met Ser Val Thr Ile Gln Leu Pro Asn Gly Gly
195 200 205

Ile Arg Thr Phe Cys Lys Gly Ala Ser Glu Ile Ile Leu Glu Gln Cys

<210> 1621

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1621

Ile His Glu Thr Thr Tyr Asn Ser Ile Met Lys Cys Asp Val Asp Ile
 1 5 10 15

Arg Lys Asp Leu Tyr Gly Asn Ile Val Leu Ser Gly Gly Thr Thr Met
 20 25 30

Phe Pro Gly Ile Ala Asp Arg Met Ser Lys Glu Ile Thr Ala Leu Ala
 35 40 45

Pro Ser Ser Met Lys Ile Lys Val Val Ala Pro Pro Glu Arg Lys Tyr
 50 55 60

Ser Val Trp Ile Gly Gly Ser Ile Leu Ala Ser Leu
 65 70 75

<210> 1622

<211> 126

<212> PRT

<213> Zea mays

<400> 1622

Lys Met Leu Thr Lys Gly Glu Glu Ala Pro Ser Val Gln Arg Gly Val
 1 5 10 15

Val Met Thr Ala Val Ala His Asn Leu Leu Val Gln Ala Leu Phe Met
 20 25 30

Asp Gly Arg Ala Ser Asp Ala Tyr Val Val Leu Glu Glu Met Gln Asn
 35 40 45

Asn Gly Pro Phe Pro Asp Val Phe Thr Tyr Thr Leu Lys Val Leu Lys
 50 55 60

Asn Gly Gln Trp Ala Glu Glu Glu Ser Thr Ile Leu Val Pro Gly Asp
 65 70 75 80

Ile Ile Gly Val Lys Leu Gly Asp Ile Ile Ser Ala Asp Thr Arg Leu
 85 90 95

Leu Glu Gly Asp Pro Leu Lys Ile Asp Gln Ser Ala Leu Thr Gly Asn
 100 105 110

Phe Cys Ile Cys Ser Ile Val Ala Gly Met Leu Val Glu Phe
 115 120 125

<210> 1623

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1623

Ala Leu Ser Thr Met Phe Pro Gln Ile Tyr His Phe Thr Val Glu Glu
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1 5 10 15
 Ser Ser Ala Met Pro Ser Leu Phe Ser Arg Tyr Gly Val Arg Gly Phe
 20 25 30
 Pro Ala Ile Leu Leu Val Asn Glu Thr Thr Met Val Arg Tyr Trp Gly
 35 40 45
 Pro Lys Asp Leu Ser Ser Leu Val Asp Phe Tyr Lys Glu Thr Thr Gly
 50 55 60
 Phe Asp Pro Ile Ala Tyr Phe Asp Val Asp His Gln Asp Ser Thr Gly
 65 70 75 80
 Asp Phe Arg Pro Val Thr Pro Gly Asp Arg Ser Leu Arg Lys Ile Ala
 85 90 95
 Lys Asp Glu Pro Phe Val Leu Leu Ala Val Leu Phe Ile Ile Leu Lys
 100 105 110
 Val Ala Ala His Phe Val Pro Ile Val Val Ser His Leu Lys Thr Phe
 115 120 125
 Leu Val Val Arg Val Gln Asn Leu Asn Leu Gly Ile Arg Arg Gly Ser
 130 135 140
 Ser Gln Leu Leu Glu Arg Ala
 145 150

 <210> 1624
 <211> 151
 <212> PRT
 <213> Solanum lycopersicum

 <400> 1624
 Ala Val Lys Gln Asn Tyr Gly Glu Lys Val Leu Ile Gln Phe Glu Asp
 1 5 10 15
 Phe Ala Asn His Asn Ala Phe Asn Leu Leu Ala Lys Tyr Gly Thr Ser
 20 25 30
 His Leu Val Phe Asn Asp Asp Ile Gln Gly Thr Ala Ser Val Val Leu
 35 40 45
 Ala Gly Leu Met Ala Ala Leu Asn Leu Val Gly Gly Ser Leu Ser Glu
 50 55 60
 His Thr Phe Leu Phe Leu Gly Ala Gly Glu Ala Gly Thr Gly Ile Ala
 65 70 75 80
 Glu Leu Ile Ala Leu Glu Met Ser Lys Gln Thr Gly Ile Pro Leu Glu
 85 90 95
 Glu Thr Arg Lys Lys Ile Trp Met Val Asp Ser Lys Gly Leu Ile Val
 100 105 110

Lys Ser Arg Met Glu Met Leu Gln His Phe Lys Arg Pro Trp Ala His
115 120 125

Asp His Glu Pro Val Gln Glu Leu Val Asn Ala Val Lys Ser Ile Lys
130 135 140

Pro Thr Val Leu Ile Gly Ser
145 150

<210> 1625

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1625

Asp Val Ile Gly Ile Ser Gly Asn Phe Cys Ser Asp Lys Lys Pro Ala
1 5 10 15

Ala Val Asn Trp Ile Glu Gly Arg Gly Lys Ser Val Val Cys Glu Ala
20 25 30

Ile Ile Thr Glu Glu Val Val Lys Lys Val Leu Lys Thr Glu Val Ala
35 40 45

Ala Leu Val Glu Leu Asn Met Leu Lys Asn Leu Thr Gly Ser Ala Met
50 55 60

Ala Gly Ala Leu Gly Gly Phe Asn Ala His Ala Ser
65 70 75

<210> 1626

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1626

Asp Val Leu Lys Asn Arg Leu Asp Ser Leu His Ala Ala Phe His Gly
1 5 10 15

Ala Val Asp Ser Thr Gly Tyr Ala Ser Arg Tyr Gln Gly Val Phe Pro
20 25 30

Ile Lys Val Asn Gln Asn Lys Ala Val Val Gln Asp Leu Val Thr Phe
35 40 45

Gly His Gly Tyr Ser Tyr Gly Leu Glu Ala Gly Ser Lys Pro Glu Leu
50 55 60

Leu Ile Ala Met Ser Cys Leu Ala Lys Ala Lys Pro Gly Ala Tyr Leu
65 70 75 80

Val Cys Asn Gly Tyr Lys Asp Ala Asp Tyr Val Ala Leu Ala Leu Ser
85 90 95

Ala Arg Ala Met Gly Leu Asn Ala Ile Ile Val Leu Glu Met Glu Glu

100

105

110

Glu Leu Asp Ile Val Val Glu Gln Ser Ala Arg Leu Gly Val Glu Pro
 115 120 125

Val Ile Gly Val Arg Ala Lys Leu Leu Thr Lys Ile Pro Gly His Phe
 130 135 140

Gly Ser Thr Ala Gly Lys His Gly Lys Phe Gly Met Leu Ala Asp Lys
 145 150 155 160

Ile Tyr Glu Val Ala Gly Lys Leu Lys Lys Met Gly Lys Leu His Trp
 165 170 175

Leu Lys Leu Leu His Tyr His Val Gly Ser Met Ile Pro Thr Thr Asp
 180 185 190

Ile Val Tyr Asn Ala Ala Ala Glu Ala
 195 200

<210> 1627

<211> 251

<212> PRT

<213> Solanum lycopersicum

<400> 1627

Val Phe Glu Asn Leu Arg Cys Thr Arg Glu Gly Leu Thr Ala Thr Ala
 1 5 10 15

Ala Gln Glu Arg Leu Ser Ile Phe Gly Tyr Asn Lys Leu Glu Glu Lys
 20 25 30

Lys Glu Ser Lys Phe Leu Lys Phe Leu Gly Phe Met Trp Asn Pro Leu
 35 40 45

Ser Trp Val Met Glu Ala Ala Ala Ile Met Ala Ile Ala Leu Ala Asn
 50 55 60

Gly Gly Gly Lys Pro Pro Asp Trp Gln Asp Phe Val Gly Ile Ile Thr
 65 70 75 80

Leu Leu Ile Ile Asn Ser Thr Ile Ser Phe Ile Glu Glu Asn Asn Ala
 85 90 95

Gly Asn Ala Ala Ala Ala Leu Met Ala Arg Leu Ala Pro Lys Ala Lys
 100 105 110

Val Leu Arg Asp Gly Lys Trp Asp Glu Glu Asp Ala Ser Val Leu Val
 115 120 125

Pro Gly Asp Ile Ile Ser Ile Lys Leu Gly Asp Ile Ile Pro Ala Asp
 130 135 140

Ala Arg Leu Leu Glu Gly Asp Pro Leu Lys Ile Asp Gln Ser Ala Leu
 145 150 155 160

Thr Gly Glu Ser Leu Pro Val Thr Lys Gly Pro Gly Asp Gly Val Tyr
 165 170 175

Ser Gly Ser Thr Cys Lys Gln Gly Glu Ile Glu Ala Val Val Ile Ala
 180 185 190

Thr Gly Val His Thr Phe Phe Gly Lys Ala Ala His Leu Val Asp Ser
 195 200 205

Thr Asn Gln Val Gly His Phe Gln Lys Val Leu Thr Ala Ile Gly Asn
 210 215 220

Phe Cys Ile Cys Ser Ile Ala Val Gly Met Ile Ile Glu Ile Ile Val
 225 230 235 240

Met Tyr Pro Ile Gln His Arg Lys Tyr Arg Pro
 245 250

<210> 1628

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 1628

Arg Val Gln Ile Lys Asp Thr Gly Ile Gly Ile Thr Pro Gln Asp Ile
 1 5 10 15

Pro Asn Leu Phe Ser Lys Phe Thr Gln Ser Gln Ala Leu Ala Thr Thr
 20 25 30

Asn Ser Gly Gly Thr Gly Leu Gly Leu Ala Ile Cys Lys Arg Phe Val
 35 40 45

Asn Leu Met Glu Gly His Ile Trp Ile Glu Ser Glu Gly Leu Gly Lys
 50 55 60

Gly Ser Thr Ala Ile Phe Ile Ile Lys Leu Gly Ile Pro Gly Arg Ala
 65 70 75 80

Asn Glu Ser Lys Leu Pro Phe Val Thr Lys Leu Pro Ala Asn His Thr
 85 90 95

Gln Met Ser Phe Gln Gly Leu Lys Val Leu Val Met Asp Glu Asn Gly
 100 105 110

Val Ser Arg Met Val Thr Lys Gly Leu Leu Thr His Leu Gly Cys Asp
 115 120 125

Val Thr Thr Val Gly Ser Arg Asp Glu Cys Leu Arg Val Val Thr His
 130 135 140

Glu His Lys Val Val Ile Met Asp Val Ser Met Gln Gly Ile Asp Cys
 145 150 155 160

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Tyr Glu Val Ala Val Val Ile His Glu Arg Phe Gly Lys Arg His Gly
165 170 175

<210> 1629

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 1629

Ser Ile Asp Tyr Arg Ser Val Gly Ser Gly Pro Gly Ser Ser Tyr Val
1 5 10 15

Pro Thr Lys Thr Thr Ala Val Ser Ala Ala Ala Ala Leu Met Gly Val
20 25 30

Leu Val Val Tyr Met Gly Thr Lys Ala Ala Thr Met Val Ala Ala Ala
35 40 45

Ala Ser Ala Ala Leu Leu Val Val Leu Ile Thr Phe Leu Trp Gly Arg
50 55 60

Cys Ser Asp Gly Phe Phe Thr Lys Ser Arg Thr Leu Glu Leu Glu Val
65 70 75 80

Glu Pro Gln Tyr Ala Gly Ala Arg Ile Glu Gly Asp Val Val Thr Leu
85 90 95

Asp Phe Val Lys Lys Met Leu Asp Asp Phe Lys Asn Gln Lys Asn Leu
100 105 110

His Lys Arg Tyr Ala Tyr Gln Ile Val Leu Gln Thr Arg Glu Met Leu
115 120 125

Arg Ala Leu Pro Ser Leu Val Asp Ile Val Val Pro Glu Gly Lys His
130 135 140

Phe Thr Val Cys Gly Asp Val His Gly Gln Phe Tyr Asp Leu Leu Asn
145 150 155 160

Ile Phe Glu Leu Asn Gly Leu Pro Ser Glu Asp Asn Pro Tyr Leu Phe
165 170 175

Asn Gly Asp Phe Val Asp Arg Gly Ser Phe Ser Leu Glu Val Ile Leu
180 185 190

Thr Leu Phe Ala Phe Lys Cys Met Cys Pro Ser Ala Ile His Leu Ala
195 200 205

Arg Gly Asn His Glu Ser Lys Ser Met Asn Lys Ile Tyr Gly Phe Glu
210 215 220

Gly Glu Val Arg Ser Lys Leu Ser Glu Ile Phe Val Glu Leu Phe Ala
225 230 235 240

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Glu Val Phe Cys Cys Leu Pro Leu Ala His Val Ile Asn Glu Lys Val
245 250 255

Phe Val Val His Gly Gly Leu Phe Ser Val Asp Gly Val Lys Leu Ser
260 265 270

Asp Ile Arg Ala
275

<210> 1630
<211> 151
<212> PRT
<213> Oryza sativa

<400> 1630
Met Ala Ala Ala Thr Val Gly Val Leu Leu Arg Leu Leu Leu Leu Pro
1 5 10 15

Val Val Val Val Val Ser Leu Leu Val Gly Ala Ser Arg Ala Ala Asn
20 25 30

Val Thr Tyr Asp His Arg Ala Val Val Ile Asp Gly Val Arg Arg Val
35 40 45

Leu Val Ser Gly Ser Ile His Tyr Pro Arg Ser Thr Pro Asp Met Trp
50 55 60

Pro Gly Leu Ile Gln Lys Ser Lys Asp Gly Gly Leu Asp Val Ile Glu
65 70 75 80

Thr Tyr Val Phe Trp Asp Ile His Glu Ala Val Arg Gly Gln Tyr Asp
85 90 95

Phe Glu Gly Arg Lys Asp Leu Val Arg Phe Val Lys Ala Val Ala Asp
100 105 110

Ala Gly Leu Tyr Val His Leu Arg Ile Gly Pro Tyr Val Cys Ala Glu
115 120 125

Trp Asn Tyr Gly Gly Phe Pro Val Trp Leu His Phe Val Pro Gly Ile
130 135 140

Lys Phe Arg Thr Asp Asn Glu
145 150

<210> 1631
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1631
Arg Ser Arg Asp Asp Gly Thr Ala Gly Ala Val Ala Leu Leu Thr Asp
1 5 10 15

Asp Gln Ile Ala Asp Asn Val Val Gly Val Leu Phe Ala Ala Gln Asp
20 25 30

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Thr Thr Ala Ser Val Leu Thr Trp Ile Leu Lys Tyr Leu His Asp Ser
35 40 45

Pro Lys Leu Leu Glu Ala Val Lys Ala Glu Gln Met Ala Ile Tyr Val
50 55 60

Ala Asn Glu Gly Gly Lys Arg Pro Leu Thr Trp Thr Gln Thr Arg Ser
65 70 75 80

Met Thr Leu Thr His Gln Val Ile Leu Glu Ser Leu Arg Met Ala Ser
85 90 95

Ile Ile Ser Phe Thr
100

<210> 1632

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1632

Val Ser Gly Val Glu Ala Lys Ile Val Asp Ile Lys Thr Leu Lys His
1 5 10 15

Leu Pro Pro Asn Gln Val Gly Glu Ile Cys Val Arg Gly Pro Asn Val
20 25 30

Met Gln Gly Tyr Phe Asn Asn Val Gln Ala Thr Glu Phe Thr Ile Lys
35 40 45

Gln Gly Trp Leu His Thr Gly Asp Leu Gly Tyr Phe Asp Gly Gly Gly
50 55 60

Gln Leu Phe Val Val Asp Arg Leu Lys Glu Leu Ile
65 70 75

<210> 1633

<211> 251

<212> PRT

<213> Solanum lycopersicum

<400> 1633

Met Ala Thr Pro Leu Gln Pro Phe Leu Thr Lys Thr His Lys Gln Asn
1 5 10 15

Pro Ile Ile Gly Phe Asn Ile Leu Thr Phe Val Val Thr Leu Phe Val
20 25 30

Ala Leu Phe Leu Val Val Phe Leu Val Ala Pro Tyr Gln Phe Glu Ile
35 40 45

Lys His Ser Asn Leu Cys Lys Thr Ala Gln Asp Ser Gln Leu Cys Leu
50 55 60

Ser Tyr Val Ser Glu Ile Val Thr Thr Glu Ser Asp Gly Val Thr Val
65 70 75 80

Leu Lys Lys Phe Leu Val Lys Tyr Val His Gln Met Asn Asn Ala Ile
 85 90 95
 Pro Val Val Arg Lys Ile Lys Asn Gln Ile Asn Asp Ile Arg Gln Gln
 100 105 110
 Gly Ala Leu Thr Asp Cys Leu Glu Leu Leu Asp Gln Ser Val Asp Leu
 115 120 125
 Val Ser Asp Ser Ile Ala Ala Ile Asp Lys Arg Ser Arg Ser Glu His
 130 135 140
 Ala Asn Ala Gln Ser Trp Leu Ser Gly Val Leu Thr Asn His Val Thr
 145 150 155 160
 Cys Leu Asp Glu Leu Thr Ser Phe Ser Leu Ser Thr Lys Asn Gly Thr
 165 170 175
 Val Leu Asp Glu Leu Ile Thr Arg Ala Lys Val Ala Leu Ala Met Leu
 180 185 190
 Ala Ser Val Thr Thr Pro Asn Asp Glu Val Leu Arg Gln Gly Leu Gly
 195 200 205
 Lys Met Pro Tyr Trp Val Ser Ser Arg Asp Arg Lys Leu Met Glu Ser
 210 215 220
 Ser Gly Lys Asp Ile Ile Ala Asn Arg Val Val Ala Gln Asp Gly Thr
 225 230 235 240
 Gly Asp Tyr Gln Thr Leu Ala Glu Ala Val Ala
 245 250

 <210> 1634
 <211> 251
 <212> PRT
 <213> Oryza sativa

 <400> 1634
 Gln Gly Tyr Thr Cys Ile Gly Ile Val Gly Ile Lys Asp Pro Val Arg
 1 5 10 15
 Pro Gly Val Arg Gln Ser Val Ala Thr Cys Arg Ser Ala Gly Ile Ser
 20 25 30
 Val Arg Met Ile Thr Gly Asp Asn Ile Asp Thr Ala Lys Ala Ile Ala
 35 40 45
 Arg Glu Cys Gly Ile Leu Thr Lys Asp Gly Ile Ala Ile Glu Gly Ala
 50 55 60
 Glu Phe Arg Glu Lys Ser Ala Glu Glu Leu His Asp Leu Ile Pro Lys
 65 70 75 80

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Met Gln Val Leu Ala Arg Ser Ser Pro Leu Asp Lys His Thr Leu Val
85 90 95

Lys His Leu Arg Thr Ala Phe Asn Glu Val Val Ala Val Thr Gly Asp
100 105 110

Gly Thr Asn Asp Ala Pro Ala Leu Arg Glu Ala Asp Ile Gly Leu Ala
115 120 125

Met Gly Ile Ala Gly Thr Glu Val Ala Lys Glu Ser Ala Asp Val Val
130 135 140

Ile Leu Asp Asp Asn Phe Ser Thr Ile Val Thr Val Ala Lys Trp Gly
145 150 155 160

Arg Ser Val Tyr Val Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr
165 170 175

Val Asn Val Val Ala Leu Leu Val Asn Phe Thr Ser Ala Cys Phe Thr
180 185 190

Gly Asp Ala Pro Leu Thr Ala Val Gln Leu Leu Trp Val Asn Met Ile
195 200 205

Met Asp Thr Leu Gly Ala Leu Ala Leu Ala Thr Glu Pro Pro Asn Asn
210 215 220

Asn Leu Met Lys Lys Ala Pro Val Gly Arg Lys Gly Lys Phe Ile Thr
225 230 235 240

Asn Val Met Trp Arg Asn Ile Val Gly Gln Ser
245 250

<210> 1635

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1635

Ile Lys Leu Gly Gly Ser His Ser Ala Gln Val Leu Leu Ala Arg Asp
1 5 10 15

Thr Arg Pro Thr Gly Glu Tyr Leu Leu Asp Val Ala Val Lys Gly Val
20 25 30

Asn Ala Val Ile Gly Ala Val Ala Val Asp Met Gly Ile Leu Thr Thr
35 40 45

Pro Gln Leu His Trp Met Val Arg Ser Lys Asn Lys Gly Leu Lys Ser
50 55 60

Ser Glu Thr Asp Tyr Phe Ser Gln Val Ile Asp Ser
65 70 75

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<210> 1636

<211> 226

<212> PRT

<213> Oryza sativa

<400> 1636

Met Gly Val Pro Pro Val Asp Trp Glu Ala Glu Ser Tyr Pro Ala Tyr
1 5 10 15

Ser Asp Phe Ala Ala Ile Pro Leu Phe Ala Val Phe Leu Phe Ala Val
20 25 30

Arg Tyr Leu Leu Asp Arg Phe Val Phe Glu Trp Leu Ala Arg Arg Leu
35 40 45

Ile Phe Glu Lys Asp Glu Lys Leu Asp Leu Ala Thr His Ala Gly Arg
50 55 60

Ile Lys Ile Arg Lys Phe Lys Glu Ser Ala Trp Lys Cys Ile Tyr Phe
65 70 75 80

Leu Ser Ala Glu Leu Leu Ala Leu Ser Val Thr Tyr Lys Glu Ser Trp
85 90 95

Phe Thr Ser Thr Lys Asn Phe Trp Val Gly Pro Gly Asp Gln Val Trp
100 105 110

Pro Asp Gln Arg Ile Lys Phe Lys Leu Lys Leu Val Tyr Met Tyr Ala
115 120 125

Ala Gly Phe Tyr Thr Tyr Ser Ile Phe Ala Leu Gln Phe Trp Glu Ile
130 135 140

Lys Arg Ser Asp Phe Gly Ile Ser Met Val His His Val Val Ser Val
145 150 155 160

Ile Leu Ile Ala Leu Ser Tyr Ile Phe Arg Phe Ala Arg Val Gly Ser
165 170 175

Ile Val Leu Ala Ile His Asp Ala Ser Asp Val Phe Leu Glu Leu Gly
180 185 190

Lys Ile Ser Lys Tyr Ser Gly Tyr Gln Leu Leu Ala Asp Val Ser Phe
195 200 205

Leu Ile Phe Val Cys Ser Trp Ala Val Leu Arg Leu Ile Tyr Tyr Pro
210 215 220

Phe Trp
225

<210> 1637

<211> 101

<212> PRT

<213> Solanum lycopersicum

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<400> 1637

Ile Val Lys Arg Leu Gln Ala Arg Lys His Ile Cys Gly Met Thr Gly
1 5 10 15

Asp Gly Val Asn Asp Ala Pro Ala Leu Lys Lys Ala Asp Ile Gly Ile
20 25 30

Ala Val Asp Asp Ala Thr Asp Ala Ala Arg Ser Ala Ser Asp Ile Val
35 40 45

Leu Thr Glu Pro Gly Leu Ser Val Ile Ile Ser Ala Val Leu Thr Ser
50 55 60

Arg Ala Ile Phe Gln Arg Met Lys Asn Tyr Thr Ile Tyr Ala Val Ser
65 70 75 80

Ile Thr Ile Arg Ile Val Leu Gly Phe Met Leu Leu Ala Leu Ile Trp
85 90 95

Lys Phe Asp Phe Pro
100

<210> 1638

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1638

Cys Thr Lys Gln Val Phe Lys Met Asn Lys Gln Ile Leu Ala Asn Leu
1 5 10 15

Ala Leu Lys Ile Asn Val Lys Val Gly Gly Arg Asn Thr Val Leu Val
20 25 30

Asp Ala Val Ser Arg Arg Ile Pro Leu Val Thr Asp Arg Pro Thr Ile
35 40 45

Ile Phe Gly Ala Asp Val Thr His Pro His Pro Gly Glu Asp Ser Ser
50 55 60

Pro Ser Ile Ala Ala Val Val Ala Ser Gln Asp Trp
65 70 75

<210> 1639

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1639

Cys Ile Gly Ile Val Gly Ile Lys Asp Pro Val Arg Pro Gly Val Arg
1 5 10 15

Glu Ser Val Ala Thr Cys Arg Ser Ala Gly Ile Met Val Arg Met Val
20 25 30

Thr Gly Asp Asn Ile Asn Thr Ala Lys Ala Ile Ala Arg Glu Cys Gly
35 40 45

Ile Leu Thr Glu Asp Gly Leu Ala Ile Glu Gly Pro Glu Phe Arg Glu
50 55 60

Lys Ser Leu Asp Glu Leu Leu Lys Leu Ile Pro Lys Ile Gln Val Met
65 70 75 80

Ala Arg Ser Ser Pro Leu Asp Lys His Thr Leu Val Lys His Leu Arg
85 90 95

Thr Thr Phe Asn Glu Val Val Ala Val Thr Gly Asp Gly Thr Asn Asp
100 105 110

Ala Pro Ala Leu His Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala
115 120 125

Gly Thr Glu Val Ala Lys Glu Ser Ala Asp Val Ile Ile Leu Asp Asp
130 135 140

Asn Phe Ser Thr Ile Val Thr Val Ala Lys Trp Gly Arg Ser Val Tyr
145 150 155 160

Val Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val Asn Val Val
165 170 175

Ala Leu Leu Val Asn Phe Ser Ser Ala Cys Phe Thr Gly Asn Ala Pro
180 185 190

Leu Thr Ala Val Gln Leu Leu Trp Val Asn Met Ile Met Asp Thr Leu
195 200 205

Gly Ala Leu Ala Leu Ala Thr Glu Pro Pro Asn Asp Asp Leu Met Lys
210 215 220

Arg Glu Pro Val Gly Arg Thr Gly Lys Phe Ile Thr Asn Val Met Trp
225 230 235 240

Arg Asn Ile Leu Gly Gln Ser Phe Tyr Gln Phe Ile Val Met Trp Tyr
245 250 255

Leu Gln Thr Gln Gly Lys Ser Met Phe Gly Leu Asp Gly Pro Asp Ala
260 265 270

Glu Val Val Leu
275

<210> 1640

<211> 76

<212> PRT

<213> Zea mays

<400> 1640

Thr Met Asp Ala Gly Ser Ser Asn Val Thr Val Thr Val Ser Asp Lys
1 5 10 15

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Asp Val Leu Leu Glu Val Gln Cys Arg Trp Glu Glu Leu Leu Met Thr
20 25 30

Arg Val Phe Asp Ala Ile Lys Ser Leu His Leu Asp Val Leu Ser Val
35 40 45

Gln Ala Ser Ala Pro Asp Gly Phe Met Gly Leu Lys Ile Arg Ala Gln
50 55 60

Phe Ala Gly Ser Gly Ala Val Val Pro Trp Met Ile
65 70 75

<210> 1641

<211> 226

<212> PRT

<213> Oryza sativa

<400> 1641

Ile Ser Asp Asp Gly Tyr Thr Leu Ile Ala Val Phe Gly Ile Lys Asp
1 5 10 15

Pro Val Arg Pro Gly Val Lys Asp Ala Val Arg Thr Cys Met Ala Ala
20 25 30

Gly Ile Arg Val Arg Met Val Thr Gly Asp Asn Ile Asn Thr Ala Lys
35 40 45

Ala Ile Ala Lys Glu Cys Gly Ile Leu Thr Glu Asp Gly Ile Ala Ile
50 55 60

Glu Gly Gln Gln Leu Asn Asn Lys Ser Ser Asp Glu Leu Lys Glu Leu
65 70 75 80

Leu Pro Lys Ile Gln Val Ile Ala Arg Ser Leu Pro Met Asp Lys Tyr
85 90 95

Lys Leu Val Thr Ser Leu Lys Ser Met Tyr Gln Glu Val Val Ala Val
100 105 110

Thr Gly Asp Gly Thr Asn Asp Ala Pro Ala Leu His Glu Ser Asp Ile
115 120 125

Gly Leu Ala Met Gly Ile Thr Gly Thr Glu Val Ala Lys Glu Ser Ala
130 135 140

Asp Val Ile Ile Met Asp Asp Asn Phe Glu Thr Ile Val Asn Val Ala
145 150 155 160

Arg Trp Gly Arg Ala Val Tyr Leu Asn Ile Gln Lys Phe Val Gln Phe
165 170 175

Gln Leu Thr Val Asn Ile Val Ala Leu Ile Val Asn Phe Val Ser Ala
180 185 190

Cys Ile Ile Gly Ser Ala Pro Leu Thr Ala Val Gln Leu Trp Val
 195 200 205

Asn Met Ile Met Asp Thr Leu Gly Ala Leu Ala Leu Ala Thr Glu Pro
 210 215 220

Pro Asn
 225

<210> 1642
 <211> 201
 <212> PRT
 <213> Oryza sativa

<400> 1642
 His Ile Phe Gly Leu Ser Val Ile Thr Tyr Ala Gln Leu His Arg Gly
 1 5 10 15

Asn Ala Ile Ile Ala Met Ser Arg Phe Asp Ile Asn Ser Leu Met Glu
 20 25 30

Ala Val Gln Arg His Arg Val Thr His Leu Phe Cys Val Pro Pro Val
 35 40 45

Ile Ile Ala Leu Ala Lys His Gly Lys Ala Gly Lys Tyr Asp Leu Ser
 50 55 60

Ser Leu Lys Phe Ile Gly Ser Gly Ala Ala Pro Leu Gly Lys Asp Val
 65 70 75 80

Met Glu Val Val Ala Lys Lys Phe Pro Asp Ser Glu Ile Val Gln Gly
 85 90 95

Tyr Gly Met Thr Glu Thr Cys Gly Ile Ile Ser Leu Glu Tyr Pro Glu
 100 105 110

Lys Gly Gln Ala Arg Glu Phe Gly Ser Thr Gly Thr Leu Val Ser Gly
 115 120 125

Val Glu Ala Lys Ile Val Asp Ile Lys Thr Leu Lys His Leu Pro Pro
 130 135 140

Asn Gln Val Gly Glu Ile Cys Val Arg Gly Pro Asn Val Met Gln Gly
 145 150 155 160

Tyr Phe Asn Asn Val Gln Ala Thr Glu Phe Thr Ile Lys Gln Gly Trp
 165 170 175

Leu His Thr Gly Asp Leu Gly Tyr Phe Asp Gly Gly Gly Gln Leu Phe
 180 185 190

Val Val Asp Arg Leu Lys Glu Leu Ile
 195 200

<210> 1643

<211> 101

<212> PRT

<213> *Oryza sativa*

<400> 1643

Asp Lys Leu Ala Thr Ser Pro Ala Asp Gly Leu Ser Thr Ala Glu Glu
 1 5 10 15

Ser Ile Lys Arg Arg Gln Asp Val Tyr Gly Leu Asn Lys Phe Thr Glu
 20 25 30

Ser Glu Val Arg Ser Phe Trp Val Phe Val Trp Glu Ala Leu Gln Asp
 35 40 45

Thr Thr Leu Ile Ile Leu Ala Val Cys Ala Phe Val Ser Leu Val Val
 50 55 60

Gly Ile Ala Met Glu Gly Trp Pro Lys Gly Ala His Asp Gly Leu Gly
 65 70 75 80

Ile Val Ala Ser Ile Leu Leu Val Val Phe Val Thr Ala Thr Ser Asp
 85 90 95

Tyr Arg Gln Ser Leu
 100

<210> 1644

<211> 76

<212> PRT

<213> *Solanum lycopersicum*

<400> 1644

Ile Ala Ile Glu Leu Phe Gln Thr Phe Val Ile Arg Gly Leu Ile Arg
 1 5 10 15

Gln His Leu Ala Ser Asn Ile Gly Val Ala Lys Ser Lys Ile Arg Glu
 20 25 30

Lys Glu Pro Ile Val Trp Glu Ile Leu Gln Glu Val Met Gln Gly His
 35 40 45

Pro Val Leu Leu Asn Arg Ala Pro Thr Leu His Arg Leu Gly Ile Gln
 50 55 60

Ala Phe Gln Pro Val Leu Val Glu Gly Arg Ala Ile
 65 70 75

<210> 1645

<211> 76

<212> PRT

<213> *Zea mays*

<400> 1645

Ile Ser Ser Leu Val Asp Val Gly Gly Gly Ile Gly Ala Ala Ala Gln
 1 5 10 15

Ala Ile Ser Lys Ala Phe Pro His Val Lys Cys Ser Val Leu Asp Leu
 20 25 30

Ala His Val Val Ala Lys Ala Pro Thr His Thr Asp Val Gln Phe Ile
35 40 45

Ala Gly Asp Met Phe Glu Ser Ile Pro Pro Ala Asp Ala Val Leu Leu
50 55 60

Lys Ser Val Leu His Asp Trp Asp His Asp Asp Cys
65 70 75

<210> 1646
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1646
Ile Gly Asp Val Val Pro Ala Asp Gly Leu Phe Ile Ser Gly Asp Cys
1 5 10 15

Leu Met Ile Asp Glu Ser Ser Leu Ser Gly Glu Ser Glu Pro Val Asn
20 25 30

Ile Ser Glu Glu Arg Pro Phe Leu His Ala Gly Asn Lys Val Val Asp
35 40 45

Gly Ala Ala Lys Met Leu Val Thr Ala Val Gly Thr Arg Thr Glu Trp
50 55 60

Gly Lys Ile Met Gly Thr Leu Asn Gly Asp Gly Val Asp Glu Thr Pro
65 70 75 80

Leu Gln Val Lys Leu Asn Gly Val Ala Thr Ile Ile Gly Gln Ile Gly
85 90 95

Leu Val Phe Ala Val
100

<210> 1647
<211> 276
<212> PRT
<213> Oryza sativa

<400> 1647
Leu Ile Ala Ile Phe Gly Ile Lys Asp Pro Val Arg Pro Gly Val Lys
1 5 10 15

Asp Ala Val Lys Thr Cys Met Ser Ala Gly Ile Thr Val Arg Met Val
20 25 30

Thr Gly Asp Asn Ile Asn Thr Ala Lys Ala Ile Ala Lys Glu Cys Gly
35 40 45

Ile Leu Thr Glu Asp Gly Val Ala Ile Glu Gly Pro Glu Phe His Ser
50 55 60

Lys Ser Thr Glu Glu Met Arg Asp Leu Ile Leu Asn Ile Gln Val Met
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65				70				75				80			
Ala	Arg	Ser	Leu	Pro 85	Leu	Asp	Lys	His	Thr 90	Leu	Val	Thr	Asn	Leu 95	Arg
Gly	Met	Phe	Asp 100	Glu	Val	Val	Ser	Val 105	Thr	Gly	Asp	Gly	Thr 110	Asn	Asp
Ala	Pro	Ala 115	Leu	His	Glu	Ala	Asp 120	Ile	Gly	Leu	Ala	Met 125	Gly	Ile	Ala
Gly	Thr 130	Glu	Val	Ala	Lys	Glu 135	Ser	Ala	Asp	Val	Ile 140	Val	Leu	Asp	Asp
Asn 145	Phe	Thr	Thr	Ile	Ile 150	Asn	Val	Ala	Arg	Trp 155	Gly	Arg	Ala	Val	Tyr 160
Ile	Asn	Ile	Gln	Lys 165	Phe	Val	Gln	Phe	Gln 170	Leu	Thr	Val	Asn	Ile 175	Val
Ala	Leu	Val	Ile 180	Asn	Phe	Val	Ser	Ala 185	Cys	Ile	Ile	Gly	Ser 190	Ala	Pro
Leu	Thr	Ala 195	Val	Gln	Leu	Leu	Trp 200	Val	Asn	Met	Ile	Met 205	Asp	Thr	Leu
Gly	Ala 210	Leu	Ala	Leu	Ala	Thr 215	Glu	Pro	Pro	Asn	Asp 220	Glu	Met	Met	Lys
Arg 225	Pro	Pro	Val	Arg	Lys 230	Gly	Glu	Ser	Phe	Ile 235	Thr	Lys	Phe	Met	Trp 240
Arg	Asn	Ile	Met	Gly 245	Gln	Ser	Leu	Tyr	Gln 250	Leu	Phe	Val	Leu	Gly 255	Ala
Leu	Met	Phe	Gly 260	Gly	Glu	Arg	Leu	Leu 265	Asn	Ile	Lys	Gly	Ala 270	Asp	Ser
Lys	Ser	Ile 275	Ile												
<210> 1648															
<211> 226															
<212> PRT															
<213> Zea mays															
<400> 1648															
Lys 1	Met	Leu	Thr	Lys 5	Gly	Glu	Glu	Ala	Pro 10	Ser	Val	Gln	Arg	Gly 15	Val
Val	Met	Thr	Ala 20	Val	Ala	His	Asn	Leu 25	Leu	Val	Gln	Ala	Leu 30	Phe	Met
Asp	Gly	Arg 35	Ala	Ser	Asp	Ala	Tyr 40	Val	Val	Leu	Glu	Glu 45	Met	Gln	Asn

Asn Gly Pro Phe Pro Asp Val Phe Thr Tyr Thr Leu Lys Val Leu Lys
50 55 60

Asn Gly Gln Trp Ala Glu Glu Glu Ser Thr Ile Leu Val Pro Gly Asp
65 70 75 80

Ile Ile Gly Val Lys Leu Gly Asp Ile Ile Ser Ala Asp Thr Arg Leu
85 90 95

Leu Glu Gly Asp Pro Leu Lys Ile Asp Gln Ser Ala Leu Thr Gly Asn
100 105 110

Phe Cys Ile Cys Ser Ile Val Ala Gly Met Leu Val Glu Phe Ile Val
115 120 125

Met Tyr Pro Ile Gln Asp Met Val Tyr Arg Pro Arg Ile Asp Lys Leu
130 135 140

Leu Val Leu Leu Ile Gly Gly Ile Pro Ile Ala Met Pro Thr Val Leu
145 150 155 160

Ser Val Thr Met Ser Ile Gly Ala Tyr Arg Leu Ala Gln Gln Gly Ala
165 170 175

Ile Thr Lys Arg Met Thr Thr Ile Glu Glu Met Ala Gly Met Asp Val
180 185 190

Pro Cys Ser Asp Lys Thr Gly Thr Leu Pro Trp Thr Lys Leu Thr Val
195 200 205

Ile Lys Ser Leu Val Asp Val Phe Gln Arg Gly Ala Asp Gln Asp Ala
210 215 220

Val Ile
225

<210> 1649
<211> 126
<212> PRT
<213> Solanum lycopersicum

<400> 1649
Ala Cys Gly Asn Phe Glu Leu Thr Asp Glu Pro Thr Trp Ile Val Asp
1 5 10 15

Pro Leu Asp Gly Thr Thr Asn Phe Val His Gly Phe Pro Phe Val Cys
20 25 30

Val Ser Ile Gly Leu Thr Ile Glu Lys Lys Pro Thr Val Gly Val Val
35 40 45

Tyr Asn Pro Ile Ile Asp Glu Leu Phe Thr Gly Ile Asp Gly Lys Gly
50 55 60

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Ala Phe Leu Asn Gly Lys Pro Ile Lys Val Ser Ser Gln Ser Glu Leu
65 70 75 80

Val Lys Ala Leu Leu Ala Thr Glu Ala Gly Thr Asn Arg Asp Lys Leu
85 90 95

Val Val Asp Ala Thr Thr Gly Arg Ile Asn Ser Leu Leu Phe Lys Val
100 105 110

Arg Ser Leu Arg Met Cys Gly Ser Cys Ala Leu Asn Leu Cys
115 120 125

<210> 1650

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1650

Thr Asp Ile Val Val Gly Ala Ala Cys Ala Asp Leu Arg His Gln Leu
1 5 10 15

Asp Val Ser Tyr Pro Val Thr Asn Gly Ile Val Gln Ser Trp Asp Asp
20 25 30

Met Gly His Ile Trp Asp His Ala Phe Tyr Ser Glu Leu Lys Val Asp
35 40 45

Pro Ser Glu Cys Lys Ile Leu Leu Thr Asp Pro Pro Leu Asn Pro Val
50 55 60

Lys Asn Arg Glu Lys Met Ile Glu Thr Met Phe Glu Lys Tyr Asn Phe
65 70 75 80

Ala Gly Val Phe Ile Gln Val Gln Ala Val Leu Ser Leu Tyr Ala Gln
85 90 95

Gly Leu Leu Thr Gly Leu Val Ile Asp Ser Gly Asp Gly Val Thr His
100 105 110

Val Val Pro Val Val Asp Gly Phe Ser Tyr Pro His Ile Thr
115 120 125

<210> 1651

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1651

Gly Thr Ile Cys Thr Asp Lys Thr Gly Thr Leu Thr Thr Asn His Met
1 5 10 15

Val Val Asp Lys Ile Trp Ile Ser Glu Val Ser Lys Ser Val Thr Ser
20 25 30

Asn Thr Ile Ser Gly Glu Leu Asn Ser Val Val Ser Ser Thr Leu
35 40 45

Ser Leu Leu Leu Gln Gly Ile Phe Glu Asn Thr Ser Ala Glu Val Val
 50 55 60

Lys Glu Lys Asp Gly Lys Gln Thr Val Leu Gly Thr
 65 70 75

<210> 1652

<211> 276

<212> PRT

<213> Zea mays

<400> 1652

Glu Lys Ile Glu Lys Met Phe Lys Gly Glu Lys Ile Asn Ser Thr Glu
 1 5 10 15

Asn Arg Ser Val Leu His Val Ala Leu Arg Ala Pro Arg Asp Ala Val
 20 25 30

Ile Asn Ser Asp Gly Val Asn Val Val Pro Glu Val Trp Ser Val Lys
 35 40 45

Asp Lys Ile Lys Gln Phe Ser Glu Thr Phe Arg Ser Gly Ser Trp Val
 50 55 60

Gly Ala Thr Gly Lys Pro Leu Thr Asn Val Val Ser Val Gly Ile Gly
 65 70 75 80

Gly Ser Phe Leu Gly Pro Leu Phe Val His Thr Ala Leu Gln Thr Asp
 85 90 95

Pro Glu Ala Ala Glu Cys Ala Lys Gly Arg Gln Leu Arg Phe Leu Ala
 100 105 110

Asn Val Asp Pro Val Asp Val Ala Arg Ser Ile Lys Asp Leu Asp Pro
 115 120 125

Glu Thr Thr Leu Val Val Val Val Ser Lys Thr Phe Thr Thr Ala Glu
 130 135 140

Thr Met Leu Asn Ala Arg Thr Leu Lys Glu Trp Ile Val Ser Ser Leu
 145 150 155 160

Gly Pro Gln Ala Val Ala Lys His Met Ile Ala Val Ser Thr Asn Leu
 165 170 175

Lys Leu Val Lys Glu Phe Gly Ile Asp Pro Asn Asn Ala Phe Ala Phe
 180 185 190

Trp Asp Trp Val Gly Gly Arg Tyr Ser Val Cys Ser Ala Val Gly Val
 195 200 205

Leu Pro Leu Ser Leu Gln Tyr Gly Phe Pro Ile Val Gln Lys Phe Leu
 210 215 220

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Glu Gly Ala Ser Ser Ile Asp Asn His Phe Tyr Ser Ser Ser Phe Glu
225 230 235 240

Lys Asn Ile Pro Val Leu Leu Gly Leu Leu Ser Val Trp Asn Val Ser
245 250 255

Phe Leu Gly Tyr Pro Ala Arg Ala Ile Leu Pro Tyr Ser Gln Ala Leu
260 265 270

Glu Lys Leu Ala
275

<210> 1653

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1653

Met Thr Ala Pro Thr Thr Arg Lys Asp Leu Met Ile Val Asn Met Gly
1 5 10 15

Pro Gln His Pro Ser Met His Gly Val Leu Arg Leu Ile Val Thr Leu
20 25 30

Asp Gly Glu Asp Val Val Asp Cys Glu Pro Ile Leu Gly Tyr Leu His
35 40 45

Arg Gly Met Glu Lys Ile Ala Glu Asn Arg Thr Ile Ile Gln Tyr Leu
50 55 60

Pro Tyr Val Thr Arg Trp Asp Tyr Leu Ala Thr Met Phe Thr Glu Ala
65 70 75 80

Ile Thr Ile Asn Gly Pro Glu Gln Leu Gly Asn Ile Gln Val Pro Lys
85 90 95

Arg Ala Ser Tyr Ile Arg Val Ile Met Leu Glu Leu Ser Arg Ile Ala
100 105 110

Ser His Leu Leu Trp Leu Gly Pro Phe Met Ala Asp Ile Gly
115 120 125

<210> 1654

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 1654

Ser Ile Asp Tyr Arg Ser Val Gly Ser Gly Pro Gly Ser Ser Tyr Val
1 5 10 15

Pro Thr Lys Thr Thr Ala Val Ser Ala Ala Ala Ala Leu Met Gly Val
20 25 30

Leu Val Val Tyr Met Gly Thr Lys Ala Ala Thr Met Val Ala Ala Ala
35 40 45

Ala Ser Ala Ala Leu Leu Val Val Leu Ile Thr Phe Leu Trp Gly Arg
50 55 60

Cys Ser Asp Gly Phe Phe Thr Lys Ser Arg Thr Leu Glu Leu Glu Val
65 70 75 80

Glu Pro Gln Tyr Ala Gly Ala Arg Ile Glu Gly Asp Val Val Thr Leu
85 90 95

Asp Phe Val Lys Lys Met Leu Asp Asp Phe Lys Asn Gln Lys Asn Leu
100 105 110

His Lys Arg Tyr Ala Tyr Gln Ile Val Leu Gln Thr Arg Glu Met Leu
115 120 125

Arg Ala Leu Pro Ser Leu Val Asp Ile Val Val Pro Glu Gly Lys His
130 135 140

Phe Thr Val Cys Gly Asp Val
145 150

<210> 1655

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 1655

Leu Asp Ile Gly Thr Phe Asn Leu His Ala Leu Phe Arg Glu Val His
1 5 10 15

Ser Leu Ile Lys Pro Ile Ala Ser Val Lys Lys Leu Phe Val Thr Leu
20 25 30

Ser Leu Ser Ser Asp Leu Pro Glu Tyr Val Ile Gly Asp Glu Lys Arg
35 40 45

Leu Met Gln Ile Leu Leu Asn Val Val Gly Asn Ala Val Lys Phe Ser
50 55 60

Lys Glu Gly Asn Val Ser Ile Ser Ala Phe Val Ala Lys Ser Asp Ser
65 70 75 80

Leu Arg Asp Pro Arg Ala Pro Glu Phe Phe Ala Val Pro Ser Glu Asn
85 90 95

His Phe Tyr Leu Arg Val Gln Ile Lys Asp Thr Gly Ile Gly Ile Thr
100 105 110

Pro Gln Asp Ile Pro Asn Leu Phe Ser Lys Phe Thr Gln Ser Gln Ala
115 120 125

Leu Ala Thr Thr Asn Ser Gly Gly Thr Gly Leu Gly Leu Ala Ile Cys
130 135 140

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Lys Arg Phe Val Asn Leu Met Glu Gly His Ile Trp Ile Glu Ser Glu
145 150 155 160

Gly Leu Gly Lys Gly Ser Thr Ala Ile Phe Ile Ile Lys Leu Gly Ile
165 170 175

<210> 1656

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 1656

Met Ala Asn Pro Gln Gln Pro Leu Leu Ile Lys Thr His Lys Gln Asn
1 5 10 15

Pro Ile Ile Ser Phe Lys Ile Leu Ser Phe Val Ile Thr Leu Phe Val
20 25 30

Ala Leu Phe Leu Val Ala Pro Tyr Gln Val Glu Ile Lys His Ser Asn
35 40 45

Leu Cys Lys Thr Ala Gln Asp Ser Gln Leu Cys Leu Ser Tyr Val Ser
50 55 60

Asp Leu Ile Ser Asn Glu Ile Val Thr Thr Glu Ser Asp Gly His Ser
65 70 75 80

Ile Leu Met Lys Phe Leu Val Asn Tyr Val His Gln Met Asn Asn Ala
85 90 95

Ile Pro Val Val Arg Lys Met Lys Asn Gln Ile Asn Asp Ile Arg Gln
100 105 110

His Gly Ala Leu Thr Asp Cys Leu Glu Leu Leu Asp Gln Ser Val Asp
115 120 125

Phe Ala Ser Asp Ser Ile Ala Ala Ile Asp Lys Arg Ser Arg Ser Glu
130 135 140

His Ala Asn Ala Gln Ser Trp Leu Ser Gly Val Leu Thr Asn His Val
145 150 155 160

Thr Cys Leu Asp Glu Leu Asp Ser Phe Thr Lys Ala Met Ile Asn Gly
165 170 175

<210> 1657

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1657

Leu Ile Pro Asn Ile Gln Val Met Ala Arg Ser Leu Pro Leu Asp Lys
1 5 10 15

His Thr Leu Val Thr Asn Leu Arg Gly Met Phe Asp Glu Val Val Ser
20 25 30

Val Thr Gly Asp Gly Thr Asn Asp Ala Pro Ala Leu His Glu Ala Asp
35 40 45

Ile Gly Leu Ala Met Gly Ile Ala Gly Thr Glu Val Ala Lys Glu Ser
50 55 60

Ala Asp Val Ile Val Leu Asp Asp Asn Phe Thr Thr Ile Ile Asn Val
65 70 75 80

Ala Arg Trp Gly Arg Ala Val Tyr Ile Asn Ile Gln Lys Phe Val Gln
85 90 95

Phe Gln Leu Thr Val
100

<210> 1658

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1658

Thr Leu Arg Arg Pro Val Arg Met Tyr Leu Asn Arg Asn Thr Asp Met
1 5 10 15

Ile Met Val Gly Gly Arg His Pro Met Lys Ala Arg Tyr Ser Val Gly
20 25 30

Phe Lys Ser Asp Gly Lys Ile Thr Ala Leu His Leu Asp Leu Leu Ile
35 40 45

Asn Ala Gly Ile Ser Ala Asp Ala Ser Pro Val Ile Pro Gly Thr Ile
50 55 60

Ile Ser Gly Leu Lys Lys Tyr Asn Trp Gly Ala Leu
65 70 75

<210> 1659

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1659

Ala Gly Ile Pro Glu Leu Ser Ala Ile Val Arg Lys Asp Lys Gly Ile
1 5 10 15

Glu Ile Gly Ala Ala Thr Ser Ile Ser Arg Thr Ile Glu Ile Leu Asn
20 25 30

Gln Glu Ser Glu Ser Thr Ser Ser Pro Asn Gly Ser Val Val Phe Arg
35 40 45

Lys Leu Ala Glu His Met Ser Lys Val Ala Ser Pro Phe Val Arg Asn
50 55 60

Thr Ala Ser Ile Gly Gly Asn Ile Ile Leu Ala His Lys Tyr Pro Phe
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Ala Ile Arg Thr Val Arg Ser Phe Ala Gln Glu Ser His Glu Val Leu
50 55 60

Arg Tyr Gly Glu Lys Val Asp Glu Thr Leu Lys Leu Gly Leu Lys Gln
65 70 75 80

Ala Lys Val Val Gly Met Phe Ser Gly Gly Leu Asn Ala Ala Ser Thr
85 90 95

Leu Ser Val Val Ile
100

<210> 1661

<211> 251

<212> PRT

<213> Zea mays

<400> 1661

Cys Val Lys Ala Phe Ala Thr Ile Asp Lys Leu Ala Leu Val Asn Val
1 5 10 15

Glu Gly Thr Gly Met Ala Gly Val Pro Gly Thr Ala Asn Ala Ile Phe
20 25 30

Gly Ala Val Lys Asp Val Gly Ala Asn Val Ile Met Ile Ser Gln Ala
35 40 45

Ser Ser Glu His Ser Val Cys Phe Ala Val Pro Glu Lys Glu Val Ala
50 55 60

Leu Val Ser Ala Ala Leu His Ala Arg Phe Arg Glu Ala Leu Ala Ala
65 70 75 80

Gly Arg Leu Ser Lys Val Glu Val Ile His Asn Cys Ser Ile Leu Ala
85 90 95

Thr Val Gly Leu Arg Met Ala Ser Thr Pro Gly Val Ser Ala Thr Leu
100 105 110

Phe Asp Ala Leu Ala Lys Ala Asn Ile Asn Val Arg Ala Ile Ala Gln
115 120 125

Gly Cys Ser Glu Tyr Asn Ile Thr Ile Val Leu Lys Gln Glu Asp Cys
130 135 140

Val Arg Ala Leu Arg Ala Ala His Ser Arg Phe Phe Leu Ser Lys Thr
145 150 155 160

Thr Leu Ala Val Gly Ile Ile Gly Pro Gly Leu Ile Gly Arg Thr Leu
165 170 175

Leu Asn Gln Leu Lys Asp Gln Ala Ala Val Leu Lys Glu Asn Met Asn
180 185 190

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Ile Asp Leu Arg Val Met Gly Ile Ala Gly Ser Arg Thr Met Leu Leu
195 200 205

Ser Asp Ile Gly Val Asp Leu Thr Gln Trp Lys Glu Lys Leu Gln Thr
210 215 220

Glu Ala Glu Pro Ala Asn Leu Asp Lys Phe Val His His Leu Ser Glu
225 230 235 240

Asn His Phe Phe Pro Asn Arg Val Leu Val Asp
245 250

<210> 1662

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1662

Met Phe Asn Glu Val Val Ala Val Thr Gly Asp Gly Thr Asn Asp Ala
1 5 10 15

Pro Ala Leu His Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala Gly
20 25 30

Thr Glu Val Ala Lys Glu Asn Ala Asp Val Ile Ile Met Asp Asp Asn
35 40 45

Phe Ser Thr Ile Ile Asn Val Ala Lys Trp Gly Arg Ser Val Tyr Ile
50 55 60

Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val
65 70 75

<210> 1663

<211> 226

<212> PRT

<213> Oryza sativa

<400> 1663

Ile Arg Asn Cys Asp Asn Phe Gln Val Asn Gln Asn Asp Val Glu Lys
1 5 10 15

Ile Ile Asp Trp Glu Asn Thr Ser Pro Lys Leu Ala Glu Ile Pro Phe
20 25 30

Lys Pro Ala Arg Val Leu Leu Gln Asp Phe Thr Gly Val Pro Ala Val
35 40 45

Val Asp Leu Ala Ala Met Arg Asp Ala Met Ala Lys Leu Gly Ser Asp
50 55 60

Ala Asn Lys Ile Asn Pro Leu Val Pro Val Asp Leu Val Ile Asp His
65 70 75 80

Ser Val Gln Val Asp Val Ala Arg Ser Pro Asn Ala Val Gln Ser Asn
85 90 95

Met Glu Leu Glu Phe Lys Arg Asn Asn Glu Arg Phe Gly Phe Leu Lys
100 105 110

Trp Gly Ser Thr Ala Phe His Asn Met Leu Val Val Pro Pro Gly Ser
115 125

Gly Ile Val His Gln Val Asn Leu Glu Tyr Leu Gly Arg Val Val Phe
130 135 140

Asn Thr Asp Gly Ile Met Tyr Pro Asp Ser Val Val Gly Thr Asp Ser
145 150 155 160

His Thr Thr Met Ile Asp Gly Leu Gly Val Ala Gly Trp Gly Val Gly
165 170 175

Gly Ile Glu Ala Glu Ala Thr Met Leu Gly Gln Pro Met Ser Met Val
180 185 190

Leu Pro Gly Val Val Gly Phe Lys Leu Thr Gly Lys Leu Gln Asn Gly
195 200 205

Val Thr Ala Thr Asp Leu Val Leu Thr Val Thr Gln Met Leu Arg Lys
210 215 220

His Gly
225

<210> 1664
<211> 151
<212> PRT
<213> Zea mays

<400> 1664
Ala Arg Ala Thr Ile Gln Val Tyr Glu Glu Thr Ala Gly Leu Met Val
1 5 10 15

Asn Asp Pro Val Leu Arg Thr Arg Lys Pro Leu Ser Val Glu Leu Gly
20 25 30

Pro Gly Ile Leu Gly Asn Ile Phe Asp Gly Ile Gln Arg Pro Leu Lys
35 40 45

Thr Ile Ala Ile Lys Ser Gly Asp Val Tyr Ile Pro Arg Gly Val Ser
50 55 60

Val Pro Ala Leu Asp Lys Asp Val Leu Trp Glu Phe Gln Pro Thr Lys
65 70 75 80

Leu Gly Val Gly Asp Val Ile Thr Gly Gly Asp Leu Tyr Ala Thr Val
85 90 95

Phe Glu Asn Thr Leu Met Gln His His Val Ala Leu Pro Pro Gly Ser
100 105 110

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Met Gly Lys Ile Ser Tyr Ile Ala Pro Ala Gly Gln Tyr Asn Leu Gln
115 120 125

Asp Thr Val Leu Glu Leu Glu Phe Gln Gly Ile Lys Lys Lys Phe Thr
130 135 140

Met Leu Gln Thr Trp Pro Val
145 150

<210> 1665
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1665
Glu Val Val Ser Val Thr Gly Asp Gly Thr Asn Asp Ala Pro Ala Leu
1 5 10 15

His Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala Gly Thr Glu Val
20 25 30

Ala Lys Glu Ser Ala Asp Val Ile Val Leu Asp Asp Asn Phe Thr Thr
35 40 45

Ile Ile Asn Val Ala Arg Trp Gly Arg Ala Val Tyr Ile Asn Ile Gln
50 55 60

Lys Phe Val Gln Phe Gln Leu Thr Val Asn Ile Val
65 70 75

<210> 1666
<211> 276
<212> PRT
<213> Oryza sativa

<400> 1666
Ser Gly Met Tyr Asp Gly Val Gly Ile Met Leu Thr Ile Leu Leu Val
1 5 10 15

Val Met Ile Thr Ala Ala Ser Asp Tyr Lys Gln Ser Leu Gln Phe Arg
20 25 30

Asp Leu Asp Lys Glu Lys Lys Lys Ile Asp Val Gln Val Thr Arg Asp
35 40 45

Gly Tyr Arg Gln Lys Val Ser Ile Tyr Asp Ile Val Val Gly Asp Ile
50 55 60

Val His Leu Ser Ile Gly Asp Gln Val Pro Ala Asp Gly Leu Phe Ile
65 70 75 80

Asp Gly Tyr Ser Phe Val Val Asp Glu Ser Asn Leu Ser Gly Glu Ser
85 90 95

Glu Pro Val His Val Ser Thr Ala Asn Arg Phe Leu Leu Gly Gly Thr
100 105 110

Lys Val Gln Asp Gly Ser Ala Arg Met Leu Val Thr Ala Val Gly Met
 115 120 125
 Arg Thr Glu Trp Gly Asn Leu Met Glu Thr Leu Ser Gln Gly Gly Glu
 130 135 140
 Asp Glu Thr Pro Leu Gln Val Lys Leu Asn Gly Val Ala Thr Ile Ile
 145 150 155 160
 Gly Lys Ile Gly Leu Ala Phe Ala Val Leu Thr Phe Thr Val Leu Met
 165 170 175
 Ala Arg Phe Leu Leu Gly Lys Ala Gly Ala Pro Gly Gly Leu Leu Arg
 180 185 190
 Trp Arg Met Val Asp Ala Leu Ala Val Leu Asn Phe Phe Ala Val Ala
 195 200 205
 Val Thr Ile Ile Val Val Ala Val Pro Glu Gly Leu Pro Leu Ala Val
 210 215 220
 Thr Leu Ser Leu Ala Phe Ala Met Lys Lys Leu Met Gln Glu Arg Ala
 225 230 235 240
 Leu Val Arg His Leu Ser Ala Cys Glu Thr Met Gly Ser Ala Ser Cys
 245 250 255
 Ile Cys Thr Asp Lys Thr Gly Thr Leu Thr Thr Asn His Met Val Val
 260 265 270
 Glu Lys Ile Trp
 275

 <210> 1667
 <211> 76
 <212> PRT
 <213> Solanum lycopersicum

 <400> 1667
 Met Glu Ala Asn Lys Ser Met Val Lys Leu Val Ala Phe Leu Ile Ile
 1 5 10 15

 Leu Val Ser Ser Cys Phe Gln Ser Leu Thr Ala Gln Asp Leu Glu Ile
 20 25 30

 Glu Val Ser Asp Gly Leu Asn Val Leu Gln Val His Asp Val Ser Gln
 35 40 45

 Ser Phe Cys Pro Gly Val Thr Lys Glu Ser Trp Pro Glu Leu Leu Gly
 50 55 60

 Thr Pro Ala Lys Phe Ala Lys Gln Ile Ile Gln Lys
 65 70 75

<210> 1668

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1668

Glu Val Val Ala Val Thr Gly Asp Gly Thr Asn Asp Ala Pro Ala Leu
 1 5 10 15

His Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala Gly Thr Glu Val
 20 25 30

Ala Lys Glu Ser Ala Asp Val Ile Ile Leu Asp Asp Asn Phe Ser Thr
 35 40 45

Ile Val Thr Val Ala Lys Trp Gly Arg Ser Val Tyr Val Asn Ile Gln
 50 55 60

Lys Phe Val Gln Phe Gln Leu Thr Val Asn Val Val
 65 70 75

<210> 1669

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 1669

Met Ala Thr Pro Leu Gln Pro Phe Leu Thr Lys Thr His Lys Gln Asn
 1 5 10 15

Pro Ile Ile Gly Phe Asn Ile Leu Thr Phe Val Val Thr Leu Phe Val
 20 25 30

Ala Leu Phe Leu Val Val Phe Leu Val Ala Pro Tyr Gln Phe Glu Ile
 35 40 45

Lys His Ser Asn Leu Cys Lys Thr Ala Gln Asp Ser Gln Leu Cys Leu
 50 55 60

Ser Tyr Val Ser Glu Ile Val Thr Thr Glu Ser Asp Gly Val Thr Val
 65 70 75 80

Leu Lys Lys Phe Leu Val Lys Tyr Val His Gln Met Asn Asn Ala Ile
 85 90 95

Pro Val Val Arg Lys Ile Lys Asn Gln Ile Asn Asp Ile Arg Gln Gln
 100 105 110

Gly Ala Leu Thr Asp Cys Leu Glu Leu Leu Asp Gln Ser Val Asp Leu
 115 120 125

Val Ser Asp Ser Ile Ala Ala Ile Asp Lys Arg Ser Arg Ser Glu His
 130 135 140

Ala Asn Ala Gln Ser Trp Leu
 145 150

<210> 1670

<211> 251

<212> PRT

<213> Oryza sativa

<400> 1670

Ser Ala Ile Val Arg Lys Asp Lys Gly Ile Glu Ile Gly Ala Ala Thr
 1 5 10 15

Ser Ile Ser Arg Thr Ile Glu Ile Leu Asn Gln Glu Ser Glu Leu Thr
 20 25 30

Ser Ser Pro Asn Gly Ser Val Val Phe Arg Lys Leu Ala Glu His Met
 35 40 45

Ser Lys Val Ala Ser Pro Phe Val Arg Asn Thr Ala Ser Ile Gly Gly
 50 55 60

Asn Ile Ile Leu Ala His Lys Tyr Pro Phe Arg Ser Asp Ile Ala Thr
 65 70 75 80

Ile Leu Leu Gly Ala Ala Ala Thr Val Asn Leu Gln Val Ser Ser Lys
 85 90 95

Thr Leu His Val Asn Leu Glu Gln Phe Leu Glu Gln Pro Pro Leu Asp
 100 105 110

His Ser Thr Leu Leu Leu Ser Ile Phe Ile Pro His Trp Ala Ser Asp
 115 120 125

Cys Lys Lys Glu His Thr Leu Val Phe Glu Thr Tyr Arg Ala Ala Pro
 130 135 140

Arg Pro Leu Gly Asn Ala Val Ser Tyr Val Asn Ser Ala Phe Leu Gly
 145 150 155 160

His Val Ser Leu Asp Lys Ser Ser Gly Asp Asn Ile Leu Ser Asn Leu
 165 170 175

His Leu Ala Phe Gly Ala Tyr Gly Thr Lys His Ala Ile Arg Ala Arg
 180 185 190

Lys Val Glu Glu Tyr Leu Thr Gly Lys Ile Leu Ser Ala Ser Val Val
 195 200 205

Leu Glu Ala Ile Arg Leu Leu Arg Glu Thr Ile Val Pro Val Glu Gly
 210 215 220

Thr Thr His Pro Glu Tyr Arg Val Ser Val Ala Val Gly Phe Leu Phe
 225 230 235 240

Ser Phe Leu Ser Pro Leu Cys Lys Gly Val Ile
 245 250

<210> 1671

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1671

Leu Pro Ile Asp Glu Leu Ile Glu Lys Ala Asp Gly Phe Ala Gly Val
 1 5 10 15

Phe Pro Glu His Lys Tyr Glu Ile Val Lys Arg Leu Gln Ala Arg Lys
 20 25 30

His Ile Cys Gly Met Thr Gly Asp Gly Val Asn Asp Ala Pro Ala Leu
 35 40 45

Lys Lys Ala Asp Ile Gly Ile Ala Val Asp Asp Ala Thr Asp Ala Ala
 50 55 60

Arg Ser Ala Ser Asp Ile Val Leu Thr Glu Pro Gly Leu Ser Val Ile
 65 70 75 80

Ile Ser Ala Val Leu Thr Ser Arg Ala Ile Phe Gln Arg Met Lys Asn
 85 90 95

Tyr Thr Ile Tyr Ala Val Ser Ile Thr Ile Arg Ile Val Leu Gly Phe
 100 105 110

Met Leu Leu Ala Leu Ile Trp Lys Phe Asp Phe Pro Pro Phe Met Val
 115 120 125

Leu Ile Ile Ala Ile Leu Asn Asp Gly Thr Ile Met Thr Ile Ser Lys
 130 135 140

Asp Arg Val Lys Pro Ser Pro Leu Pro Asp Ser Trp Lys Leu Ala Glu
 145 150 155 160

Ile Phe Thr Thr Gly Val Val Leu Gly Gly Tyr Leu Ala Met Met Thr
 165 170 175

Val Ile Phe Phe Trp Ala Ala Tyr Glu Thr Gln Phe Phe Pro Arg Val
 180 185 190

Phe Gly Val Ser Thr Leu Gln Arg Thr Ala Thr Asp Asp Phe Arg Lys
 195 200 205

Leu Ala Ser Ala Ile Tyr Leu Gln Val Ser Thr Ile Ser Gln Ala Leu
 210 215 220

Ile Phe
 225

<210> 1672

<211> 126

<212> PRT

<213> Oryza sativa

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<400> 1672

Ile Leu Pro Met Phe Pro Pro Val Phe His Lys Trp Phe Leu Thr Thr
1 5 10 15

Phe Ser Glu Pro Ala Ala Trp Ile Arg Ala Arg Ala Ala Tyr Ala His
20 25 30

Thr Thr Ala Val Trp Ser Met Val Gly His Ile Val Gly Leu Gly Asp
35 40 45

Arg His Gly Glu Asn Ile Leu Leu Asp Ser Thr Thr Gly Asp Cys Ile
50 55 60

His Val Asp Phe Ser Cys Leu Phe Asp Lys Gly Leu Leu Leu Glu Lys
65 70 75 80

Pro Glu Val Val Pro Phe Arg Phe Thr Gln Asn Met Val Asp Gly Leu
85 90 95

Gly Ile Thr Gly Tyr Glu Gly Val Phe Val Lys Val Cys Glu Ile Thr
100 105 110

Leu Ser Val Leu Arg Thr His Lys Glu Ala Leu Met Thr Val
115 120 125

<210> 1673

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1673

Ala Ile Cys Lys Arg Phe Val Asn Leu Met Glu Gly His Ile Trp Ile
1 5 10 15

Glu Ser Glu Gly Val Gly Lys Gly Ser Thr Ala Ile Phe Ile Val Lys
20 25 30

Leu Gly Ile Pro Gly Arg Leu Asn Glu Ser Lys Leu Pro Phe Thr Ala
35 40 45

Gly Leu Pro Ala Asn His Met Gln Met Thr Phe Gln Gly Leu Lys Val
50 55 60

Leu Val Met Asp Asp Asn Gly Phe Ser Arg Met Val Thr Lys Ser Leu
65 70 75 80

Leu Val His Leu Gly Cys Asp Val Thr Thr Ile Gly Ser Gly Asp Glu
85 90 95

Cys Leu Arg Ile Leu
100

<210> 1674

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1674

Ala Leu Gln Pro Arg Ser Ile Ser Leu Pro Ile Glu Gly Ile Ala Glu
 1 5 10 15

Ala Ala Ala Arg His Phe Leu Thr Ser Ile Thr Val Tyr Pro Ile Lys
 20 25 30

Ser Cys Ala Gly Phe Ser Val Asp Gln Trp Pro Leu Thr Ser Thr Gly
 35 40 45

Leu Leu His Asp Arg Glu Trp Ile Leu Lys Ser Thr Thr Gly Glu Ile
 50 55 60

Leu Thr Gln Lys Lys Val Pro Glu Met Cys Tyr Ile
 65 70 75

<210> 1675

<211> 201

<212> PRT

<213> Zea mays

<400> 1675

Gly Gly Gly Ala Trp Leu Gly Gly Gln Leu Phe Ser Ala Met Val Val
 1 5 10 15

Arg Lys Pro Ala His Leu Phe Leu Asp Glu Leu Gly Val Ala Tyr Asp
 20 25 30

Glu Ala Glu Asp Tyr Val Val Ile Lys His Ala Ala Leu Phe Thr Ser
 35 40 45

Thr Val Met Ser Leu Leu Leu Ala Arg Pro Asn Val Lys Leu Phe Asn
 50 55 60

Ala Val Ala Val Glu Asp Leu Ile Val Arg Gly Gly Arg Val Gly Gly
 65 70 75 80

Val Val Thr Asn Trp Ala Leu Val Ser Met Asn His Asp Thr Gln Ser
 85 90 95

Cys Met Asp Pro Asn Val Met Glu Ala Lys Val Val Val Ser Ser Cys
 100 105 110

Gly His Asp Gly Pro Phe Gly Ala Thr Gly Val Lys Arg Leu Gln Asp
 115 120 125

Ile Gly Met Ile Ser Ala Val Pro Gly Met Lys Ala Leu Asp Met Asn
 130 135 140

Thr Ala Glu Asp Glu Ile Val Arg Leu Thr Arg Glu Val Val Pro Gly
 145 150 155 160

Met Ile Val Thr Gly Met Glu Val Ala Glu Ile Asp Gly Ala Pro Arg
 165 170 175

Met Gly Pro Thr Phe Gly Ala Met Met Ile Ser Gly Gln Lys Ala Ala
180 185 190

His Leu Ala Leu Lys Ala Leu Gly Arg
195 200

<210> 1676

<211> 226

<212> PRT

<213> Oryza sativa

<400> 1676

Gly Tyr Thr Leu Ile Ala Val Phe Gly Ile Lys Asp Pro Leu Arg Pro
1 5 10 15

Gly Val Arg Glu Ala Val Ala Thr Cys His Ala Ala Gly Ile Asn Val
20 25 30

Arg Met Val Thr Gly Asp Asn Ile Asn Thr Ala Lys Ala Ile Ala Arg
35 40 45

Glu Cys Gly Ile Leu Thr Asp Asp Gly Ile Ala Ile Glu Gly Pro Glu
50 55 60

Phe Arg Asn Lys Asp Pro Asp Gln Met Arg Glu Ile Ile Pro Lys Ile
65 70 75 80

Gln Val Met Ala Arg Ser Leu Pro Leu Asp Lys His Thr Leu Val Thr
85 90 95

Asn Leu Arg Gly Met Phe Asn Glu Val Val Ala Val Thr Gly Asp Gly
100 105 110

Thr Asn Asp Ala Pro Ala Leu His Glu Ala Asp Ile Gly Leu Ala Met
115 120 125

Gly Ile Ala Gly Thr Glu Val Ala Lys Glu Asn Ala Asp Val Ile Ile
130 135 140

Met Asp Asp Asn Phe Ser Thr Ile Ile Asn Val Ala Lys Trp Gly Arg
145 150 155 160

Ser Val Tyr Ile Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val
165 170 175

Asn Val Val Ala Leu Met Val Asn Phe Ile Ser Ala Ser Phe Thr Gly
180 185 190

Ser Ala Pro Leu Thr Ile Val Gln Leu Leu Trp Val Asn Leu Ile Met
195 200 205

Asp Thr Leu Gly Ala Leu Ala Leu Ala Thr Glu Pro Pro Asn Asp Ala
210 215 220

Met Met
225

<210> 1677
<211> 251
<212> PRT
<213> Zea mays

<400> 1677
Ser Thr Pro Gly Val Ser Ala Ile Leu Phe Asp Ala Leu Ala Lys Ala
1 5 10 15

Asn Ile Asn Val Arg Ala Ile Ala Gln Gly Cys Ser Glu Tyr Asn Ile
20 25 30

Thr Val Val Leu Lys Gln Gln Asp Cys Val Arg Ala Leu Arg Ala Ala
35 40 45

His Ser Arg Phe Phe Leu Ser Lys Thr Thr Leu Ala Val Gly Ile Ile
50 55 60

Gly Pro Gly Leu Ile Gly Gly Ala Leu Leu Asn Gln Leu Lys Asn Gln
65 70 75 80

Thr Ala Val Leu Lys Glu Asn Met Asn Ile Asp Leu Arg Val Ile Gly
85 90 95

Ile Thr Gly Ser Ser Thr Met Leu Leu Ser Asp Thr Gly Ile Asp Leu
100 105 110

Thr Gln Trp Lys Gln Leu Leu Gln Lys Glu Ala Glu Pro Ala Asp Ile
115 120 125

Gly Ser Phe Val His His Leu Ser Asp Asn His Val Phe Pro Asn Lys
130 135 140

Val Leu Val Asp Cys Thr Ala Asp Thr Ser Val Ala Ser His Tyr Tyr
145 150 155 160

Asp Trp Leu Lys Lys Gly Ile His Val Ile Thr Pro Asn Lys Lys Ala
165 170 175

Asn Ser Gly Pro Leu Asp Gln Tyr Leu Lys Leu Arg Thr Met Gln Arg
180 185 190

Ala Ser Tyr Thr His Tyr Phe Tyr Glu Ala Thr Val Gly Ala Gly Leu
195 200 205

Pro Ile Ile Ser Thr Leu Arg Gly Leu Leu Glu Thr Gly Asp Lys Ile
210 215 220

Leu Arg Ile Glu Gly Ile Phe Ser Gly Thr Leu Ser Tyr Ile Phe Asn
225 230 235 240

Asn Phe Glu Gly Thr Arg Ala Phe Ser Asp Val
245 250

<210> 1678
<211> 126
<212> PRT
<213> Zea mays

<400> 1678
Leu Val Val Glu Ile Ser Leu Gln Pro Trp Lys Val Phe Lys Pro Asp
1 5 10 15

Gly Val Ile Leu Phe Ser Asp Ile Leu Thr Pro Leu Pro Gly Met Asn
20 25 30

Ile Pro Phe Asp Ile Val Lys Gly Lys Gly Pro Val Ile Tyr Asp Pro
35 40 45

Leu Arg Thr Ala Ala Ala Val Asn Glu Val Arg Glu Phe Val Pro Glu
50 55 60

Glu Trp Val Pro Tyr Val Gly Gln Ala Leu Asn Ile Leu Arg Gln Glu
65 70 75 80

Val Lys Asn Glu Ala Ala Val Leu Gly Phe Val Gly Ala Pro Phe Thr
85 90 95

Leu Ala Ser Tyr Cys Val Glu Gly Gly Ser Ser Lys Asn Phe Thr Leu
100 105 110

Ile Lys Lys Met Ala Phe Ser Glu Pro Ala Ile Leu His Asn
115 120 125

<210> 1679
<211> 176
<212> PRT
<213> Solanum lycopersicum

<400> 1679
Ala Ala Leu Met Ala Arg Leu Ala Pro Lys Ala Lys Val Leu Arg Asp
1 5 10 15

Gly Lys Trp Asp Glu Glu Asp Ala Ser Val Leu Val Pro Gly Asp Ile
20 25 30

Ile Ser Ile Lys Leu Gly Asp Ile Ile Pro Ala Asp Ala Arg Leu Leu
35 40 45

Glu Gly Asp Pro Leu Lys Ile Asp Gln Ser Ala Leu Thr Gly Glu Ser
50 55 60

Leu Pro Val Thr Lys Gly Pro Gly Asp Gly Val Tyr Ser Gly Ser Thr
65 70 75 80

Cys Lys Gln Gly Glu Ile Glu Ala Val Val Ile Ala Thr Gly Val His
85 90 95

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Thr Phe Phe Gly Lys Ala Ala His Leu Val Asp Ser Thr Asn Gln Val
100 105 110

Gly His Phe Gln Lys Val Leu Thr Ala Ile Gly Asn Phe Cys Ile Cys
115 120 125

Ser Ile Ala Val Gly Met Ile Ile Glu Ile Ile Val Met Tyr Pro Ile
130 135 140

Gln His Arg Lys Tyr Arg Pro Gly Ile Asp Asn Leu Leu Val Leu Leu
145 150 155 160

Ile Gly Gly Ile Pro Ile Ala Met Pro Thr Val Leu Ser Val Thr Met
165 170 175

<210> 1680

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1680

Ala Val Val Ser Val Ser Ile Ala Tyr Phe Gly Ile Phe Ile Ala Ser
1 5 10 15

Phe Leu Tyr Lys Pro Ile Tyr Ser Ser Leu Lys Asn Leu Glu Phe Ile
20 25 30

Asn Ser Phe Val Lys Lys Gly Pro Lys Arg Ile Leu Trp Asp Lys Ile
35 40 45

Leu Asn Gly Ile Tyr Asp Trp Ser Tyr Asn Arg Ala Tyr Ile Asp Ala
50 55 60

Phe Tyr Thr Arg Phe Phe Val Gly Gly Ile Arg Gly Leu Ala Glu Phe
65 70 75 80

Thr His Phe Val Asp Arg Arg Val Ile Asp Gly Met Thr Asn Gly Val
85 90 95

Gly Val Ile Ser Phe
100

<210> 1681

<211> 176

<212> PRT

<213> Zea mays

<400> 1681

Ile Gly Asp Gly Lys Ser Arg Phe Thr Ile Ser Gly Gln Pro Ile Phe
1 5 10 15

His Phe Val Gly Thr Ser Thr Phe Ser Glu Tyr Thr Val Ile His Val
20 25 30

Gly Cys Leu Ala Lys Ile Asn Pro Glu Ala Pro Leu Asp Lys Val Cys
35 40 45

Ile Leu Ser Cys Gly Ile Ser Thr Gly Leu Gly Ala Thr Leu Asn Val
50 55 60

Ala Lys Pro Ala Lys Gly Ser Thr Val Ala Ile Phe Gly Leu Gly Ala
65 70 75 80

Val Gly Leu Ala Ala Met Glu Gly Ala Arg Leu Ala Gly Ala Ser Arg
85 90 95

Ile Ile Gly Val Asp Ile Asn Pro Ala Lys Tyr Glu Gln Ala Lys Lys
100 105 110

Phe Gly Cys Thr Glu Phe Val Asn Pro Lys Asp His Asp Lys Pro Val
115 120 125

Gln Glu Val Leu Ile Glu Leu Thr Asn Gly Gly Val Asp Arg Ser Val
130 135 140

Glu Cys Thr Gly Asn Val Asn Ala Met Ile Ser Ala Phe Glu Cys Val
145 150 155 160

His Asp Gly Trp Gly Val Ala Val Leu Val Gly Val Pro His Lys Asp
165 170 175

<210> 1682

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1682

Thr Gly Glu Thr Arg Trp Arg Pro Phe Ala Thr Met Leu Ile Lys Leu
1 5 10 15

Val Asn Lys Cys Leu Ala Asp Gly Thr Leu Tyr Val Glu Gly Leu Val
20 25 30

Asn Met Pro Phe Val Ser Ala Ala Cys Ser Ile Ile Cys Tyr Gly Asp
35 40 45

Glu Ser Leu His Lys Val Cys Phe Asp Phe Ala Arg Ile Val Ala Thr
50 55 60

Val Ile Thr Val Glu Ile Leu Pro Val Glu Asn Ile
65 70 75

<210> 1683

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1683

Thr Gly Thr Ile Leu Tyr Ile Val Ile Ile Val Val Thr Gly Ser Val
1 5 10 15

Cys Thr Ala Leu Arg Ala Trp Leu Phe Asn Ser Ala Ser Glu Arg Val
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20

25

30

Val Ala Arg Leu Arg Lys Asp Leu Phe Ser His Leu Val Asn Gln Glu
35 40 45

Ile Ala Phe Phe Asp Val Thr Arg Thr Gly Glu Leu Leu Ser Arg Leu
50 55 60

Ser Glu Asp Thr Gln Ile Ile Lys Asn Ala Ala Thr Thr Asn Leu Ser
65 70 75 80

Glu Ala Leu Arg Asn Ile Thr Thr Thr Ser Ile Gly Leu Gly Phe Met
85 90 95

Phe Ala Thr Ser Trp Lys Leu Thr Leu Leu Ala Leu Val Ile Val Pro
100 105 110

Val Ile Ser Ile Ala Val Arg Lys Phe Gly Arg Phe Leu Arg Glu Leu
115 120 125

Ser His Gln Thr Gln Ala Ala Ala Ala Val Ala Ser Ser Ile Ala Glu
130 135 140

Glu Ser Phe Gly Ala Ile Arg Thr Val Arg Ser Phe Ala Gln Glu Ser
145 150 155 160

His Glu Val Leu Arg Tyr Gly Glu Lys Val Asp Glu Thr Leu Lys Leu
165 170 175

Gly Leu Lys Gln Ala Lys Val Val Gly Met Phe Ser Gly Gly Leu Asn
180 185 190

Ala Ala Ser Thr Leu Ser Val Val Ile
195 200

<210> 1684

<211> 126

<212> PRT

<213> Zea mays

<400> 1684

Met Ala Lys Asp Val Glu Gln Val Thr Glu Gln Gly Glu Tyr Ser Ala
1 5 10 15

Lys Asp Tyr His Asp Pro Pro Pro Ala Pro Leu Ile Asp Pro Asp Glu
20 25 30

Leu Thr Lys Trp Ser Leu Tyr Arg Ala Ala Ile Ala Glu Phe Ile Ala
35 40 45

Thr Leu Leu Phe Leu Tyr Ile Thr Val Leu Thr Ile Ile Gly Tyr Lys
50 55 60

Arg Gln Ser Asp Thr Lys Ile Pro Gly Asn Thr Glu Cys Asp Gly Val
65 70 75 80

Gly Ile Leu Gly Ile Ala Trp Ala Phe Gly Gly Met Ile Phe Ile Leu
85 90 95

Val Tyr Cys Thr Ala Gly Ile Ser Gly Gly His Ile Asn Pro Ala Val
100 105 110

Thr Phe Gly Leu Phe Leu Gly Arg Lys Val Ser Leu Val Arg
115 120 125

<210> 1685

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1685

Pro Tyr Val Ala Ala His Asn Met Ile Leu Thr His Ala Ala Val Val
1 5 10 15

Arg Leu Tyr Arg Glu Lys Tyr Gln Thr Leu Gln Lys Gly Ile Val Gly
20 25 30

Ile Asn Val Leu Ser Leu Trp Ser Tyr Pro Leu Thr Asp Ser Thr Ala
35 40 45

Asp Leu Gln Ala Ala Gln Arg Tyr Lys Asp Phe Thr Tyr Gly Trp Ile
50 55 60

Leu His Pro Leu Val Phe Gly Asp Tyr Pro Gln Val Met Lys Lys Ala
65 70 75 80

Ile Gly Ser Arg Leu Pro Ser Phe Ser Lys Val Gln Thr Glu Leu Val
85 90 95

Lys Gly Thr Leu Asp Phe Ile Gly Val Asn His Tyr Phe Ser Leu Tyr
100 105 110

Val Ser Asp Leu Pro Leu Ala Lys Gly Val Arg Asp Phe Ile
115 120 125

<210> 1686

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1686

Lys Asn Phe Trp Val Gly Pro Gly Asp Gln Val Trp Pro Asp Gln Arg
1 5 10 15

Ile Lys Phe Lys Leu Lys Leu Val Tyr Met Tyr Ala Ala Gly Phe Tyr
20 25 30

Thr Tyr Ser Ile Phe Ala Leu Gln Phe Trp Glu Ile Lys Arg Ser Asp
35 40 45

Phe Gly Ile Ser Met Val His His Val Val Ser Val Ile Leu Ile Ala

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50 55 60

Leu Ser Tyr Ile Phe Arg Phe Ala Arg Val Gly Ser Ile Val Leu Ala
65 70 75 80

Ile His Asp Ala Ser Asp Val Phe Leu Glu Leu Gly Lys Ile Ser Lys
85 90 95

Tyr Ser Gly Tyr Gln
100

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<400> 1689

Val Phe Asn Glu Gly Met Lys Asn His Ser Val Ile Ile Thr Lys Lys
1 5 10 15

Leu Leu Asp Phe Tyr Thr Gly Phe Glu Gly Val Ser Thr Leu Val Asp
20 25 30

Val Gly Gly Gly Val Gly Ala Thr Leu His Ala Ile Thr Ser Arg His
35 40 45

Pro His Ile Ser Gly Val Asn Phe Asp Leu Pro His Val Ile Ser Glu
50 55 60

Ala Pro Pro Phe Pro Gly Val Arg His Val Gly Gly Asp Met Phe Ala
65 70 75 80

Ser Val Pro Ala Gly Asp Ala Ile Leu Met Lys Trp Ile Leu His Asp
85 90 95

Trp Ser Asp Ala His Cys Ala Thr Leu Leu Lys Asn Cys Tyr Asp Ala
100 105 110

Leu Pro Glu Asn Gly Lys Val Ile Val Val Glu Cys Val Leu
115 120 125

<210> 1690

<211> 101

<212> PRT

<213> Zea mays

<400> 1690

Thr Ile Ile Ala Thr Gly Phe Ile Ala Ser Thr Pro Glu Asn Ile Pro
1 5 10 15

Thr Thr Leu Lys Arg Asp Gly Ser Asp Phe Ser Ala Ala Ile Ile Gly
20 25 30

Ser Leu Val Lys Ala Arg Gln Val Thr Ile Trp Thr Asp Val Asp Gly
35 40 45

Val Phe Ser Ala Asp Pro Arg Lys Val Ser Glu Ala Val Ile Leu Ser
50 55 60

Thr Leu Ser Tyr Gln Glu Ala Trp Glu Met Ser Tyr Phe Gly Ala Asn
65 70 75 80

Val Leu His Pro Arg Thr Ile Ile Pro Val Met Lys Tyr Asn Ile Pro
85 90 95

Ile Val Ile Arg Asn
100

<210> 1691

<211> 276

<212> PRT

<213> Zea mays

<400> 1691

Ser Phe Ala Thr Val Asp Asn Leu Ala Leu Val Asn Val Glu Gly Thr
 1 5 10 15

Gly Met Ala Gly Val Pro Gly Thr Ala Ser Ala Ile Phe Ser Ala Val
 20 25 30

Lys Asp Val Gly Ala Asn Val Ile Met Ile Ser Gln Ala Ser Ser Glu
 35 40 45

His Ser Val Cys Phe Ala Val Pro Glu Lys Glu Val Ala Val Val Ser
 50 55 60

Ala Glu Leu His Asp Arg Phe Arg Glu Ala Leu Ala Ala Gly Arg Leu
 65 70 75 80

Ser Lys Val Glu Val Ile Asn Gly Cys Ser Ile Leu Ala Ala Val Gly
 85 90 95

Leu Arg Met Ala Ser Thr Pro Gly Val Ser Ala Ile Leu Phe Asp Ala
 100 105 110

Leu Ala Lys Ala Asn Ile Asn Val Arg Ala Ile Ala Gln Gly Cys Ser
 115 120 125

Glu Tyr Asn Ile Thr Val Val Leu Lys Gln Gln Asp Cys Val Arg Ala
 130 135 140

Leu Arg Ala Ala His Ser Arg Phe Phe Leu Ser Lys Thr Thr Leu Ala
 145 150 155 160

Val Gly Ile Ile Gly Pro Gly Leu Ile Gly Gly Ala Leu Leu Asn Gln
 165 170 175

Leu Lys Asn Gln Thr Ala Val Leu Lys Glu Asn Met Asn Ile Asp Leu
 180 185 190

Arg Val Ile Gly Ile Thr Gly Ser Ser Thr Met Leu Leu Ser Asp Thr
 195 200 205

Gly Ile Asp Leu Thr Gln Trp Lys Gln Leu Leu Gln Lys Glu Ala Glu
 210 215 220

Pro Ala Asp Ile Gly Ser Phe Val His His Leu Ser Asp Asn His Val
 225 230 235 240

Phe Pro Asn Lys Val Leu Val Asp Cys Thr Ala Asp Thr Ser Val Ala
 245 250 255

Ser His Tyr Tyr Asp Trp Leu Lys Lys Gly Ile His Val Ile Thr Pro
 260 265 270

Asn Lys Lys Ala
275

<210> 1692

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1692

Phe Thr Gly Lys Glu Phe Met Ala Phe Ser Ser Gln Gln Gln Ile Glu
1 5 10 15

Ile Leu Ser Gln Asp Gly Gly Lys Val Phe Ser Arg Ala Glu Pro Arg
20 25 30

His Lys Gln Glu Ile Val Arg Met Leu Lys Glu Met Gly Glu Ile Val
35 40 45

Ala Met Thr Gly Asp Gly Val Asn Asp Ala Pro Ala Leu Lys Leu Ala
50 55 60

Asp Ile Gly Ile Ala Met Gly Ile Thr Gly Thr Glu Val Ala Lys Glu
65 70 75 80

Ala Ser Asp Met Val Leu Ala Asp Asp Asn Phe Ser Thr Ile Val Ser
85 90 95

Ala Val Ala Glu Gly Arg Ser Ile Tyr Asn Asn Met Lys Ala Phe Ile
100 105 110

Arg Tyr Met Ile Ser Ser Asn Val Gly Glu Val Ile Ser Ile Phe Leu
115 120 125

Thr Ala Val Leu Gly Ile Pro Glu Cys Leu Ile Pro Val Gln Leu Leu
130 135 140

Trp Val Asn Leu Val Thr Asp Gly Pro Pro Ala Thr Ala Leu Gly Phe
145 150 155 160

Asn Pro Ala Asp Val Asp Ile Met Gln Lys Pro Pro Arg Lys Asn Thr
165 170 175

Asp Ala Leu Ile Asn Ser Trp Val Phe Phe Arg Tyr Met Val Ile Gly
180 185 190

Ser Tyr Val Gly Ile Ala Thr Val Gly Ile Phe Ile Val Trp Tyr Thr
195 200 205

Gln Ala Ser Phe Leu Gly Ile Asn Ile Val Ser Asp Gly His Thr Leu
210 215 220

Val Glu
225

<210> 1693

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 1693

Arg Phe Val Thr Gly Gly Leu Ala Gly Gln Leu Tyr Leu Asn Val Lys
 1 5 10 15

Lys Trp Leu Gly Tyr Arg Asp Gln Val Leu His Ser Gly Glu Gly Pro
 20 25 30

Ile His Ala Val Lys Trp Arg Thr Ser Leu Val Ala Trp Ala Asn Asp
 35 40 45

Thr Gly Val Lys Val Tyr Asp Ala Ser Asn Asp Gln Arg Ile Thr Phe
 50 55 60

Ile Glu Arg Pro Arg Gly Ile Pro Arg Pro Glu Leu Leu Leu Pro His
 65 70 75 80

Ile Val Trp Gln Asp Asp Ser Leu Leu Val Ile Gly Trp Gly Thr Ser
 85 90 95

Val Lys Ile Ala Leu Ile Arg Thr Thr Gln Ser Lys Gly Ala Asn Gly
 100 105 110

Thr Tyr Lys His Met Ser Met Ser Ser Leu Asn Gln Val Asp Ile Val
 115 120 125

Ala Ser Phe Gln Thr Ser Tyr Phe Ile Ser Gly Ile Ala Pro Phe Gly
 130 135 140

Asp Ser Leu Val Ile Leu Ala
 145 150

<210> 1694

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 1694

Ile Val Lys Arg Leu Gln Ala Arg Lys His Ile Cys Gly Met Thr Gly
 1 5 10 15

Asp Gly Val Asn Asp Ala Pro Ala Leu Lys Lys Ala Asp Ile Gly Ile
 20 25 30

Ala Val Asp Asp Ala Thr Asp Ala Ala Arg Ser Ala Ser Asp Ile Val
 35 40 45

Leu Thr Glu Pro Gly Leu Ser Val Ile Ile Ser Ala Val Leu Thr Ser
 50 55 60

Arg Ala Ile Phe Gln Arg Met Lys Asn Tyr Thr Ile Tyr Ala Val Ser
 65 70 75 80

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Ile Thr Ile Arg Ile Val Leu Gly Phe Met Leu Leu Ala Leu Ile Trp
85 90 95

Lys Phe Asp Phe Pro Pro Phe Met Val Leu Ile Ile Ala Ile Leu Asn
100 105 110

Asp Gly Thr Ile Met Thr Ile Ser Lys Asp Arg Val Lys Pro Ser Pro
115 120 125

Leu Pro Asp Ser Trp Lys Leu Ala Glu Ile Phe Thr Thr Gly Val Val
130 135 140

Leu Gly Gly Tyr Leu Ala Met Met Thr Val Ile Phe Phe Trp Ala Ala
145 150 155 160

Tyr Lys Thr Asn Phe Phe Pro Arg Ile Phe Gly Val Ser Thr Leu Glu
165 170 175

Lys Thr Ala Thr Asp Asp Phe Arg Lys Leu Ala Ser Ala Ile Tyr Leu
180 185 190

Gln Val Ser Thr Ile Ser Gln Ala Leu
195 200

<210> 1695

<211> 251

<212> PRT

<213> Oryza sativa

<400> 1695

Val Ser Thr Ala Asn Arg Phe Leu Leu Gly Gly Thr Lys Val Gln Asp
1 5 10 15

Gly Ser Ala Arg Met Leu Val Thr Ala Val Gly Met Arg Thr Glu Trp
20 25 30

Gly Asn Leu Met Glu Thr Leu Ser Gln Gly Gly Glu Asp Glu Thr Pro
35 40 45

Leu Gln Val Lys Leu Asn Gly Val Ala Thr Ile Ile Gly Lys Ile Gly
50 55 60

Leu Ala Phe Ala Val Leu Thr Phe Thr Val Leu Met Ala Arg Phe Leu
65 70 75 80

Leu Gly Lys Ala Gly Ala Pro Gly Gly Leu Leu Arg Trp Arg Met Val
85 90 95

Asp Ala Leu Ala Val Leu Asn Phe Phe Ala Val Ala Val Thr Ile Ile
100 105 110

Val Val Ala Val Pro Glu Gly Leu Pro Leu Ala Val Thr Leu Ser Leu
115 120 125

Ala Phe Ala Met Lys Lys Leu Met Gln Glu Arg Ala Leu Val Arg His
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130
 135
 140
 Leu Ser Ala Cys Glu Thr Met Gly Ser Ala Ser Cys Ile Cys Thr Asp
 145 150 155 160
 Lys Thr Gly Thr Leu Thr Thr Asn His Met Val Val Glu Lys Ile Trp
 165 170 175
 Ala Ser Gly Ala Ala Gln Thr Met Ser Asn Ala Lys Gly Phe Asp Gln
 180 185 190
 Leu Thr Ser Ser Met Ser Glu Thr Phe Ala Lys Val Leu Leu Glu Gly
 195 200 205
 Val Phe His Cys Ser Gly Ser Glu Val Val Arg Gly Lys Asp Gly Arg
 210 215 220
 His Thr Ile Met Gly Thr Pro Thr Glu Thr Ala Ile Leu Glu Phe Gly
 225 230 235 240
 Leu Ala Val Glu Lys Arg Ala Arg Ile Glu His
 245 250
 <210> 1696
 <211> 176
 <212> PRT
 <213> Zea mays
 <400> 1696
 Glu Cys Ala Lys Gly Arg Gln Leu Arg Phe Leu Ala Asn Val Asp Pro
 1 5 10 15
 Val Asp Val Ala Arg Ser Ile Lys Asp Leu Asp Pro Glu Thr Thr Leu
 20 25 30
 Val Val Val Val Ser Lys Thr Phe Thr Thr Ala Glu Thr Met Leu Asn
 35 40 45
 Ala Arg Thr Leu Lys Glu Trp Ile Val Ser Ser Leu Gly Pro Gln Ala
 50 55 60
 Val Ala Lys His Met Ile Ala Val Ser Thr Asn Leu Lys Leu Val Lys
 65 70 75 80
 Glu Phe Gly Ile Asp Pro Asn Asn Ala Phe Ala Phe Trp Asp Trp Val
 85 90 95
 Gly Gly Arg Tyr Ser Val Cys Ser Ala Val Gly Val Leu Pro Leu Ser
 100 105 110
 Leu Gln Tyr Gly Phe Pro Ile Val Gln Lys Phe Leu Glu Gly Ala Ser
 115 120 125
 Ser Ile Asp Asn His Phe Tyr Ser Ser Ser Phe Glu Lys Asn Ile Pro
 130 135 140

Val Leu Leu Gly Leu Leu Ser Val Trp Asn Val Ser Phe Leu Gly Tyr
145 150 155 160

Pro Ala Arg Ala Ile Leu Pro Tyr Ser Gln Ala Leu Glu Lys Leu Ala
165 170 175

<210> 1697

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1697

Phe Leu Ser Lys Thr Lys Tyr Pro Ile Ala Lys Asn Gly Arg Lys Met
1 5 10 15

Thr Arg Pro Phe Met Thr Ile Ala His Phe Lys His Lys Ala Val Ser
20 25 30

Ser Tyr Pro Tyr Glu Ser Asp Asn Thr Met Leu Phe Pro Ile Phe Val
35 40 45

Leu Gly Leu Phe Thr Leu Phe Val Gly Ala Ile Gly Ile Pro Phe Asn
50 55 60

Gln Glu Gly Val Asn Leu Asp Ile Leu Ser Lys Trp Leu Ala Pro Ser
65 70 75 80

Ile Asn Leu Leu His Pro Lys Ser Asn Asn Ser Leu Asp Trp Asn Glu
85 90 95

Phe Leu Lys Asp Ala Val Val Ser Val Ser Ile Ala Tyr Phe Gly Ile
100 105 110

Phe Ile Ala Ser Phe Leu Tyr Lys Pro Ile Tyr Ser Ser Leu Lys Asn
115 120 125

Leu Glu Phe Ile Asn Ser Phe Val Lys Lys Gly Pro Lys Arg Ile Leu
130 135 140

Trp Asp Lys Ile Leu Asn Gly Ile Tyr Asp Trp Ser Tyr Asn Arg Ala
145 150 155 160

Tyr Ile Asp Ala Phe Tyr Thr Arg Phe Phe Val Gly Gly Ile Arg Gly
165 170 175

Leu Ala Glu Phe Thr His Phe Val Asp Arg Arg Val Ile Asp Gly Met
180 185 190

Thr Asn Gly Val Gly Val Ile Ser Phe Ile Val Gly Glu Gly Ile Lys
195 200 205

Tyr Ile Gly Gly Gly Arg Ile Ser Ser Tyr Leu Phe Leu Tyr Leu Ala
210 215 220

Tyr Val
225

<210> 1698
<211> 276
<212> PRT
<213> Oryza sativa

<400> 1698
Val Val Ser Leu Gly Ile Met Ser Ala Gly Ala Val Phe Ser Gly Val
1 5 10 15

Asn Pro Arg Ala Leu Ala Ala Glu Ile Lys Lys Gln Val Glu Asp Ser
20 25 30

Glu Ala Lys Leu Val Val Ala Asn Glu Val Ala Phe Asp Lys Val Lys
35 40 45

Asp Ala Gly Val Pro Val Ile Gly Val Gly Asp Arg Glu Arg Met Pro
50 55 60

Gly Ala Ile Ser Trp Asp Gly Leu Leu Ala Ala Asp Arg Thr Gly
65 70 75 80

Ala Gly Val Val Pro Val Asp Ala Ala Gln Gln Ser Asp Leu Cys Ala
85 90 95

Leu Pro Tyr Ser Ser Gly Thr Thr Gly Val Ser Lys Gly Val Met Leu
100 105 110

Ser His Arg Asn Leu Val Ser Asn Leu Cys Ser Ser Met Phe Ala Val
115 120 125

Ala Pro Glu Thr Ala Gly Gln Val Val Thr Leu Gly Leu Met Pro Phe
130 135 140

Phe His Ile Tyr Gly Ile Thr Gly Ile Cys Cys Ala Thr Leu Arg His
145 150 155 160

Lys Gly Thr Val Val Val Met Asp Arg Phe Asp Leu Arg Thr Phe Leu
165 170 175

Arg Ala Leu Val Asp His Arg Val Met Phe Ala Pro Leu Val Pro Pro
180 185 190

Val Met Leu Ala Met Val Lys Ser Pro Val Ala Asp Glu Phe Asp Leu
195 200 205

Ser Asp Leu Ala Leu Lys Ser Val Met Thr Ala Ala Ala Pro Leu Ala
210 215 220

Pro Asp Leu Leu Ala Ala Phe Gln Arg Lys Phe Pro Gly Val Gln Val
225 230 235 240

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Glu Glu Ala Tyr Gly Leu Thr Glu His Ser Cys Ile Thr Leu Thr His
245 250 255

Ala Ala Gly Asp Gly His Gly His Val Ala Lys Lys Ser Ser Val Gly
260 265 270

Phe Ile Leu Pro
275

<210> 1699

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1699

Ser Ala Ile Val Arg Lys Asp Lys Gly Ile Glu Ile Gly Ala Ala Thr
1 5 10 15

Ser Ile Ser Arg Thr Ile Glu Ile Leu Asn Gln Glu Ser Glu Leu Thr
20 25 30

Ser Ser Pro Asn Gly Ser Val Val Phe Arg Lys Leu Ala Glu His Met
35 40 45

Ser Lys Val Ala Ser Pro Phe Val Arg Asn Thr Ala Ser Ile Gly Gly
50 55 60

Asn Ile Ile Leu Ala His Lys Tyr Pro Phe Arg Ser Asp Ile Ala Thr
65 70 75 80

Ile Leu Leu Gly Ala Ala Ala Thr Val Asn Leu Gln Val Ser Ser Lys
85 90 95

Thr Leu His Val Asn Leu Glu Gln Phe Leu Glu Gln Pro Pro Leu Asp
100 105 110

His Ser Thr Leu Leu Leu Ser Ile Phe Ile Pro His Trp Ala
115 120 125

<210> 1700

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1700

Lys Asn Phe Trp Val Gly Pro Gly Asp Gln Val Trp Pro Asp Gln Arg
1 5 10 15

Ile Lys Phe Lys Leu Lys Leu Val Tyr Met Tyr Ala Ala Gly Phe Tyr
20 25 30

Thr Tyr Ser Ile Phe Ala Leu Gln Phe Trp Glu Ile Lys Arg Ser Asp
35 40 45

Phe Gly Ile Ser Met Val His His Val Val Ser Val Ile Leu Ile Ala
50 55 60

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Leu Ser Tyr Ile Phe Arg Phe Ala Arg Val Gly Ser Ile Val Leu Ala
 65 70 75 80
 Ile His Asp Ala Ser Asp Val Phe Leu Glu Leu Gly Lys Ile Ser Lys
 85 90 95
 Tyr Ser Gly Tyr Gln Leu Leu Ala Asp Val Ser Phe Leu Ile Phe Val
 100 105 110
 Cys Ser Trp Ala Val Leu Arg Leu Ile Tyr Tyr Pro Phe Trp Ile Leu
 115 120 125
 Trp Ser Thr Ser Tyr Glu Val Val Pro Met Leu Asp Lys Lys Lys His
 130 135 140
 Lys Phe Asp Gly Pro Leu His Tyr Tyr Val Phe Asn Cys Leu Leu Phe
 145 150 155 160
 Ser Leu Leu Val Leu Asn Ile Tyr Trp Trp Val Leu Met Tyr Arg Met
 165 170 175
 Leu Val Glu Gln Ile Leu Ser Lys Gly His Val Gly Asp Asp Val Arg
 180 185 190
 Ser Gly Arg Phe Ser Pro Pro Phe Ile
 195 200
 <210> 1701
 <211> 101
 <212> PRT
 <213> Oryza sativa
 <400> 1701
 Lys Pro Val Leu Glu Val Ser Ser His Gly His Ala Ile Val Ala Phe
 1 5 10 15
 Val Asn Asp Ala Phe Val Gly Cys Gly His Gly Thr Lys Ile Asn Lys
 20 25 30
 Ala Phe Thr Met Glu Lys Ala Met Asp Leu Lys Val Gly Val Asn His
 35 40 45
 Val Ala Ile Leu Ser Ser Thr Leu Gly Leu Met Asp Ser Gly Ser Tyr
 50 55 60
 Leu Glu His Arg Met Ala Gly Val Tyr Thr Val Thr Ile Arg Gly Leu
 65 70 75 80
 Asn Thr Gly Thr Leu Asp Leu Thr Thr Asn Gly Trp Gly His Val Val
 85 90 95
 Gly Leu Asp Gly Glu
 100

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<210> 1702

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1702

Met Val Leu Val Ala Ile Gly Val Val Val Ala Ala Ala Val Val Val
1 5 10 15

Ser Ser Leu Leu Leu Arg Trp Asn Glu Val Arg Tyr Ser Arg Lys Arg
20 25 30

Gly Leu Pro Pro Gly Thr Met Gly Trp Pro Leu Phe Gly Glu Thr Thr
35 40 45

Glu Phe Leu Lys Gln Gly Pro Ser Phe Met Lys Ala Arg Arg Leu Arg
50 55 60

Tyr Gly Ser Val Phe Arg Thr His Ile Leu Gly Cys
65 70 75

<210> 1703

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1703

Thr Gly Thr Ile Leu Tyr Ile Val Ile Ile Val Val Thr Gly Ser Val
1 5 10 15

Cys Thr Ala Leu Arg Ala Trp Leu Phe Asn Ser Ala Ser Glu Arg Val
20 25 30

Val Ala Arg Leu Arg Lys Asp Leu Phe Ser His Leu Val Asn Gln Glu
35 40 45

Ile Ala Phe Phe Asp Val Thr Arg Thr Gly Glu Leu Leu Ser Arg Leu
50 55 60

Ser Glu Asp Thr Gln Ile Ile Lys Asn Ala Ala Thr Thr Asn Leu Ser
65 70 75 80

Glu Ala Leu Arg Asn Ile Thr Thr Thr Ser Ile Gly Leu Gly Phe Met
85 90 95

Phe Ala Thr Ser Trp
100

<210> 1704

<211> 126

<212> PRT

<213> Zea mays

<400> 1704

Met Pro Ile Gly Val Pro Lys Val Pro Tyr Arg Ile Pro Gly Asp Glu
1 5 10 15

Glu Ala Thr Trp Val Asp Leu Tyr Asn Val Met Tyr Arg Glu Arg Thr
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20

25

30

Leu Phe Leu Gly Gln Glu Ile Arg Cys Glu Ile Thr Asn His Ile Thr
 35 40 45

Gly Leu Met Val Tyr Leu Ser Ile Glu Asp Gly Asn Ser Asp Ile Phe
 50 55 60

Leu Phe Ile Asn Ser Leu Gly Gly Trp Leu Ile Ser Gly Met Ala Ile
 65 70 75 80

Phe Asp Thr Met Gln Thr Val Thr Pro Asp Ile Tyr Thr Ile Cys Leu
 85 90 95

Gly Ile Ala Ala Ser Met Ala Ser Phe Ile Leu Leu Gly Gly Glu Pro
 100 105 110

Thr Lys Arg Ile Ala Phe Pro His Ala Arg Ile Met Leu His
 115 120 125

<210> 1705

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1705

Gly Asn Phe Thr Ala Gly Thr Cys His Thr Pro Asp Ala Lys Ala Ile
 1 5 10 15

Val Glu Lys Glu Cys Leu Gly Lys Glu Ser Cys Val Leu Pro Val Val
 20 25 30

Asn Thr Val Tyr Gly Ala Asp Ile Asn Cys Pro Ala Thr Thr Ala Thr
 35 40 45

Leu Ala Val Gln Leu Leu Leu Ala Ser His Val Met Arg Ile Ala Ile
 50 55 60

Cys Val Arg Pro Met Leu Phe Ala Arg Asn Gly Ile Val Thr Ser Val
 65 70 75 80

Leu Ala His Ile Leu Gly His Pro Glu Trp Asp Arg Lys Ser Leu Arg
 85 90 95

Val Lys Met Ala Gly
 100

<210> 1706

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1706

Leu Ile Pro Asn Ile Gln Val Met Ala Arg Ser Leu Pro Leu Asp Lys
 1 5 10 15

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His Thr Leu Val Thr Asn Leu Arg Gly Met Phe Asp Glu Val Val Ser
20 25 30

Val Thr Gly Asp Gly Thr Asn Asp Ala Pro Ala Leu His Glu Ala Asp
35 40 45

Ile Gly Leu Ala Met Gly Ile Ala Gly Thr Glu Val Ala Lys Glu Ser
50 55 60

Ala Asp Val Ile Val Leu Asp Asp Asn Phe Thr Thr Ile Ile Asn Val
65 70 75 80

Ala Arg Trp Gly Arg Ala Val Tyr Ile Asn Ile Gln Lys Phe Val Gln
85 90 95

Phe Gln Leu Thr Val Asn Ile Val Ala Leu Val Ile Asn Phe Val Ser
100 105 110

Ala Cys Ile Thr Gly Ser Ala Pro Leu Thr Ala Val Gln Leu Leu Trp
115 120 125

Val Asn Met Ile Met Asp Thr Leu Gly Ala Leu Ala Leu Ala Thr Glu
130 135 140

Pro Pro Asn Asp Glu Met Met Lys Arg Pro Pro Val Arg Lys Gly Glu
145 150 155 160

Ser Phe Ile Thr Lys Val Met Trp Arg Asn Ile Met Gly Gln Ser Leu
165 170 175

Tyr Gln Leu Phe Val Leu Gly Ala Leu Met Phe Gly Gly Glu Ser Leu
180 185 190

Leu Asn Ile Lys Gly Ala Asp Ser Lys
195 200

<210> 1707

<211> 151

<212> PRT

<213> Zea mays

<400> 1707

Tyr Thr Leu Thr Pro Val Ser Arg Leu Leu Ile Gly Ser Gln Ser Ser
1 5 10 15

Gln Leu Ala Gln Thr Pro Leu Ala Ala Met Val Leu Asp Pro Thr Ile
20 25 30

Val Ser Pro Phe Ser Glu Leu Gly Ala Trp Phe Gln His Glu Leu Pro
35 40 45

Asp Pro Cys Ile Phe Lys His Thr His Gly Arg Gly Ile Trp Glu Leu
50 55 60

Thr Lys Asp Asp Ala Thr Phe Asp Ala Leu Val Asn Asp Gly Leu Ala
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His Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala Gly Thr Glu Val
20 25 30

Ala Lys Glu Ser Ala Asp Val Ile Val Leu Asp Asp Asn Phe Thr Thr
35 40 45

Ile Ile Asn Val Ala Arg Trp Gly Arg Ala Val Tyr Ile Asn Ile Gln
50 55 60

Lys Phe Val Gln Phe Gln Leu Thr Val Asn Ile Val Ala Leu Val Ile
65 70 75 80

Asn Phe Val Ser Ala Cys Ile Ile Gly Ser Ala Pro Leu Thr Ala Val
85 90 95

Gln Leu Leu Trp Val Asn Met Ile Met Asp Thr Leu Gly Ala Leu Ala
100 105 110

Leu Ala Thr Glu Pro Pro Asn Asp Glu Met Met Lys Arg Pro Pro Val
115 120 125

Arg Lys Gly Glu Ser Phe Ile Thr Lys Phe Met Trp Arg Asn Ile Met
130 135 140

Gly Gln Ser Leu Tyr Gln Leu Phe Val Leu Gly Ala Leu Met Phe Gly
145 150 155 160

Gly Glu Arg Leu Leu Asn Ile Lys Gly Ala Asp Ser Lys Ser Ile Ile
165 170 175

<210> 1710

<211> 76

<212> PRT

<213> Zea mays

<400> 1710

Thr His Leu Arg Met Ile Val Thr Ser Ala Asp Val Leu His Ser Trp
1 5 10 15

Ala Val Pro Ser Leu Gly Val Lys Cys Asp Ala Val Pro Gly Arg Leu
20 25 30

Asn Leu Thr Ser Ile Leu Val Gln Arg Glu Gly Val Tyr Tyr Gly Gln
35 40 45

Cys Ser Glu Ile Cys Gly Thr Asn His Ala Phe Met Pro Ile Val Val
50 55 60

Glu Ala Val Thr Leu Lys Asp Tyr Ala Asp Trp Val
65 70 75

<210> 1711

<211> 151

<212> PRT

<213> Zea mays

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<400> 1711

Asp Val Leu Ala Ile Gln Val Ser Thr Val Ala Ser Glu Ser Ala Phe
1 5 10 15

Ser Ala Gly Gly Arg Val Val Asp Pro Tyr Arg Asn Arg Leu Gly Ser
20 25 30

Glu Ile Val Glu Ala Leu Ile Cys Thr Lys Asp Trp Val Ala Ala Ser
35 40 45

Arg Lys Gly Glu Trp His Ile Cys Tyr Asn Glu Val Pro Ile Tyr Ser
50 55 60

Tyr Ser Thr Ile Ile Leu Leu Ile Leu Met His Ile Cys Val Ile Gln
65 70 75 80

Gly Ala Thr Tyr Phe Pro Thr Met Ile Gly Asp Leu Glu Val Leu Asp
85 90 95

Ser Val Ile Ala Ala Ala Thr Asn His Glu Asn His Met Asp Glu Val
100 105 110

Phe Lys Asp Tyr Tyr Leu Leu Arg Ala Trp Ala Ile Asn Leu Leu Leu
115 120 125

Phe Thr Thr Val Leu Met His Gly Leu Phe Leu Ser Pro Cys Phe Asp
130 135 140

Ala Cys Ala Leu Leu Pro Ser
145 150

<210> 1712

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1712

Leu Pro Val Ile Asn Gln Val Phe Gly Thr Asn His Val Val Lys Ile
1 5 10 15

Ser Pro Asn Ser Pro Val Ala Arg Leu Arg Pro Ala Gly Lys Tyr Met
20 25 30

Pro Gly Glu Val Val Ala Val Arg Val Pro Leu Leu His Leu Ser Asn
35 40 45

Phe Gln Ile Asn Asp Trp Pro Glu Leu Ser Thr Lys Arg Tyr Ala Leu
50 55 60

Met Val Leu Met Leu Pro Ser Asp Ser Ala Arg Gln Trp His Val His
65 70 75 80

Glu Leu Glu Leu Val Glu Val Val Ala Asp Gln Val Ala Val Ala Leu
85 90 95

Ser His Ala Ala Ile
100

<210> 1713
<211> 151
<212> PRT
<213> Solanum lycopersicum

<400> 1713
Tyr Ala Ser Arg Thr Leu Leu Phe Leu Gln Asp Asn Gly Ser Leu Lys
1 5 10 15

Pro Leu Ala Ile Glu Leu Ser Leu Pro His Pro Asp Gly Asp Gln Phe
20 25 30

Gly Val Thr Ser Lys Val Tyr Thr Pro Ser Asp Gln Gly Val Glu Gly
35 40 45

Ser Ile Trp Gln Leu Ala Lys Ala Tyr Val Ala Val Asn Asp Ser Gly
50 55 60

Val His Gln Leu Ile Ser His Trp Leu Asn Thr His Ala Val Ile Glu
65 70 75 80

Pro Phe Val Ile Ala Thr Asn Arg Gln Leu Ser Val Leu His Pro Ile
85 90 95

His Lys Leu Leu Tyr Pro His Phe Arg Asp Thr Met Asn Ile Asn Ala
100 105 110

Leu Ala Arg Gln Ile Leu Ile Asn Ala Gly Gly Val Leu Glu Ser Thr
115 120 125

Val Phe Pro Ser Lys Phe Ala Met Glu Met Ser Ala Val Val Tyr Lys
130 135 140

Asp Trp Val Phe Pro Asp Gln
145 150

<210> 1714
<211> 226
<212> PRT
<213> Solanum lycopersicum

<400> 1714
Pro Pro Phe Met Val Leu Ile Ile Ala Ile Leu Asn Asp Gly Thr Ile
1 5 10 15

Met Thr Ile Ser Lys Asp Arg Val Lys Pro Ser Pro Leu Pro Asp Ser
20 25 30

Trp Lys Leu Ala Glu Ile Phe Thr Thr Gly Val Val Leu Gly Gly Tyr
35 40 45

Leu Ala Met Met Thr Val Ile Phe Phe Trp Ala Ala Tyr Lys Thr Asn
50 55 60

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Phe Phe Pro Arg Ile Phe Gly Val Ser Thr Leu Glu Lys Thr Ala Thr
 65 70 75 80
 Asp Asp Phe Arg Lys Leu Ala Ser Ala Ile Tyr Leu Gln Val Ser Thr
 85 90 95
 Ile Ser Gln Ala Leu Ile Phe Val Thr Arg Ser Arg Ser Trp Ser Phe
 100 105 110
 Val Glu Arg Pro Gly Leu Leu Leu Val Phe Ala Phe Phe Val Ala Gln
 115 120 125
 Leu Val Ala Thr Leu Ile Ala Val Tyr Ala Asn Trp Ser Phe Ala Ala
 130 135 140
 Ile Glu Gly Ile Gly Trp Gly Trp Ala Gly Val Ile Trp Leu Tyr Asn
 145 150 155 160
 Ile Val Thr Tyr Ile Pro Leu Asp Leu Ile Lys Phe Leu Ile Arg Tyr
 165 170 175
 Ala Leu Ser Gly Lys Ala Trp Asp Leu Val Leu Glu Gln Arg Ile Ala
 180 185 190
 Phe Thr Arg Lys Lys Asp Phe Gly Lys Glu Leu Arg Glu Leu Gln Trp
 195 200 205
 Ala His Ala Gln Arg Thr Leu His Gly Leu Gln Val Pro Asp Pro Lys
 210 215 220
 Ile Phe
 225
 <210> 1715
 <211> 101
 <212> PRT
 <213> Solanum lycopersicum
 <400> 1715
 Val Leu Ile Pro Ala Leu Arg Thr Val Gly Asn Ile Val Thr Gly Asp
 1 5 10 15
 Asp Ile Gln Thr Gln Val Met Ile Asp His His Ala Leu Pro Cys Leu
 20 25 30
 Val Asn Leu Leu Thr Gln Asn Tyr Lys Lys Ser Ile Lys Lys Glu Ala
 35 40 45
 Cys Trp Thr Ile Ser Asn Ile Thr Ala Gly Asn Arg Asn Gln Ile Gln
 50 55 60
 Ile Val Ile Glu Ala Gly Ile Ile Ala Pro Leu Val Tyr Leu Leu Gln
 65 70 75 80

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Asn Ala Glu Phe Glu Ile Lys Lys Glu Ala Ala Trp Ala Ile Ser Asn
85 90 95

Ala Thr Ser Gly Gly
100

<210> 1716

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1716

Ser Leu Lys Ser Met Tyr Gln Glu Val Val Ala Val Thr Gly Asp Gly
1 5 10 15

Thr Asn Asp Ala Pro Ala Leu His Glu Ser Asp Ile Gly Leu Ala Met
20 25 30

Gly Ile Thr Gly Thr Glu Val Ala Lys Glu Ser Ala Asp Val Ile Ile
35 40 45

Met Asp Asp Asn Phe Glu Thr Ile Val Asn Val Ala Arg Trp Gly Arg
50 55 60

Ala Val Tyr Leu Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val
65 70 75 80

Asn Ile Val Ala Leu Ile Val Asn Phe Val Ser Ala Cys Ile Ile Gly
85 90 95

Ser Ala Pro Leu Thr Ala Val Gln Leu Leu Trp Val Asn Met Ile Met
100 105 110

Asp Thr Leu Gly Ala Leu Ala Leu Ala Thr Glu Pro Pro Asn Asp Glu
115 120 125

Met Met Lys Arg Pro Pro Val Arg Arg Gly Asp Asn Phe Ile Thr Arg
130 135 140

Ile Met Trp Arg Asn Ile Leu Gly Gln Gly Leu Tyr Gln Leu Leu Val
145 150 155 160

Leu Ala Thr Leu Met Val Ile Gly Lys Lys Leu Leu Ser Ile Glu Gly
165 170 175

Pro Gln Ser Asp Lys Thr Ile Asn Thr Leu Ile Phe Asn Ser Phe Val
180 185 190

Phe Cys Gln Val Phe Asn Glu Ile Asn
195 200

<210> 1717

<211> 101

<212> PRT

<213> Oryza sativa

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<400> 1717

Val Gly Leu Leu Glu Gln Ile Asn Val Thr Arg Asp Asn Thr Asp Tyr
1 5 10 15

Leu Trp Tyr Thr Thr Tyr Val Asp Val Ala Gln Asp Glu Gln Phe Leu
20 25 30

Ser Asn Gly Glu Asn Leu Lys Leu Thr Val Met Ser Ala Gly His Ala
35 40 45

Leu His Ile Phe Ile Asn Gly Gln Leu Lys Gly Thr Val Tyr Gly Ser
50 55 60

Val Asp Asp Pro Lys Leu Thr Tyr Thr Gly Asn Val Lys Leu Trp Ala
65 70 75 80

Gly Ser Asn Thr Ile Ser Cys Leu Ser Ile Ala Val Gly Leu Pro Asn
85 90 95

Val Gly Glu His Phe
100

<210> 1718

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1718

Ser Leu Lys Ser Met Tyr Gln Glu Val Val Ala Val Thr Gly Asp Gly
1 5 10 15

Thr Asn Asp Ala Pro Ala Leu His Glu Ser Asp Ile Gly Leu Ala Met
20 25 30

Gly Ile Thr Gly Thr Glu Val Ala Lys Glu Ser Ala Asp Val Ile Ile
35 40 45

Met Asp Asp Asn Phe Glu Thr Ile Val Asn Val Ala Arg Trp Gly Arg
50 55 60

Ala Val Tyr Leu Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val
65 70 75 80

Asn Ile Val Ala Leu Ile Val Asn Phe Val Ser Ala Cys Ile Ile Gly
85 90 95

Ser Ala Pro Leu Thr
100

<210> 1719

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1719

Asn Asp Gly Val Val Ala Ile Ser Glu Val Thr Gly Phe Pro Lys Leu
1 5 10 15

Asp Leu Met Leu Leu Gly Met Gly Pro Asp Gly His Val Ala Ser Leu
20 25 30

Phe Pro Gly His Pro Val Val Asn Glu Asn Leu Lys Trp Val Ser Tyr
35 40 45

Ile Lys Asp Ser Pro Lys Pro Pro Pro Glu Arg Ile Thr Phe Thr Phe
50 55 60

Pro Leu Val Asn Ser Ser Ala His Ile Ala Leu Val
65 70 75

<210> 1720
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 1720
His Pro Asp Gly Asp Gln Phe Gly Thr Val Ser Lys Val Tyr Thr Pro
1 5 10 15

Ala Asp Gln Gly Val Glu Gly Ser Ile Trp Gln Phe Ala Lys Ala Tyr
20 25 30

Val Ala Val Asn Asp Met Gly Ile His Gln Leu Ile Ser His Trp Leu
35 40 45

Asn Thr His Ala Val Ile Glu Pro Phe Val Val Ala Thr Asn Arg His
50 55 60

Leu Ser Val Leu His Pro Ile His Lys Leu Leu His
65 70 75

<210> 1721
<211> 226
<212> PRT
<213> Oryza sativa

<400> 1721
Val Phe Val Asn Glu Asp Asn Pro Tyr Leu Leu Ser Gly Thr Lys Val
1 5 10 15

Leu Asp Gly Ser Cys Lys Met Leu Val Thr Ala Val Gly Met Arg Thr
20 25 30

Gln Trp Gly Lys Leu Met Ala Val Leu Thr Asp Gly Gly Asp Asp Glu
35 40 45

Thr Pro Leu Gln Thr Arg Leu Asn Gly Val Ala Asn Thr Ile Gly Lys
50 55 60

Ile Gly Leu Phe Phe Ala Val Leu Thr Phe Ile Val Leu Ser Gln Gly
65 70 75 80

Ile Ile Gly Gln Lys Tyr Leu Asp Gly Leu Leu Leu Ser Trp Ser Gly
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Asp Asp Val Leu Glu Ile Leu Asp His Phe Ala Val Ala Val Thr Ile
100 105 110

Val Val Val Ala Val Pro Glu Gly Leu Pro Leu Ala Val Thr Leu Ser
115 120 125

Leu Ala Phe Ala Met Lys Lys Met Met Asn Asp Lys Ala Leu Val Arg
130 135 140

Gln Leu Ala Ala Cys Glu Thr Met Gly Ser Ala Thr Val Ile Cys Ser
145 150 155 160

Asp Lys Thr Gly Thr Leu Thr Thr Asn Arg Met Thr Val Val Lys Ala
165 170 175

Cys Ile Cys Gly Asn Thr Ile Gln Val Asn Asn Pro Gln Thr Pro Asn
180 185 190

Met Ser Ser Asn Phe Pro Glu Val Ala Val Glu Thr Leu Leu Glu Ser
195 200 205

Ile Phe Asn Asn Thr Ser Gly Glu Val Val Thr Asn Gln Asp Gly Lys
210 215 220

Tyr Gln
225

<210> 1722

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1722

Glu Val Val Ala Val Thr Gly Asp Gly Thr Asn Asp Ala Pro Ala Leu
1 5 10 15

His Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala Gly Thr Glu Val
20 25 30

Ala Lys Glu Ser Ala Asp Val Ile Ile Leu Asp Asp Asn Phe Ser Thr
35 40 45

Ile Val Thr Val Ala Lys Trp Gly Arg Ser Val Tyr Val Asn Ile Gln
50 55 60

Lys Phe Val Gln Phe Gln Leu Thr Val Asn Val Val Ala Leu Leu Val
65 70 75 80

Asn Phe Ser Ser Ala Cys Phe Thr Gly Asn Ala Pro Leu Thr Ala Val
85 90 95

Gln Leu Leu Trp Val Asn Met Ile Met Asp Thr Leu Gly Ala Leu Ala
100 105 110

Leu Ala Thr Glu Pro Pro Asn Asp Asp Leu Met Lys Arg Glu Pro Val
 115 120 125

Gly Arg Thr Gly Lys Phe Ile Thr Asn Val Met Trp Arg Asn Ile Leu
 130 135 140

Gly Gln Ser Phe Tyr Gln Phe Ile Val Met Trp Tyr Leu Gln Thr Gln
 145 150 155 160

Gly Lys Ser Met Phe Gly Leu Asp Gly Pro Asp Ala Glu Val Val Leu
 165 170 175

<210> 1723

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1723

Met Ser Val Trp Asn Tyr Val Val Thr Ala His Lys Pro Thr Asn Val
 1 5 10 15

Thr His Ser Cys Val Gly Asn Phe Thr Gly Pro Gln Glu Leu Asn Leu
 20 25 30

Ile Ile Ala Lys Cys Thr Arg Ile Glu Ile His Leu Leu Thr Pro Gln
 35 40 45

Gly Leu Gln Pro Met Leu Asp Val Pro Ile Tyr Gly Arg Ile Ala Thr
 50 55 60

Leu Glu Leu Phe Arg Pro His Gly Glu Thr Gln Asp
 65 70 75

<210> 1724

<211> 251

<212> PRT

<213> Solanum lycopersicum

<400> 1724

Ala Val Ser Ile Thr Ile Arg Ile Val Leu Gly Phe Met Leu Leu Ala
 1 5 10 15

Leu Ile Trp Lys Phe Asp Phe Pro Pro Phe Met Val Leu Ile Ile Ala
 20 25 30

Ile Leu Asn Asp Gly Thr Ile Met Thr Ile Ser Lys Asp Arg Val Lys
 35 40 45

Pro Ser Pro Leu Pro Asp Ser Trp Lys Leu Ala Glu Ile Phe Thr Thr
 50 55 60

Gly Val Val Leu Gly Gly Tyr Leu Ala Met Met Thr Val Ile Phe Phe
 65 70 75 80

Trp Ala Ala Tyr Glu Thr Gln Phe Phe Pro Arg Val Phe Gly Val Ser
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Thr Leu Gln Arg Thr Ala Thr Asp Asp Phe Arg Lys Leu Ala Ser Ala
100 105 110

Ile Tyr Leu Gln Val Ser Thr Ile Ser Gln Ala Leu Ile Phe Val Thr
115 120 125

Arg Ser Arg Ser Trp Ser Phe Val Glu Arg Pro Gly Leu Leu Leu Val
130 135 140

Val Ala Leu Ile Val Ala Gln Leu Val Ala Thr Leu Ile Ala Val Tyr
145 150 155 160

Ala Ser Trp Ser Phe Ala Ala Ile Glu Gly Ile Gly Trp Gly Trp Ala
165 170 175

Gly Val Ile Trp Leu Tyr Asn Leu Val Phe Tyr Phe Pro Leu Asp Ile
180 185 190

Ile Lys Phe Leu Ile Arg Tyr Ala Leu Ser Gly Arg Ala Trp Asp Leu
195 200 205

Val Leu Glu Gln Arg Ile Ala Phe Thr Arg Lys Lys Asp Phe Gly Lys
210 215 220

Glu Gln Arg Glu Leu Gln Trp Ala His Ala Gln Arg Thr Leu His Gly
225 230 235 240

Leu Gln Val Pro Asp Ile Lys Leu Phe Ser Glu
245 250

<210> 1725

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 1725

Glu Ser Ala Trp Lys Cys Ile Tyr Phe Leu Ser Ala Glu Val Phe Ala
1 5 10 15

Leu Val Val Thr Tyr Asn Glu Pro Trp Phe Thr Asn Thr Arg Tyr Phe
20 25 30

Trp Val Gly Pro Gly Asp Gln Val Trp Pro Asp Gln Met Tyr Lys Ser
35 40 45

Lys Leu Lys Ala Leu Tyr Met Tyr Thr Gly Gly Phe Tyr Thr Tyr Ser
50 55 60

Ile Phe Ala Leu Ile Phe Trp Glu Thr Arg Arg Ser Asp Phe Gly Val
65 70 75 80

Ser Met Ser His His Val Ala Thr Ala Ile Leu Ile Val Leu Ser Tyr
85 90 95

Asn Ile Arg Phe Ala Arg Val Gly Ser Val Val Leu Ala Ile His Asp
100 105 110

Ala Ser Asp Ile Phe Leu Glu Ile Gly Lys Met Ser Lys Tyr Ser Gly
115 120 125

Ala Glu Ala Leu Ala Ser Phe Arg Tyr Leu Cys Leu Ser Trp Ile Ile
130 135 140

Leu Arg Leu Ile Tyr Tyr Pro Phe Trp Val Leu Trp Ser Thr Ser Tyr
145 150 155 160

Glu Val Leu Gln Thr Leu Asp Lys Glu Lys His Lys Val Asp Gly Pro
165 170 175

Ile Tyr Tyr Tyr Ile Phe Asn Ser Leu Leu Phe Cys Leu Leu Val Leu
180 185 190

His Ile Tyr Trp Trp Val Leu Ile Tyr
195 200

<210> 1726

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1726

Trp Phe Thr Asp Ser Arg Tyr Phe Trp Ala Gly Pro Gly Asp Val Val
1 5 10 15

Trp Pro Asn Leu Lys Met Lys Leu Lys Leu Lys Leu Tyr Met Tyr
20 25 30

Ala Gly Gly Phe Tyr Phe Tyr Ser Ile Phe Ala Thr Leu Tyr Trp Glu
35 40 45

Thr Arg Arg Tyr Asp Phe Ala Ala Gln Ile Ile His His Val Thr Thr
50 55 60

Val Ser Leu Ile Val Leu Ser Tyr Val Tyr Gly Phe Ala Arg Ile Gly
65 70 75 80

Ser Val Val Leu Ala Leu His Asp Gly Ser Asp Val Phe Met Glu Ile
85 90 95

Ala Lys Met Ser Lys Tyr Ser Gly Phe Asp Leu Ile Ala Asp Ile Phe
100 105 110

Phe Ser Leu Phe Ala Leu Val Phe Thr Ser Leu Arg Ile Ile
115 120 125

<210> 1727

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1727

Met Gly Ile Ile Lys Gly Val Leu Phe Ser Ile Val Leu Ile Asn Leu
1 5 10 15Ser Leu Val Val Phe Cys Gly Tyr Pro Arg Arg Pro Val Asp Val Pro
20 25 30Phe Trp Lys Asn Tyr Glu Pro Ser Trp Ala Ser His His Ile Lys Phe
35 40 45Leu Asn Gly Gly Thr Thr Thr Asp Leu Ile Leu Asp Arg Ser Ser Gly
50 55 60Ala Gly Phe Gln Ser Lys Lys Ser Tyr Leu Phe Gly
65 70 75

<210> 1728

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1728

Arg Val Gln Ile Lys Asp Thr Gly Ile Gly Ile Thr Pro Gln Asp Ile
1 5 10 15Pro Asn Leu Phe Ser Lys Phe Thr Gln Ser Gln Ala Leu Ala Thr Thr
20 25 30Asn Ser Gly Gly Thr Gly Leu Gly Leu Ala Ile Cys Lys Arg Phe Val
35 40 45Asn Leu Met Glu Gly His Ile Trp Ile Glu Ser Glu Gly Leu Gly Lys
50 55 60Gly Ser Thr Ala Ile Phe Ile Ile Lys Leu Gly Ile
65 70 75

<210> 1729

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1729

Asp Asp Leu Ser Ser Met Phe Pro Arg Ile Lys His Leu Ala Val Glu
1 5 10 15Gln Thr Asn Ala Met Pro Ala Val Leu Ser Arg Tyr Gly Val Arg Ser
20 25 30Phe Pro Ser Ile Leu Ile Ala Cys Gly Pro Tyr Ala Tyr Trp Pro Val
35 40 45Gly Ser Lys Glu Leu Asp Ser Leu Val Asn Val Tyr Thr Ala Val Thr
50 55 60

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Gly Gln Glu Pro Ile Ala Tyr Leu Gly Pro Arg Lys Trp Ser Ala Ala
65 70 75 80

Arg Thr Gly Ser Thr Gln His Val Lys Leu Trp Lys Ser Ser Ile Ile
85 90 95

Glu Ala Leu Lys Ser Glu Pro Tyr Leu Ala Phe Ser Ile Leu Phe Ile
100 105 110

Cys Leu Lys Ile Leu Val Ala Phe Phe Pro Lys Phe Phe Ser Cys Ile
115 120 125

Lys Gly Ile Trp Val Gln Tyr Phe Arg His Ala Asn Leu Gly Ile Leu
130 135 140

Ala Lys Leu Thr Gln Leu Leu
145 150

<210> 1730

<211> 126

<212> PRT

<213> Zea mays

<400> 1730

Leu Leu Thr Phe Asp Gly Tyr Leu Arg Val His Phe Gln Asn Tyr Ser
1 5 10 15

Ser Thr Lys Glu Gly Ser Leu Tyr Ser Ile Ser Leu Trp Gly Lys Ser
20 25 30

Ile Ser Lys Gly Val Asn Arg Asp Phe Val Leu Ser Thr Met Lys Ser
35 40 45

Gly Val Ser Phe Phe Ser Gln Asn Ile Pro Lys Ile Pro Ala Asn Thr
50 55 60

Arg Asn Lys Ile Gly Ser Phe Ser Thr Pro Phe Gly Ala Lys Asn Thr
65 70 75 80

Phe Val Tyr Pro His Glu Thr Gly Asn Thr Met Leu Phe Pro Leu Leu
85 90 95

Ile Leu Leu Leu Phe Thr Leu Phe Ile Gly Ser Ile Gly Ile His Phe
100 105 110

Asp Asn Gly Val Lys Asp Asn Arg Ile Leu Glu Leu Thr Ile
115 120 125

<210> 1731

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1731

Ala Val Met Gly Leu Leu Ile Pro Ala Ala Leu His Tyr Thr His Ser
1 5 10 15

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Glu Ala Gln Phe Gly Lys Ser Glu Leu Ala Leu Ser Arg Phe Ser Ser
20 25 30

Cys Ile Met Leu Val Ala Tyr Ala Ser Tyr Leu Tyr Phe Gln Leu Ser
35 40 45

Asn Asn Arg Arg Arg Asn Glu Ala Asn Val Tyr Pro Cys Met Pro Leu
50 55 60

Ile Lys Arg Arg Ile Gln Asp Asp Val Asp Gly Asn Asp Asp Glu Val
65 70 75 80

Pro Glu Ile Ser Lys Arg Glu Ala Ile Ser Trp Ile Ala Ile Phe Ile
85 90 95

Ala Trp Ile Ser Met Leu Ser Tyr Tyr Leu Val Asp Ala Ile Asp Gly
100 105 110

Ala Ser Lys Ala Trp Asn Ile Pro Val Ala Phe Ile Ser Val Val Leu
115 120 125

Leu Pro Val Val Gly Asn Ser Ala Gly His Ala Asn Ala Val Met Phe
130 135 140

Ala Val Lys Asp Lys Leu Asp Ile Ser Leu Gly Val Ala Ile Gly Ser
145 150 155 160

Ser Ile Gln Ile Ser Met Phe Gly Ile Pro Phe Cys Val Val Met Gly
165 170 175

Trp Met Met Gly Lys Pro Met Asp Leu Asn Phe His Leu Phe Glu Thr
180 185 190

Ala Ser Leu Leu Thr Thr Val Leu Val
195 200

<210> 1732

<211> 76

<212> PRT

<213> Zea mays

<400> 1732

Ala Ala Glu Ile Ile Gly Thr Phe Val Leu Val Tyr Thr Val Phe Ser
1 5 10 15

Ala Thr Asp Pro Lys Arg Ser Ala Arg Asp Ser His Val Pro Val Leu
20 25 30

Ala Pro Leu Pro Ile Gly Phe Ala Val Phe Met Val His Leu Ala Thr
35 40 45

Ile Pro Ile Thr Gly Thr Gly Ile Asn Pro Ala Arg Ser Leu Gly Ala
50 55 60

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Ala Val Ile Tyr Asn Lys Asp Lys Ala Trp Asp Asp
65 70 75

<210> 1733

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1733

Ile Gly Phe Asn Met Leu Ala Glu Lys Phe Lys Tyr Asp Asp Pro Leu
1 5 10 15

Glu Ala Ala Gln Leu His Gly Gly Cys Gly Ala Trp Gly Ile Ile Phe
20 25 30

Thr Gly Leu Phe Ala Lys Gly Glu Phe Val Asp Gln Val Tyr Pro Gly
35 40 45

Lys Pro Gly Arg Pro His Gly Leu Phe Met Gly Gly Gly Gly Lys Leu
50 55 60

Leu Gly Ala His Ile Ile Gln Ile Leu Val Ile Ile
65 70 75

<210> 1734

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1734

Ala Val Ala Lys Leu Leu Asn Val Ser Thr Asn Asp Ile Leu Ile Gln
1 5 10 15

Ser Thr Gly Val Ile Gly Gln Arg Ile Lys Lys Glu Ala Leu Val Asn
20 25 30

Ser Leu His Arg Leu Val Gly Ser Leu Ser Ser Ser Ile Glu Gly Ala
35 40 45

Asn Ser Ala Ala Val Ala Ile Thr Thr Thr Asp Leu Val Ser Lys Ser
50 55 60

Ile Ala Val Gln Thr Glu Ile Gly Gly Val Pro Ile Lys Ile Gly Gly
65 70 75 80

Met Ala Lys Gly Ser Gly Met Ile His Pro Asn Met Ala Thr Met Leu
85 90 95

Gly Val Leu Thr Thr Asp Ala Gln Val Ser Ser Asp Val Trp Arg Glu
100 105 110

Met Val Arg Thr Ser Val Ser Arg Ser Phe Asn Gln Ile Thr
115 120 125

<210> 1735

<211> 126

<212> PRT

<213> Zea mays

<400> 1735

Met Asn Trp Arg Ser Glu His Ile Trp Ile Glu Leu Leu Lys Gly Ser
1 5 10 15Arg Lys Arg Gly Asn Phe Phe Trp Ala Cys Ile Leu Phe Leu Gly Ser
20 25 30Leu Gly Phe Leu Ala Val Gly Ala Ser Ser Tyr Leu Gly Lys Asn Met
35 40 45Ile Ser Val Leu Pro Ser Gln Gln Ile Leu Phe Phe Pro Gln Gly Val
50 55 60Val Met Ser Phe Tyr Gly Ile Ala Gly Leu Phe Ile Ser Ser Tyr Leu
65 70 75 80Trp Cys Thr Ile Leu Trp Asn Val Gly Ser Gly Tyr Asp Arg Phe Asp
85 90 95Arg Lys Glu Gly Ile Val Cys Ile Phe Arg Trp Gly Phe Pro Gly Ile
100 105 110Lys Arg Arg Ile Phe Leu Gln Phe Leu Val Arg Asp Ile Gln
115 120 125

<210> 1736

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 1736

Met Ala Ile Phe Leu Ile Ile Phe Val Val Phe Phe Gly Phe Cys Ile
1 5 10 15Leu Ser Thr Pro Leu Phe Arg Trp Ile Asp Ile Val Tyr Asn Lys Lys
20 25 30Asn Leu Pro Pro Gly Thr Met Gly Trp Pro Ile Phe Gly Glu Thr Arg
35 40 45Glu Phe Leu Asn Gln Gly Pro Asn Phe Met Lys Asn Gln Arg Ala Arg
50 55 60Tyr Gly Asn Phe Phe Lys Ser His Ile Leu Gly Cys Pro Thr Val Val
65 70 75 80Ser Met Asp Ala Gly Leu Asn Val Tyr Ile Leu Asn Asn Glu Ala Lys
85 90 95Gly Leu Ile Pro Gly Tyr Pro Gln Ser Met Leu Asp Ile Leu Gly Lys
100 105 110Cys Asn Ile Ala Ala Val His Gly Ala Thr His Lys Tyr Ile Arg Gly
115 120 125

Ala Leu Leu Ser Leu Ile Asn Pro Thr Met Ile Lys Asp His Ile Leu
130 135 140

Pro Lys Ile Asp Lys Phe Met
145 150

<210> 1737

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1737

Met Asn Tyr Phe Pro Trp Leu Thr Ile Ile Val Val Phe Pro Ile Phe
1 5 10 15

Ala Gly Ser Leu Ile Phe Phe Leu Pro His Lys Gly Asn Arg Val Ile
20 25 30

Arg Trp Tyr Thr Ile Cys Ile Cys Ile Leu Glu Leu Leu Leu Thr Thr
35 40 45

Tyr Ala Phe Cys Tyr His Phe Gln Ser Asp Asp Pro Leu Ile Gln Leu
50 55 60

Val Glu Asp Tyr Lys Trp Ile Asp Phe Phe Asp Phe
65 70 75

<210> 1738

<211> 151

<212> PRT

<213> Zea mays

<400> 1738

Met Ala Gln Ala Val Glu Glu Trp Tyr Arg Gln Met Pro Ile Ile Thr
1 5 10 15

Arg Ser Tyr Leu Thr Ala Ala Val Val Thr Thr Val Gly Cys Thr Leu
20 25 30

Glu Ile Ile Ser Pro Tyr His Leu Tyr Leu Asn Pro Lys Leu Val Val
35 40 45

Gln His Tyr Glu Ile Trp Arg Leu Val Thr Asn Phe Leu Tyr Phe Arg
50 55 60

Lys Met Asp Leu Asp Phe Leu Phe His Met Phe Phe Leu Ala Arg Tyr
65 70 75 80

Cys Lys Leu Leu Glu Glu Asn Ser Phe Arg Gly Arg Thr Ala Asp Phe
85 90 95

Phe Tyr Met Leu Leu Phe Gly Ala Thr Val Leu Thr Ser Ile Val Leu
100 105 110

Ile Gly Gly Met Ile Pro Tyr Ile Ser Glu Thr Phe Ala Arg Ile Leu

115

120

125

Phe Leu Ser Asn Ser Leu Thr Phe Met Met Val Tyr Val Trp Ser Lys
 130 135 140

His Asn Pro Phe Ile His Met
 145 150

<210> 1739

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1739

Thr Ala Phe Asn Glu Val Val Ala Val Thr Gly Asp Gly Thr Asn Asp
 1 5 10 15

Ala Pro Ala Leu Arg Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala
 20 25 30

Gly Thr Glu Val Ala Lys Glu Ser Ala Asp Val Val Ile Leu Asp Asp
 35 40 45

Asn Phe Ser Thr Ile Val Thr Val Ala Lys Trp Gly Arg Ser Val Tyr
 50 55 60

Val Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val Asn Val Val
 65 70 75 80

Ala Leu Leu Val Asn Phe Thr Ser Ala Cys Phe Thr Gly Asp Ala Pro
 85 90 95

Leu Thr Ala Val Gln Leu Leu Trp Val Asn Met Ile Met Asp Thr Leu
 100 105 110

Gly Ala Leu Ala Leu Ala Thr Glu Pro Pro Asn Asn Asn Leu Met Lys
 115 120 125

Lys Ala Pro Val Gly Arg Lys Gly Lys Phe Ile Thr Asn Val Met Trp
 130 135 140

Arg Asn Ile Val Gly Gln Ser Leu Tyr Gln Phe Ala Val Met Trp Tyr
 145 150 155 160

Leu Gln Thr Gln Gly Lys His Leu Phe Gly Leu Glu Gly Tyr His Ala
 165 170 175

<210> 1740

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1740

Trp Lys Leu Lys Ala Val Tyr Met Tyr Ala Ala Gly Phe Tyr Thr Tyr
 1 5 10 15

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Ser Ile Phe Ala Leu Met Phe Trp Glu Thr Arg Arg Ser Asp Phe Gly
20 25 30

Val Ser Met Ser His His Val Ala Thr Val Ala Leu Ile Val Leu Ser
35 40 45

Tyr Val Phe Arg Phe Ala Arg Val Gly Ser Val Val Leu Ala Ile His
50 55 60

Asp Ala Ser Asp Val Phe Leu Glu Val Gly Lys Met Ala Lys Tyr Ser
65 70 75 80

His Cys Asp Leu Leu Ala Asn Val Ala Phe Leu Leu Phe Val Val Ser
85 90 95

Trp Val Leu Leu Arg
100

<210> 1741
<211> 76
<212> PRT
<213> Zea mays

<400> 1741
Arg Ile Pro Ala Gln Val Ile Gly Ala Val Leu Gly Val Lys Leu Ile
1 5 10 15

Gln Val Thr Phe Pro Asn Val Gly Lys Gly Ala Arg Leu Ser Val Gly
20 25 30

Ala His His Gly Ala Leu Ala Glu Gly Leu Ala Thr Phe Met Val Val
35 40 45

Met Val Ser Val Thr Leu Lys Lys Lys Glu Met Lys Ser Phe Phe Met
50 55 60

Lys Thr Trp Ile Thr Ser Ile Trp Lys Asn Thr Ile
65 70 75

<210> 1742
<211> 176
<212> PRT
<213> Oryza sativa

<400> 1742
Met Phe Asn Glu Val Val Ala Val Thr Gly Asp Gly Thr Asn Asp Ala
1 5 10 15

Pro Ala Leu His Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala Gly
20 25 30

Thr Glu Val Ala Lys Glu Asn Ala Asp Val Ile Ile Met Asp Asp Asn
35 40 45

Phe Ser Thr Ile Ile Asn Val Ala Lys Trp Gly Arg Ser Val Tyr Ile
50 55 60

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Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val Asn Val Val Ala
65 70 75 80

Leu Met Val Asn Phe Ile Ser Ala Ser Phe Thr Gly Ser Ala Pro Leu
85 90 95

Thr Ile Val Gln Leu Leu Trp Val Asn Leu Ile Met Asp Thr Leu Gly
100 105 110

Ala Leu Ala Leu Ala Thr Glu Pro Pro Asn Asp Ala Met Met Lys Arg
115 120 125

Pro Pro Val Gly Arg Gly Asp Asn Phe Ile Thr Lys Val Met Trp Arg
130 135 140

Asn Ile Val Gly Gln Ser Ile Tyr Gln Leu Val Val Leu Gly Val Leu
145 150 155 160

Leu Leu Arg Gly Lys Ser Leu Leu Gln Ile Asn Gly Pro Gln Ala Asp
165 170 175

<210> 1743

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1743

Met Gly Phe Trp Met Ala Met Leu Leu Met Leu Leu Leu Cys Leu Trp
1 5 10 15

Val Ser Cys Gly Ile Ala Ser Val Ser Tyr Asp His Lys Ala Ile Ile
20 25 30

Val Asn Gly Gln Arg Lys Ile Leu Ile Ser Gly Ser Ile His Tyr Pro
35 40 45

Arg Ser Thr Pro Glu Met Trp Pro Asp Leu Ile Gln Lys Ala Lys Glu
50 55 60

Gly Gly Val Asp Val Ile Gln Thr Tyr Val Phe Trp
65 70 75

<210> 1744

<211> 101

<212> PRT

<213> Zea mays

<400> 1744

Ile Lys Lys Glu Ala Leu Leu Asn Ser Leu Pro Arg Leu Val Gly Ser
1 5 10 15

Leu Ser Ser Ser Val Gln Gly Ala Asn Ser Ala Ala Val Ala Ile Thr
20 25 30

Thr Thr Asp Leu Val Ser Lys Ser Ile Ala Val Gln Thr Glu Ile Gly
35 40 45

Gly Val Ala Ile Arg Ile Gly Gly Met Ala Lys Gly Ser Gly Met Ile
50 55 60

His Pro Asn Met Ala Thr Met Leu Gly Val Leu Thr Thr Asp Ala Gln
65 70 75 80

Val Ser Ser Asp Val Trp Arg Glu Met Ile Arg Met Ser Val Ser Arg
85 90 95

Ser Phe Asn Gln Ile
100

<210> 1745

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1745

Phe Lys Arg Asn Asn Glu Arg Phe Gly Phe Leu Lys Trp Gly Ser Thr
1 5 10 15

Ala Phe His Asn Met Leu Val Val Pro Pro Gly Ser Gly Ile Val His
20 25 30

Gln Val Asn Leu Glu Tyr Leu Gly Arg Val Val Phe Asn Thr Asp Gly
35 40 45

Ile Met Tyr Pro Asp Ser Val Val Gly Thr Asp Ser His Thr Thr Met
50 55 60

Ile Asp Gly Leu Gly Val Ala Gly Trp Gly Val Gly Gly Ile Glu Ala
65 70 75 80

Glu Ala Thr Met Leu Gly Gln Pro Met Ser Met Val Leu Pro Gly Val
85 90 95

Val Gly Phe Lys Leu Thr Gly Lys Leu Gln Asn Gly Val Thr Ala Thr
100 105 110

Asp Leu Val Leu Thr Val Thr Gln Met Leu Arg Lys His Gly
115 120 125

<210> 1746

<211> 126

<212> PRT

<213> Zea mays

<400> 1746

Met Ala Lys Asp Ile Glu Ala Ala Ala Ala His Glu Gly Lys Asp Tyr
1 5 10 15

Ser Asp Pro Pro Pro Ala Pro Leu Val Asp Ala Glu Glu Leu Thr Lys
20 25 30

Trp Ser Leu Tyr Arg Ala Val Ile Ala Glu Phe Val Ala Thr Leu Leu

35

40

45

Phe Leu Tyr Ile Thr Val Ala Thr Val Ile Gly Tyr Lys His Gln Thr
 50 55 60

Asp Ala Ala Ala Ser Gly Pro Asp Ala Ala Cys Gly Gly Val Gly Val
 65 70 75 80

Leu Gly Ile Ala Trp Ala Phe Gly Gly Met Ile Phe Ile Leu Val Tyr
 85 90 95

Cys Thr Ala Gly Val Ser Gly Gly His Ile Asn Pro Ala Val Thr Phe
 100 105 110

Gly Leu Phe Leu Ala Arg Lys Val Ser Leu Val Arg Ala Leu
 115 120 125

<210> 1747

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1747

Gly Ala Pro Met Phe His Ser Met Gly Phe Leu Phe Val Leu Gln Gly
 1 5 10 15

Val Ala Leu Gly Ala Thr Thr Val Val Val Thr Asp Ala Val Ala Arg
 20 25 30

Ala Gly Ile Arg Gly Leu Val Glu Ala Ala Glu Arg Trp Ala Val Met
 35 40 45

Asp Met Thr Ala Ser Pro Pro Val Val Leu Gly Met Thr Lys Gln Arg
 50 55 60

Cys Arg Leu Pro Ala Leu Glu Arg Ile Thr Cys Gly
 65 70 75

<210> 1748

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1748

Gly Ile Phe Ile Val Trp Tyr Thr Gln Ala Ser Phe Leu Gly Ile Asn
 1 5 10 15

Ile Val Ser Asp Gly His Thr Leu Val Glu Leu Ser Gln Leu Arg Asn
 20 25 30

Trp Gly Glu Cys Ser Thr Trp Thr Asn Phe Thr Val Ser Pro Phe Lys
 35 40 45

Ala Gly Asn Arg Leu Ile Thr Phe Ser Asp Pro Cys Glu Tyr Phe Thr
 50 55 60

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Val Gly Lys Val Lys Ala Met Thr Leu Ser Leu Ser Val Leu Val Ala
65 70 75 80

Ile Glu Met Phe Asn Ser Leu Asn Ala Leu Ser Glu Asp Asn Ser Leu
85 90 95

Ile Lys Met Pro Pro
100

<210> 1749

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1749

Val Asn Met Ile Met Asp Thr Leu Gly Ala Leu Ala Leu Ala Thr Glu
1 5 10 15

Pro Pro Asn Asp Glu Met Met Lys Arg Pro Pro Val Arg Lys Gly Glu
20 25 30

Ser Phe Ile Thr Lys Phe Met Trp Arg Asn Ile Met Gly Gln Ser Leu
35 40 45

Tyr Gln Leu Phe Val Leu Gly Ala Leu Met Phe Gly Gly Glu Arg Leu
50 55 60

Leu Asn Ile Lys Gly Ala Asp Ser Lys Ser Ile Ile Asn Thr Leu Ile
65 70 75 80

Phe Asn Ser Phe Val Phe Cys Gln Val Phe Asn Glu Ile Asn Ser Arg
85 90 95

Glu Met Gln Lys Ile Asn Val Phe Arg Gly Ile Ile Ser Asn Trp Ile
100 105 110

Phe Ile Ala Val Ile Ala Ala Thr Val Ala Phe Gln Val Val Ile Ile
115 120 125

Glu Phe Leu Gly Thr Phe Ala Ser Thr Val Pro Leu Asn Trp Gln His
130 135 140

Trp Leu Leu Ser Val Gly Leu
145 150

<210> 1750

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1750

Val Leu Asn Phe Phe Ala Val Ala Val Thr Ile Ile Val Val Ala Val
1 5 10 15

Pro Glu Gly Leu Pro Leu Ala Val Thr Leu Ser Leu Ala Phe Ala Met
20 25 30

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Lys Lys Leu Met Gln Glu Arg Ala Leu Val Arg His Leu Ser Ala Cys
35 40 45

Glu Thr Met Gly Ser Ala Ser Cys Ile Cys Thr Asp Lys Thr Gly Thr
50 55 60

Leu Thr Thr Asn His Met Val Val Glu Lys Ile Trp
65 70 75

<210> 1751

<211> 176

<212> PRT

<213> Zea mays

<400> 1751

Leu Thr Tyr Val Gly Ala Gly Met Ile Cys Ser His Leu Val Asn Ile
1 5 10 15

Ser Thr Leu Leu Gly Ala Ile Leu Ser Trp Gly Ile Leu Trp Pro Leu
20 25 30

Ile Ser Lys Gln Lys Gly Glu Trp Tyr Pro Ala Asn Ile Pro Glu Ser
35 40 45

Ser Met Lys Ser Leu Tyr Gly Tyr Lys Ala Phe Leu Cys Ile Ala Leu
50 55 60

Ile Met Gly Asp Gly Thr Tyr His Phe Phe Lys Val Phe Gly Val Thr
65 70 75 80

Val Lys Ser Leu His Gln Arg Leu Ser Arg Lys Arg Ala Thr Asn Arg
85 90 95

Val Ala Asn Gly Gly Asp Glu Met Ala Ala Leu Asp Asp Leu Gln Arg
100 105 110

Asp Glu Ile Phe Ser Asp Gly Ser Phe Pro Ala Trp Ala Ala Tyr Ala
115 120 125

Gly Tyr Ala Ala Leu Thr Val Val Ser Ala Val Ile Ile Pro His Met
130 135 140

Phe Arg Gln Val Lys Trp Tyr Tyr Val Ile Val Ala Tyr Val Leu Ala
145 150 155 160

Pro Leu Leu Gly Phe Ala Asn Ser Tyr Gly Thr Gly Leu Thr Asp Ile
165 170 175

<210> 1752

<211> 76

<212> PRT

<213> Zea mays

<400> 1752

Leu Gly Ala Glu Ile Ile Gly Thr Phe Val Leu Val Tyr Thr Val Phe
1 5 10 15

Ser Ala Thr Asp Pro Lys Arg Asn Ala Arg Asp Ser His Val Pro Val
20 25 30

Leu Ala Pro Leu Pro Ile Gly Phe Ala Val Phe Met Val His Leu Ala
35 40 45

Thr Ile Pro Val Thr Gly Thr Gly Ile Asn Pro Ala Arg Ser Leu Gly
50 55 60

Ala Ala Val Ile Tyr Asn Lys Asp Lys Pro Trp Asp
65 70 75

<210> 1753

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1753

Thr Ala Phe Asn Glu Val Val Ala Val Thr Gly Asp Gly Thr Asn Asp
1 5 10 15

Ala Pro Ala Leu Arg Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala
20 25 30

Gly Thr Glu Val Ala Lys Glu Ser Ala Asp Val Val Ile Leu Asp Asp
35 40 45

Asn Phe Ser Thr Ile Val Thr Val Ala Lys Trp Gly Arg Ser Val Tyr
50 55 60

Val Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val Asn Val Val
65 70 75 80

Ala Leu Leu Val Asn Phe Thr Ser Ala Cys Phe Thr Gly Asp Ala Pro
85 90 95

Leu Thr Ala Val Gln Leu Leu Trp Val Asn Met Ile Met Asp Thr Leu
100 105 110

Gly Ala Leu Ala Leu Ala Thr Glu Pro Pro Asn Asn Asn Leu Met Lys
115 120 125

Lys Ala Pro Val Gly Arg Lys Gly Lys Phe Ile Thr Asn Val Met Trp
130 135 140

Arg Asn Ile Val Gly Gln Ser Leu Tyr Gln Phe Ala Val Met Trp Tyr
145 150 155 160

Leu Gln Thr Gln Gly Lys His Leu Phe Gly Leu Glu Gly Tyr His Ala
165 170 175

Asp Ile Val Leu Asn Thr Ile Ile Phe Asn Thr Phe Val Phe Cys Gln
180 185 190

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Val Phe Asn Glu Ile Ser Ser Arg Glu Met Glu Asp Ile Asn Val Leu
195 200 205

Arg Gly Met Ala Gly Asn Ser Ile Phe Leu Gly Val Leu Thr Gly Thr
210 215 220

Ile Phe Phe Gln Phe Ile Leu Val Gln Phe Leu Gly Asp Phe Ala Asn
225 230 235 240

Thr Thr Pro Leu Thr Gln Gln Gln Trp Leu Ile Ser Ile Leu Phe Gly
245 250 255

Phe Leu Gly Met Pro Ile Ala Ala Ala Ile Lys Leu Ile Ala Val Glu
260 265 270

Pro His Glu Lys
275

<210> 1754
<211> 126
<212> PRT
<213> Oryza sativa

<400> 1754
Gln Leu Leu Trp Val Asn Met Ile Met Asp Thr Leu Gly Ala Leu Ala
1 5 10 15

Leu Ala Thr Glu Pro Pro Asn Asn Asn Leu Met Lys Lys Ala Pro Val
20 25 30

Gly Arg Lys Gly Lys Phe Ile Thr Asn Val Met Trp Arg Asn Ile Val
35 40 45

Gly Gln Ser Leu Tyr Gln Phe Ala Val Met Trp Tyr Leu Gln Thr Gln
50 55 60

Gly Lys His Leu Phe Gly Leu Glu Gly Tyr His Ala Asp Ile Val Leu
65 70 75 80

Asn Thr Ile Ile Phe Asn Thr Phe Val Phe Cys Gln Val Phe Asn Glu
85 90 95

Ile Ser Ser Arg Glu Met Glu Asp Ile Asn Val Leu Arg Gly Met Ala
100 105 110

Gly Asn Ser Ile Phe Leu Gly Val Leu Thr Gly Thr Ile Phe
115 120 125

<210> 1755
<211> 76
<212> PRT
<213> Zea mays

<400> 1755
Leu Ala Ala Glu Ile Ile Gly Thr Phe Val Leu Val Tyr Thr Val Phe
1 5 10 15

Ser Ala Thr Asp Pro Lys Arg Ser Ala Arg Asp Ser His Val Pro Val
20 25 30

Leu Ala Pro Leu Pro Ile Gly Phe Ala Val Phe Met Val His Leu Ala
35 40 45

Thr Ile Pro Ile Thr Gly Thr Gly Ile Asn Pro Ala Arg Ser Leu Gly
50 55 60

Ala Ala Val Ile Tyr Asn Lys Asp Lys Ala Trp Asp
65 70 75

<210> 1756

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 1756

Pro Gly Gly Glu Val Ile Asp Thr Phe Pro Tyr Phe Val Ser Gly Val
1 5 10 15

Leu His Leu Ile Ser Ser Ala Val Leu Gly Phe Gly Gly Ile Tyr His
20 25 30

Ala Leu Leu Gly Pro Glu Thr Leu Glu Glu Ser Phe Pro Phe Phe Gly
35 40 45

Tyr Val Trp Lys Asp Arg Asn Lys Met Thr Thr Ile Leu Gly Ile His
50 55 60

Leu Ile Leu Leu Gly Ile Gly Ala Phe Leu Leu Val Phe Lys Ala Leu
65 70 75 80

Tyr Phe Gly Gly Val Tyr Asp Thr Trp Ala Pro Gly Gly Gly Asp Val
85 90 95

Arg Lys Ile Thr Asn Leu Thr Leu Ser Pro Ser Ile Ile Phe Gly Tyr
100 105 110

Leu Leu Lys Ser Pro Phe Gly Gly Glu Gly Trp Ile Val Ser Val Asp
115 120 125

Asp Leu Glu Asp Ile Ile Gly Gly His Val Trp Leu Gly Ser Ile Cys
130 135 140

Ile Leu Gly Gly Ile Trp His Ile Leu Thr Lys Pro Phe Ala Trp Ala
145 150 155 160

Arg Arg Ala Leu Val Trp Ser Gly Glu Ala Tyr Leu Ser Tyr Ser Leu
165 170 175

Gly Ala Leu Ala Val Phe Gly Phe Ile Ala Cys Cys Phe Val Trp Phe
180 185 190

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Asn Asn Thr Ala Tyr Pro Ser Glu Phe Tyr Gly Pro Thr Gly Pro Glu
195 200 205

Ala Ser Gln Ala Gln Ala Phe Thr Phe Leu Val Arg Asp Gln Arg Leu
210 215 220

Gly Ala Asn Val Gly Ser Ala Gln Gly Pro Thr Gly Leu Gly Lys Tyr
225 230 235 240

Leu Met Arg Ser Pro Thr Gly Glu Val Ile Phe Gly Gly Glu Thr Met
245 250 255

Arg Phe Trp Asp Leu Arg Ala Pro Trp Leu Glu Pro Leu Arg Gly Pro
260 265 270

Asn Gly Leu Asp
275

<210> 1757
<211> 201
<212> PRT
<213> Oryza sativa

<400> 1757
Gln Ala Asp Val Ser Ile Gly Leu Leu Leu Leu Gly Val Leu Cys His
1 5 10 15

Ile Ala Thr Leu Val Ser Lys Tyr Thr Ser Ser Thr Gly Asp Ser Ile
20 25 30

Asn Ser Ser Ser Val Met Gln Leu Ser Arg Ser Cys Ala Ile Val Met
35 40 45

Leu Ile Ala Tyr Phe Gly Ser Leu Met Phe Gln Leu Lys Thr His Arg
50 55 60

Gln Ile Phe Glu Leu Glu Glu Asp Ser Ser Asp Ser Ser Ser Ser Glu
65 70 75 80

Asp Asp Ala Thr Asp Lys Ser Val Ile Gly Phe Ala Ser Ala Met Val
85 90 95

Trp Leu Ile Gly Met Ala Val Val Thr Ala Met Leu Ser Ser Tyr Val
100 105 110

Val Thr Thr Ile Glu Glu Ala Ser Glu Ser Met Gly Ile Pro Val Arg
115 120 125

Phe Ile Ser Ile Ile Leu Leu Pro Ile Val Gly Asn Ala Ala Glu His
130 135 140

Ala Gly Ala Ile Ile Phe Ala Phe Lys Asn Lys Ile Asp Ile Ser Leu
145 150 155 160

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Gly Ile Thr Leu Gly Ser Ala Thr Gln Ile Ser Met Leu Val Val Pro
165 170 175

Val Ile Leu Ile Val Ser Trp Val Asn Ala Ile Pro Met Asp Leu Asp
180 185 190

Phe Asn Leu Leu Glu Thr Gly Ser Leu
195 200

<210> 1758

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1758

Glu Val Val Ser Val Thr Gly Asp Gly Thr Asn Asp Ala Pro Ala Leu
1 5 10 15

His Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala Gly Thr Glu Val
20 25 30

Ala Lys Glu Ser Ala Asp Val Ile Val Leu Asp Asp Asn Phe Thr Thr
35 40 45

Ile Ile Asn Val Ala Arg Trp Gly Arg Ala Val Tyr Ile Asn Ile Gln
50 55 60

Lys Phe Val Gln Phe Gln Leu Thr Val Asn Ile Val Ala Leu Val Ile
65 70 75 80

Asn Phe Val Ser Ala Cys Ile Ile Gly Ser Ala Pro Leu Thr Ala Val
85 90 95

Gln Leu Leu Trp Val Asn Met Ile Met Asp Thr Leu Gly Ala Leu Ala
100 105 110

Leu Ala Thr Glu Pro Pro Asn Asp Glu Met Met Lys Arg Pro Pro Val
115 120 125

Arg Lys Gly Glu Ser Phe Ile Thr Lys Phe Met Trp Arg Asn Ile Met
130 135 140

Gly Gln Ser Leu Tyr Gln Leu Phe Val Leu Gly Ala Leu Met Phe Gly
145 150 155 160

Gly Glu Arg Leu Leu Asn Ile Lys Gly Ala Asp Ser Lys Ser Ile Ile
165 170 175

Asn Thr Leu Ile Phe Asn Ser Phe Val Phe Cys Gln Val Phe Asn Glu
180 185 190

Ile Asn Ser Arg Glu Met Gln Lys Ile Asn Val Phe Arg Gly Ile Ile
195 200 205

Ser Asn Trp Ile Phe Ile Ala Val Ile Ala Ala Thr Val Ala Phe Gln

210

215

220

Val Val Ile Ile Glu Phe Leu Gly Thr Phe Ala Ser Thr Val Pro Leu
225 230 235 240

Asn Trp Gln His Trp Leu Leu Ser Val Gly Leu Gly Ser Ile Ser Leu
245 250 255

Ile Val Gly Val Ile Leu Lys Cys Ile Pro Val Gly Ser Gly Glu Thr
260 265 270

Ser Ala Thr Pro
275

<210> 1759

<211> 176

<212> PRT

<213> Zea mays

<400> 1759

Met Ser Lys Val Tyr Asp Trp Phe Glu Glu Arg Leu Glu Ile Gln Ala
1 5 10 15

Ile Ala Asp Asp Ile Thr Ser Lys Tyr Val Pro Pro His Val Asn Ile
20 25 30

Phe Tyr Cys Leu Gly Gly Ile Thr Leu Thr Cys Phe Leu Val Gln Val
35 40 45

Ala Thr Gly Phe Ala Met Thr Phe Tyr Tyr Arg Pro Thr Val Thr Glu
50 55 60

Ala Phe Ser Ser Val Gln Tyr Ile Met Thr Glu Ala Asn Phe Gly Trp
65 70 75 80

Leu Ile Arg Ser Val His Arg Trp Ser Ala Ser Met Met Val Leu Met
85 90 95

Met Ile Leu His Val Phe Arg Val Tyr Leu Thr Gly Gly Phe Lys Lys
100 105 110

Pro Arg Glu Leu Thr Trp Val Thr Gly Val Val Leu Ala Val Leu Thr
115 120 125

Ala Ser Phe Gly Val Thr Gly Tyr Ser Leu Pro Trp Asp Gln Ile Gly
130 135 140

Tyr Trp Ala Val Lys Ile Val Thr Gly Val Pro Glu Ala Ile Pro Val
145 150 155 160

Ile Gly Ser Pro Leu Val Glu Leu Leu Arg Gly Ser Ala Ser Val Gly
165 170 175

<210> 1760

<211> 101

<212> PRT

<213> *Oryza sativa*

<400> 1760

Val Met Met Asn Asp Arg Lys Ser Arg Phe Ser Ile Asn Gly Lys Pro
 1 5 10 15

Ile Tyr His Phe Met Gly Thr Ser Thr Phe Ser Gln Tyr Thr Val Val
 20 25 30

His Asp Val Ser Val Ala Lys Ile Asn Pro Gln Ala Pro Leu Asp Lys
 35 40 45

Val Cys Leu Leu Gly Cys Gly Val Ser Thr Gly Leu Gly Ala Val Trp
 50 55 60

Asn Thr Ala Lys Val Glu Ala Gly Ser Ile Val Ala Ile Phe Gly Leu
 65 70 75 80

Gly Thr Val Gly Leu Ala Val Ala Glu Gly Ala Lys Ser Ala Gly Ala
 85 90 95

Ser Arg Ile Ile Gly
 100

<210> 1761

<211> 176

<212> PRT

<213> *Solanum lycopersicum*

<400> 1761

Met Ser Lys Val Tyr Asp Trp Phe Glu Glu Arg Leu Glu Ile Gln Ala
 1 5 10 15

Ile Ala Asp Asp Ile Thr Ser Lys Tyr Val Pro Pro His Val Asn Ile
 20 25 30

Phe Tyr Cys Leu Gly Gly Ile Thr Leu Thr Cys Phe Leu Val Gln Val
 35 40 45

Ala Thr Gly Phe Ala Met Thr Phe Tyr Tyr Arg Pro Thr Val Thr Glu
 50 55 60

Ala Phe Ala Ser Val Gln Tyr Ile Met Thr Glu Ala Asn Phe Gly Trp
 65 70 75 80

Leu Ile Arg Ser Val His Arg Trp Ser Ala Ser Met Met Val Leu Met
 85 90 95

Met Ile Leu His Val Phe Arg Val Tyr Leu Thr Gly Gly Phe Lys Lys
 100 105 110

Pro Arg Glu Leu Thr Trp Val Thr Gly Val Val Leu Ala Val Leu Thr
 115 120 125

Ala Ser Phe Gly Val Thr Gly Tyr Ser Leu Pro Trp Asp Gln Ile Gly

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Ala Ala Glu His Gly Leu Asp Leu Val Thr Ile Ile Pro Thr Leu Val
35 40 45

Val Gly Pro Phe Ile Ser Ala Ser Met Pro Pro Ser Leu Ile Thr Ala
50 55 60

Leu Ala Leu Ile Thr Gly Asn Ala Pro His Tyr Ser
65 70 75

<210> 1764

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1764

Met Phe Asn Glu Val Val Ala Val Thr Gly Asp Gly Thr Asn Asp Ala
1 5 10 15

Pro Ala Leu His Glu Ala Asp Ile Gly Leu Ala Met Gly Ile Ala Gly
20 25 30

Thr Glu Val Ala Lys Glu Asn Ala Asp Val Ile Ile Met Asp Asp Asn
35 40 45

Phe Ser Thr Ile Ile Asn Val Ala Lys Trp Gly Arg Ser Val Tyr Ile
50 55 60

Asn Ile Gln Lys Phe Val Gln Phe Gln Leu Thr Val Asn Val Val Ala
65 70 75 80

Leu Met Val Asn Phe Ile Ser Ala Ser Phe Thr Gly Ser Ala Pro Leu
85 90 95

Thr Ile Val Gln Leu Leu Trp Val Asn Leu Ile Met Asp Thr Leu Gly
100 105 110

Ala Leu Ala Leu Ala Thr Glu Pro Pro Asn Asp Ala Met Met Lys Arg
115 120 125

Pro Pro Val Gly Arg Gly Asp Asn Phe Ile Thr Lys Val Met Trp Arg
130 135 140

Asn Ile Val Gly Gln Ser Ile Tyr Gln Leu Val Val Leu Gly Val Leu
145 150 155 160

Leu Leu Arg Gly Lys Ser Leu Leu Gln Ile Asn Gly Pro Gln Ala Asp
165 170 175

Ser Leu Leu Asn Thr Phe Val Phe Asn Thr Phe Val Phe Cys Gln Val
180 185 190

Phe Asn Glu Val Asn Ser Arg Glu Met Glu Lys Ile Asn Val Phe Ser
195 200 205

Gly Ile Phe Ser Ser Trp Ile Phe Ser Ala Val Val Gly Val Thr Ala

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210 215 220

Gly Phe Gln Val Ile Met Val Glu Leu Leu Gly Thr Phe Ala Asn Thr
 225 230 235 240

Val His Leu Ser Gly Lys Leu Trp Leu Thr Ser Val Leu Ile Gly Ser
 245 250 255

Val Gly Leu Val Ile Gly Ala Ile Leu Lys Cys Ile Pro Val Glu Ser
 260 265 270

Gly Ser Asp Ala
 275

<210> 1765
 <211> 176
 <212> PRT
 <213> Oryza sativa

<400> 1765
 Val Ile Gly Ala Val Gln Gly Met Ile Thr Gly Leu Val Cys Ile Thr
 1 5 10 15

Pro Gly Ala Gly Leu Val Gln Gly Trp Ala Ala Ile Val Met Gly Ile
 20 25 30

Leu Ser Gly Ser Ile Pro Trp Phe Thr Met Met Val Val His Lys Arg
 35 40 45

Ser Arg Leu Leu Gln Gln Val Asp Asp Thr Leu Gly Val Phe His Thr
 50 55 60

His Ala Val Ala Gly Phe Leu Gly Gly Ala Thr Thr Gly Leu Phe Ala
 65 70 75 80

Glu Pro Val Leu Cys Ser Leu Phe Leu Pro Val Thr Asn Ser Arg Gly
 85 90 95

Ala Phe Tyr Pro Gly Arg Gly Gly Gly Leu Gln Phe Val Arg Gln Val
 100 105 110

Ala Gly Ala Leu Phe Ile Ile Cys Trp Asn Val Val Val Thr Ser Leu
 115 120 125

Val Cys Leu Ala Val Arg Ala Val Val Pro Leu Arg Met Pro Glu Glu
 130 135 140

Glu Leu Ala Ile Gly Asp Asp Ala Val His Gly Glu Glu Ala Tyr Ala
 145 150 155 160

Leu Trp Gly Asp Gly Glu Lys Tyr Asp Ser Thr Lys His Gly Trp Tyr
 165 170 175

<210> 1766
 <211> 226

<212> PRT

<213> Zea mays

<400> 1766

Gln Gly Thr Asp Asp Lys Asp Tyr Lys Glu Pro Pro Pro Ala Pro Leu
 1 5 10 15

Phe Glu Pro Gly Glu Leu Lys Ser Trp Ser Phe Tyr Arg Pro Gly Ile
 20 25 30

Ala Glu Phe Val Ala Thr Phe Leu Phe Leu Tyr Ile Ser Ile Leu Thr
 35 40 45

Val Met Gly Val Ser Lys Ser Thr Ser Lys Cys Ala Thr Val Gly Ile
 50 55 60

Gln Gly Ile Ala Trp Ser Phe Gly Gly Met Ile Leu Ala Leu Val Tyr
 65 70 75 80

Cys Thr Ala Gly Ile Ser Gly His Ile Asn Pro Ala Val Thr Phe Gly
 85 90 95

Leu Phe Leu Ala Arg Lys Leu Ser Leu Thr Arg Ala Val Phe Tyr Ile
 100 105 110

Ile Met Gln Cys Leu Gly Ala Ile Cys Gly Arg Gly Val Val Lys Gly
 115 120 125

Phe Gln Gln Gly Leu Tyr Met Gly Asn Gly Gly Arg Arg Asn Val Val
 130 135 140

Ala Pro Gly Tyr Thr Lys Gly Asp Gly Leu Gly Ala Glu Ile Val Gly
 145 150 155 160

Thr Phe Ile Leu Val Tyr Thr Val Phe Ser Ala Thr Asp Ala Lys Arg
 165 170 175

Arg Ala Arg Asp Ser His Val Pro Ile Leu Ala Pro Leu Pro Ile Gly
 180 185 190

Phe Ala Val Phe Leu Val His Leu Ala Thr Met Gly Ile Thr Gly Thr
 195 200 205

Gly Ile Asn Pro Ala Arg Ser Leu Gly Ala Ala Val Ile Tyr Asn Gln
 210 215 220

His His
 225

<210> 1767

<211> 176

<212> PRT

<213> Zea mays

<400> 1767

Met Asn Ile Thr Pro Cys Ser Ile Lys Thr Leu Lys Gly Leu Tyr Asp

1 5 10 15
 Ile Ser Gly Val Glu Val Gly Gln His Phe Tyr Trp Gln Ile Gly Gly
 20 25 30
 Phe Gln Ile His Ala Gln Val Leu Ile Thr Ser Trp Val Val Ile Thr
 35 40 45
 Ile Leu Leu Gly Ser Val Ile Ile Ala Val Arg Asn Pro Gln Thr Ile
 50 55 60
 Pro Thr Asp Gly Gln Asn Phe Phe Glu Tyr Val Leu Glu Phe Ile Arg
 65 70 75 80
 Asp Leu Ser Lys Thr Gln Ile Gly Glu Glu Tyr Gly Pro Trp Val Pro
 85 90 95
 Phe Ile Gly Thr Met Phe Leu Phe Ile Phe Val Ser Asn Trp Ser Gly
 100 105 110
 Ala Leu Leu Pro Trp Lys Ile Ile Glu Leu Pro His Gly Glu Leu Ala
 115 120 125
 Ala Pro Thr Asn Asp Ile Asn Thr Thr Val Ala Leu Ala Leu Leu Thr
 130 135 140
 Ser Ala Ala Tyr Phe Tyr Ala Gly Leu Ser Lys Lys Gly Leu Ser Tyr
 145 150 155 160
 Phe Glu Lys Tyr Ile Lys Pro Thr Pro Ile Leu Leu Pro Ile Asn Ile
 165 170 175

 <210> 1768
 <211> 126
 <212> PRT
 <213> Zea mays

 <400> 1768
 Gln Gly Thr Asp Asp Lys Asp Tyr Lys Glu Pro Pro Pro Ala Pro Leu
 1 5 10 15
 Phe Glu Pro Gly Glu Leu Lys Ser Trp Ser Phe Tyr Arg Pro Gly Ile
 20 25 30
 Ala Glu Phe Val Ala Thr Phe Leu Phe Leu Tyr Ile Ser Ile Leu Thr
 35 40 45
 Val Met Gly Val Ser Lys Ser Thr Ser Lys Cys Ala Thr Val Gly Ile
 50 55 60
 Gln Gly Ile Ala Trp Ser Phe Gly Gly Met Ile Leu Ala Leu Val Tyr
 65 70 75 80
 Cys Thr Ala Gly Ile Ser Gly His Ile Asn Pro Ala Val Thr Phe Gly
 85 90 95

Leu Phe Leu Ala Arg Lys Leu Ser Leu Thr Arg Ala Val Phe Tyr Ile
100 105 110

Ile Met Gln Cys Leu Gly Ala Ile Cys Gly Arg Gly Val Val
115 120 125

<210> 1769

<211> 251

<212> PRT

<213> Oryza sativa

<400> 1769

Tyr Thr Gly Pro Thr Val Gly Gly Leu Leu Asn Ala Thr Phe Gly Asn
1 5 10 15

Ala Thr Glu Met Ile Ile Ala Ile Tyr Ala Leu Lys Asn Gly Met Ile
20 25 30

Arg Val Val Gln Gln Ser Leu Leu Gly Ser Ile Leu Ser Asn Met Leu
35 40 45

Leu Val Met Gly Cys Ala Phe Phe Ala Gly Gly Ile Val His Arg Asn
50 55 60

Lys Asp Gln Val Phe Ser Lys Ala Thr Ala Val Val Asn Ser Gly Leu
65 70 75 80

Leu Leu Met Ala Val Met Gly Leu Met Phe Pro Ala Val Leu His Phe
85 90 95

Thr His Ser Glu Val Arg Gln Gly Ala Ser Glu Val Ser Leu Ser Arg
100 105 110

Phe Ser Ser Cys Ile Met Leu Val Ala Tyr Ala Ser Tyr Leu Tyr Phe
115 120 125

Gln Leu Ser Gly Arg Asn Asn Ala Tyr Ser Pro Ile Gly Ser Glu Glu
130 135 140

Met Pro Asn Glu Asp Ala Ala Glu Glu Asp Glu Glu Ser Glu Ile Gly
145 150 155 160

Met Trp Glu Ser Ile Ala Trp Leu Ala Met Leu Thr Leu Trp Val Ser
165 170 175

Ile Leu Ser Glu Tyr Leu Val Asn Ala Ile Glu Gly Ala Ser Asp Ser
180 185 190

Leu Asn Leu Pro Val Ala Phe Ile Ser Val Ile Leu Leu Pro Ile Val
195 200 205

Gly Asn Ala Ala Glu His Ala Ser Ala Ile Met Phe Ala Met Lys Asp
210 215 220

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Lys Leu Asp Ile Thr Leu Gly Val Ala Ile Gly Ser Ser Thr Gln Ile
225 230 235 240

Ser Met Phe Val Ile Pro Phe Cys Val Val Ile
245 250

<210> 1770
<211> 176
<212> PRT
<213> Solanum lycopersicum

<400> 1770
Ile Thr Gly Pro Ser Ala Ile Leu Thr Gln Gly Phe Ala Thr Ser Gly
1 5 10 15

Ile Leu Thr Glu Ile His Gln Ser Gly Ile Leu Val Pro Ala Leu Gln
20 25 30

Ser Glu Trp Leu Ile Met His Val Ser Met Met Ile Leu Gly Tyr Ala
35 40 45

Ala Leu Leu Cys Gly Ser Leu Leu Ser Val Ala Leu Leu Val Ile Thr
50 55 60

Phe Arg Lys Asn Arg Lys Leu Phe Ser Lys Ser Asn Val Phe Leu Asn
65 70 75 80

Glu Ser Phe Phe Leu Gly Glu Asn Val Val Glu Asn Thr Ser Phe Phe
85 90 95

Cys Thr Lys Asn Tyr Tyr Arg Ser Gln Leu Ile Gln Gln Leu Asp Tyr
100 105 110

Trp Ser Tyr Arg Val Ile Ser Leu Gly Phe Thr Phe Leu Thr Ile Gly
115 120 125

Ile Leu Ser Gly Ala Val Trp Ala Asn Glu Ala Trp Gly Ser Tyr Trp
130 135 140

Asn Trp Asp Pro Lys Glu Thr Trp Ala Phe Ile Thr Trp Ile Val Phe
145 150 155 160

Ala Ile Tyr Leu His Thr Arg Thr Asn Arg Asn Leu Arg Gly Pro Asn
165 170 175

<210> 1771
<211> 101
<212> PRT
<213> Zea mays

<400> 1771
Val Met Met Asn Asp Met Lys Ser Arg Phe Ser Val Asn Gly Lys Pro
1 5 10 15

Ile Tyr His Phe Met Gly Thr Ser Thr Phe Ser Gln Tyr Thr Val Val
20 25 30

His Asp Val Ser Val Ala Lys Ile Asn Pro Gln Ala Pro Leu Asp Lys
 35 40 45

Val Cys Leu Leu Gly Cys Gly Val Pro Thr Gly Leu Gly Ala Val Trp
 50 55 60

Asn Thr Ala Lys Val Glu Ser Gly Ser Val Val Ala Val Phe Gly Leu
 65 70 75 80

Gly Thr Val Gly Leu Ala Val Ala Glu Gly Ala Lys Ala Ala Gly Ala
 85 90 95

Ser Arg Val Ile Gly
 100

<210> 1772

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1772

Gly Arg Ser Ile Tyr Asn Asn Met Lys Ala Phe Ile Arg Tyr Met Ile
 1 5 10 15

Ser Ser Asn Val Gly Glu Val Ile Ser Ile Phe Leu Thr Ala Val Leu
 20 25 30

Gly Ile Pro Glu Cys Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu
 35 40 45

Val Thr Asp Gly Pro Pro Ala Thr Ala Leu Gly Phe Asn Pro Ala Asp
 50 55 60

Val Asp Ile Met Gln Lys Pro Pro Arg Lys Asn Thr Asp Ala Leu Ile
 65 70 75 80

Asn Ser Trp Val Phe Phe Arg Tyr Met Val Ile Gly Ser Tyr Val Gly
 85 90 95

Ile Ala Thr Val Gly Ile Phe Ile Val Trp Tyr Thr Gln Ala Ser Phe
 100 105 110

Leu Gly Ile Asn Ile Val Ser Asp Gly His Thr Leu Val Glu Leu Ser
 115 120 125

Gln Leu Arg Asn Trp Gly Glu Cys Ser Thr Trp Thr Asn Phe Thr Val
 130 135 140

Ser Pro Phe Lys Ala Gly Asn Arg Leu Ile Thr Phe Ser Asp Pro Cys
 145 150 155 160

Glu Tyr Phe Thr Val Gly Lys Val Lys Ala Met Thr Leu Ser Leu Ser
 165 170 175

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Val Leu Val Ala Ile Glu Met Phe Asn Ser Leu Asn Ala Leu Ser Glu
180 185 190

Asp Asn Ser Leu Ile Lys Met Pro Pro Trp Arg Asn Pro Trp Leu Leu
195 200 205

Val Ala Met Ser Leu Ser Phe Ala Leu His Ser Val Ile Leu Tyr Val
210 215 220

Pro Phe
225

<210> 1773
<211> 151
<212> PRT
<213> Zea mays

<400> 1773
Met Gly Leu Pro Trp Tyr Arg Val His Thr Val Val Leu Asn Asp Pro
1 5 10 15

Gly Arg Leu Leu Ser Val His Ile Met His Thr Ala Leu Val Ser Gly
20 25 30

Trp Ala Gly Ser Met Ala Leu Tyr Glu Leu Ala Val Phe Asp Pro Ser
35 40 45

Asp Pro Val Leu Asp Pro Met Trp Arg Gln Gly Met Phe Val Ile Pro
50 55 60

Phe Met Thr Arg Leu Gly Ile Thr Asn Ser Trp Gly Gly Trp Ser Ile
65 70 75 80

Ser Gly Gly Thr Val Thr Asn Pro Gly Ile Trp Ser Tyr Glu Gly Val
85 90 95

Ala Gly Ala His Ile Val Phe Ser Gly Leu Cys Phe Leu Ala Ala Ile
100 105 110

Trp His Trp Val Tyr Trp Asp Leu Glu Ile Phe Cys Asp Glu Arg Thr
115 120 125

Gly Lys Pro Ser Leu Asp Leu Pro Lys Ile Phe Gly Ile His Leu Phe
130 135 140

Leu Ala Gly Val Ala Cys Phe
145 150

<210> 1774
<211> 151
<212> PRT
<213> Solanum lycopersicum

<400> 1774
Met Gly Leu Pro Trp Tyr Arg Val His Thr Val Val Leu Asn Asp Pro
1 5 10 15

Gly Arg Leu Leu Ser Val His Ile Met His Thr Ala Leu Val Ala Gly
20 25 30

Trp Ala Gly Ser Met Ala Leu Tyr Glu Leu Ala Val Phe Asp Pro Ser
35 40 45

Asp Pro Val Leu Asp Pro Met Trp Arg Gln Gly Met Phe Val Ile Pro
50 55 60

Phe Met Thr Arg Leu Gly Ile Thr Asn Ser Trp Gly Gly Trp Ser Ile
65 70 75 80

Thr Gly Gly Thr Val Thr Asn Pro Gly Ile Trp Ser Tyr Glu Gly Val
85 90 95

Ala Gly Ala His Ile Val Phe Ser Gly Leu Cys Phe Leu Ala Ala Ile
100 105 110

Trp His Trp Val Tyr Trp Asp Leu Glu Ile Phe Cys Asp Glu Arg Thr
115 120 125

Gly Lys Pro Ser Leu Asp Leu Pro Lys Ile Phe Gly Ile His Leu Phe
130 135 140

Leu Ser Gly Val Ala Cys Phe
145 150

<210> 1775
<211> 126
<212> PRT
<213> Oryza sativa

<400> 1775
Gly Pro Trp Leu Phe Val Gly Ile Pro Asp Ala Val Lys Val Trp Asn
1 5 10 15

Met Gln Thr Gln Ala Glu Met Asn Leu Thr Gly Pro Thr Gly Gln Val
20 25 30

Tyr Ala Leu Ala Val Gly Asn Glu Leu Leu Phe Ala Ala Thr Gln Asp
35 40 45

Gly Arg Ile Leu Ala Trp Arg Phe Ser Ala Ala Thr Asn Gly Phe Glu
50 55 60

Pro Ala Ala Ser Leu Val Gly His Gln Leu Ala Val Val Ser Leu Val
65 70 75 80

Val Gly Ala Met Arg Leu Tyr Ser Ala Ser Met Asp Lys Thr Ile Arg
85 90 95

Val Trp Asp Leu Ala Thr Leu Gln Cys Ile Gln Thr Leu Ser Asp His
100 105 110

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Thr Gly Val Val Met Ser Val Leu Cys Trp Asp Gln Phe Leu
115 120 125

<210> 1776
<211> 226
<212> PRT
<213> Zea mays

<400> 1776
Met Ala Lys Asp Ile Glu Ala Ala Ala Ala His Glu Gly Lys Asp Tyr
1 5 10 15

Ser Asp Pro Pro Pro Ala Pro Leu Val Asp Ala Glu Glu Leu Thr Lys
20 25 30

Trp Ser Leu Tyr Arg Ala Val Ile Ala Glu Phe Val Ala Thr Leu Leu
35 40 45

Phe Leu Tyr Ile Thr Val Ala Thr Val Ile Gly Tyr Lys His Gln Thr
50 55 60

Asp Ala Ala Ala Ser Gly Pro Asp Ala Ala Cys Gly Gly Val Gly Val
65 70 75 80

Leu Gly Ile Ala Trp Ala Phe Gly Gly Met Ile Phe Ile Leu Val Tyr
85 90 95

Cys Thr Ala Gly Val Ser Gly Gly His Ile Asn Pro Ala Val Thr Phe
100 105 110

Gly Leu Phe Leu Ala Arg Lys Val Ser Leu Val Arg Ala Leu Leu Tyr
115 120 125

Ile Val Ala Gln Cys Leu Gly Ala Ile Cys Gly Val Gly Leu Val Lys
130 135 140

Gly Phe Gln Ser Ala Phe Tyr Val Arg Tyr Gly Gly Gly Ala Asn Glu
145 150 155 160

Leu Ser Ala Gly Tyr Ser Lys Gly Thr Gly Leu Ala Ala Glu Ile Ile
165 170 175

Gly Thr Phe Val Leu Val Tyr Thr Val Phe Ser Ala Thr Asp Pro Lys
180 185 190

Arg Asn Ala Arg Asp Ser His Val Pro Val Leu Ala Pro Leu Pro Ile
195 200 205

Gly Phe Ala Val Phe Met Val His Leu Ala Thr Ile Pro Ile Thr Gly
210 215 220

Thr Gly
225

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<210> 1777
<211> 176
<212> PRT
<213> Zea mays

<400> 1777

Pro Tyr Leu Ala Thr Asp Tyr Gly Thr Gln Leu Ser Leu Phe Thr His
1 5 10 15

His Met Trp Ile Gly Gly Phe Leu Ile Val Gly Ala Ala Ala His Ala
20 25 30

Ala Ile Phe Met Val Arg Asp Tyr Asp Pro Thr Thr Arg Tyr Asn Asp
35 40 45

Leu Leu Asp Arg Val Leu Arg His Arg Asp Ala Ile Ile Ser His Leu
50 55 60

Asn Trp Val Cys Ile Phe Leu Gly Phe His Ser Phe Gly Leu Tyr Ile
65 70 75 80

His Asn Asp Thr Met Ser Ala Leu Gly Arg Pro Gln Asp Met Phe Ser
85 90 95

Asp Ala Ala Ile Gln Leu Gln Pro Ile Phe Ala Gln Trp Ile Gln Asn
100 105 110

Ile His Ala Gly Ala Pro Gly Val Thr Ala Pro Gly Ala Thr Thr Ser
115 120 125

Thr Ser Leu Thr Trp Gly Gly Gly Glu Leu Val Ala Ile Gly Gly Lys
130 135 140

Val Ala Leu Leu Pro Ile Pro Leu Gly Thr Ala Asp Phe Leu Val His
145 150 155 160

His Ile His Ala Phe Thr Ile His Val Thr Val Leu Ile Leu Leu Lys
165 170 175

<210> 1778
<211> 176
<212> PRT
<213> Oryza sativa

<400> 1778

Met Asn Ile Ile Pro Cys Ser Ile Lys Thr Leu Lys Gly Leu Tyr Asp
1 5 10 15

Ile Ser Gly Val Glu Val Gly Gln His Phe Tyr Trp Gln Ile Gly Gly
20 25 30

Phe Gln Ile His Ala Gln Val Leu Ile Thr Ser Trp Val Val Ile Thr
35 40 45

Ile Leu Leu Gly Ser Val Ile Ile Ala Val Arg Asn Pro Gln Thr Ile
50 55 60

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Pro Thr Asp Gly Gln Asn Phe Phe Glu Tyr Val Leu Glu Phe Ile Arg
65 70 75 80

Asp Leu Ser Lys Thr Gln Ile Gly Glu Glu Tyr Gly Pro Trp Val Pro
85 90 95

Phe Ile Gly Thr Met Phe Leu Phe Ile Phe Val Ser Asn Trp Ser Gly
100 105 110

Ala Leu Leu Pro Trp Lys Ile Ile Gln Leu Pro His Gly Glu Leu Ala
115 120 125

Ala Pro Thr Asn Asp Ile Asn Thr Thr Val Ala Leu Ala Leu Leu Thr
130 135 140

Ser Ala Ala Tyr Phe Tyr Ala Gly Leu Ser Lys Lys Gly Leu Ser Tyr
145 150 155 160

Phe Glu Lys Tyr Ile Lys Pro Thr Pro Ile Leu Leu Pro Ile Asn Ile
165 170 175

<210> 1779

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1779

Met Asp Cys Asn Cys Phe Asp Pro Leu Leu Pro Ala Asp Glu Leu Leu
1 5 10 15

Met Lys Tyr Gln Tyr Ile Ser Asp Phe Phe Ile Ala Val Ala Tyr Phe
20 25 30

Ser Ile Pro Ile Glu Leu Val Tyr Phe Val Gln Lys Ser Ala Val Phe
35 40 45

Pro Tyr Arg Trp Val Leu Val Gln Phe Gly Ala Phe Ile Val Leu Cys
50 55 60

Gly Ala Thr His Leu Ile Asn Leu Trp Thr Ser Thr
65 70 75

<210> 1780

<211> 101

<212> PRT

<213> Zea mays

<400> 1780

Glu Ile Ile Gly Thr Phe Val Leu Val Tyr Thr Val Phe Ser Ala Thr
1 5 10 15

Asp Pro Lys Arg Asn Ala Arg Asp Ser His Val Pro Val Leu Ala Pro
20 25 30

Leu Pro Ile Gly Phe Ala Val Phe Met Val His Leu Ala Thr Ile Pro
35 40 45

Val Thr Gly Thr Gly Ile Asn Pro Ala Arg Ser Phe Gly Pro Ala Val
50 55 60

Ile Phe Asn Asn Asp Lys Ala Trp Asp Asp Gln Trp Ile Tyr Trp Val
65 70 75 80

Gly Pro Phe Val Gly Ala Ala Val Ala Ala Ile Tyr His Gln Tyr Ile
85 90 95

Leu Arg Gly Ser Ala
100

<210> 1781

<211> 101

<212> PRT

<213> Zea mays

<400> 1781

Ala Gly Leu Gly Ala Glu Ile Val Gly Thr Phe Val Leu Val Tyr Thr
1 5 10 15

Val Phe Ser Ala Thr Asp Pro Lys Arg Asn Ala Arg Asp Ser His Val
20 25 30

Pro Val Leu Ala Pro Leu Pro Ile Gly Phe Ala Val Phe Met Val His
35 40 45

Leu Ala Thr Ile Pro Val Thr Gly Thr Gly Ile Asn Pro Ala Arg Ser
50 55 60

Leu Gly Ala Ala Val Val Tyr Asn Lys Asp Lys Pro Trp Asp Asp His
65 70 75 80

Trp Ile Phe Trp Val Gly Pro Leu Leu Gly Ala Ala Ile Ala Ala Phe
85 90 95

Tyr His Gln Tyr Ile
100

<210> 1782

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1782

Gly Arg Ser Ile Tyr Asn Asn Met Lys Ala Phe Ile Arg Tyr Met Ile
1 5 10 15

Ser Ser Asn Val Gly Glu Val Ile Ser Ile Phe Leu Thr Ala Val Leu
20 25 30

Gly Ile Pro Glu Cys Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu
35 40 45

Val Thr Asp Gly Pro Pro Ala Thr Ala Leu Gly Phe Asn Pro Ala Asp
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50		55		60											
Val	Asp	Ile	Met	Gln	Lys	Pro	Pro	Arg	Lys	Asn	Thr	Asp	Ala	Leu	Ile
65				70					75					80	
Asn	Ser	Trp	Val	Phe	Phe	Arg	Tyr	Met	Val	Ile	Gly	Ser	Tyr	Val	Gly
			85						90					95	
Ile	Ala	Thr	Val	Gly	Ile	Phe	Ile	Val	Trp	Tyr	Thr	Gln	Ala	Ser	Phe
			100					105					110		
Leu	Gly	Ile	Asn	Ile	Val	Ser	Asp	Gly	His	Thr	Leu	Val	Glu		
		115					120					125			

<210> 1783
 <211> 176
 <212> PRT
 <213> Oryza sativa

<400> 1783															
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Gly	Ser	Ala	Pro	Leu	Thr	Ala	Val	Gln	Leu	Leu	Trp	Val	Asn	Met	Ile
			20					25					30		
Met	Asp	Thr	Leu	Gly	Ala	Leu	Ala	Leu	Ala	Thr	Glu	Pro	Pro	Asn	Asp
		35					40					45			
Glu	Met	Met	Lys	Arg	Pro	Pro	Val	Arg	Lys	Gly	Glu	Ser	Phe	Ile	Thr
	50					55					60				
Lys	Val	Met	Trp	Arg	Asn	Ile	Met	Gly	Gln	Ser	Leu	Tyr	Gln	Leu	Phe
65					70					75					80
Val	Leu	Gly	Ala	Leu	Met	Phe	Gly	Gly	Glu	Ser	Leu	Leu	Asn	Ile	Lys
				85					90					95	
Gly	Ala	Asp	Ser	Lys	Ser	Ile	Ile	Asn	Thr	Leu	Ile	Phe	Asn	Ser	Phe
			100					105					110		
Val	Phe	Cys	Gln	Val	Phe	Asn	Glu	Ile	Asn	Ser	Arg	Glu	Met	Gln	Lys
		115					120					125			
Ile	Asn	Val	Phe	Arg	Gly	Ile	Ile	Ser	Asn	Trp	Ile	Phe	Ile	Ala	Val
	130					135					140				
Ile	Ala	Ala	Thr	Val	Ala	Phe	Gln	Val	Val	Ile	Ile	Glu	Phe	Leu	Gly
145					150					155					160
Thr	Phe	Ala	Ser	Thr	Val	Pro	Leu	Asn	Trp	Gln	His	Trp	Leu	Leu	Ser
				165					170					175	

<210> 1784
 <211> 201

<212> PRT

<213> Zea mays

<400> 1784

Gly Asp Glu Met Ala Ala Leu Asp Asp Leu Gln Arg Asp Glu Ile Phe
1 5 10 15

Ser Asp Gly Ser Phe Pro Ala Trp Ala Ala Tyr Ala Gly Tyr Ala Ala
20 25 30

Leu Thr Val Val Ser Ala Val Ile Ile Pro His Met Phe Arg Gln Val
35 40 45

Lys Trp Tyr Tyr Val Ile Val Ala Tyr Val Leu Ala Pro Leu Leu Gly
50 55 60

Phe Ala Asn Ser Tyr Gly Thr Gly Leu Thr Asp Ile Asn Met Ala Tyr
65 70 75 80

Asn Tyr Gly Lys Ile Ala Leu Phe Ile Phe Ala Ala Trp Ala Gly Arg
85 90 95

Asp Asn Gly Val Ile Ala Gly Leu Ala Gly Gly Thr Leu Val Lys Gln
100 105 110

Leu Val Met Ala Ser Ala Asp Leu Met His Asp Phe Lys Thr Gly His
115 120 125

Leu Thr Met Thr Ser Pro Arg Ser Leu Leu Val Ala Gln Phe Ile Gly
130 135 140

Thr Ala Met Gly Cys Val Val Ala Pro Leu Thr Phe Leu Leu Phe Tyr
145 150 155 160

Asn Ala Phe Asp Ile Gly Asn Pro Thr Gly Tyr Trp Lys Ala Pro Tyr
165 170 175

Gly Leu Ile Tyr Arg Asn Met Ala Ile Leu Gly Val Glu Gly Phe Ser
180 185 190

Val Leu Pro Arg His Cys Leu Ala Leu
195 200

<210> 1785

<211> 151

<212> PRT

<213> Zea mays

<400> 1785

Arg Lys Leu Ser Leu Thr Arg Ala Val Phe Tyr Ile Ile Met Gln Cys
1 5 10 15

Leu Gly Ala Ile Cys Gly Arg Gly Val Val Lys Gly Phe Gln Gln Gly
20 25 30

Leu Tyr Met Gly Asn Gly Gly Arg Arg Asn Val Val Ala Pro Gly Tyr
Page 1026

35

40

45

Thr Lys Gly Asp Gly Leu Gly Ala Glu Ile Val Gly Thr Phe Ile Leu
50 55 60

Val Tyr Thr Val Phe Ser Ala Thr Asp Ala Lys Arg Arg Ala Arg Asp
65 70 75 80

Ser His Val Pro Ile Leu Ala Pro Leu Pro Ile Gly Phe Ala Val Phe
85 90 95

Leu Val His Leu Ala Thr Met Gly Ile Thr Gly Thr Gly Ile Asn Pro
100 105 110

Ala Arg Ser Leu Gly Ala Ala Val Ile Tyr Asn Gln His His Ala Trp
115 120 125

Ala Asp His Trp Ile Phe Trp Val Gly Pro Phe Ile Gly Ala Ala Leu
130 135 140

Ala Ala Ile Tyr His Gln Val
145 150

<210> 1786

<211> 201

<212> PRT

<213> Zea mays

<400> 1786

Gln Gly Ala Ala Asp Asp Lys Asp Tyr Lys Glu Pro Pro Pro Ala Pro
1 5 10 15

Leu Phe Glu Pro Gly Glu Leu Lys Ser Trp Ser Phe Tyr Arg Ala Gly
20 25 30

Ile Ala Glu Phe Val Ala Thr Phe Leu Phe Leu Tyr Ile Thr Ile Leu
35 40 45

Thr Val Met Gly Val Ser Lys Ser Thr Ser Lys Cys Ala Thr Val Gly
50 55 60

Ile Gln Gly Ile Ala Trp Ser Phe Gly Gly Met Ile Phe Ala Leu Val
65 70 75 80

Tyr Cys Thr Ala Gly Ile Ser Gly Gly His Ile Asn Pro Ala Val Thr
85 90 95

Phe Gly Leu Phe Leu Ala Arg Lys Leu Ser Leu Thr Arg Ala Leu Phe
100 105 110

Tyr Ile Ile Met Gln Cys Leu Gly Ala Val Cys Gly Ala Gly Val Val
115 120 125

Lys Gly Phe Gln Gln Gly Leu Tyr Met Gly Asn Gly Gly Gly Ala Asn
130 135 140

Val Val Ala Pro Gly Tyr Thr Lys Gly Asp Gly Leu Gly Ala Glu Ile
145 150 155 160

Val Gly Thr Phe Ile Leu Val Tyr Thr Val Phe Ser Ala Thr Asp Ala
165 170 175

Lys Arg Asn Ala Arg Asp Ser His Val Pro Ile Leu Ala Pro Leu Pro
180 185 190

Ile Gly Phe Ala Val Phe Leu Val His
195 200

<210> 1787
<211> 151
<212> PRT
<213> Zea mays

<400> 1787
Leu Leu His Leu Ala Ala Leu His Gln Tyr Gly Ser Asn Asn Pro Leu
1 5 10 15

Gly Val His Ser Glu Met Asp Lys Ile Ala Ser Tyr Pro Tyr Phe Tyr
20 25 30

Val Lys Asp Leu Val Gly Arg Val Ala Ser Ala Ile Phe Phe Ser Ile
35 40 45

Trp Ile Phe Phe Ala Pro Asn Val Leu Gly His Pro Asp Asn Tyr Ile
50 55 60

Pro Ala Asn Pro Met Pro Thr Pro Pro His Ile Val Pro Glu Trp Tyr
65 70 75 80

Phe Leu Pro Ile His Ala Ile Leu Arg Ser Ile Pro Asp Lys Ala Gly
85 90 95

Gly Val Ala Ala Ile Ala Pro Val Phe Ile Ser Leu Leu Ala Leu Pro
100 105 110

Phe Phe Lys Glu Met Tyr Val Arg Ser Ser Ser Phe Arg Pro Ile His
115 120 125

Gln Gly Ile Phe Trp Leu Leu Leu Ala Asp Cys Leu Leu Leu Gly Trp
130 135 140

Ile Gly Cys Gln Pro Val Glu
145 150

<210> 1788
<211> 201
<212> PRT
<213> Solanum lycopersicum

<400> 1788
Ala Gln Thr Asp Lys Asp Tyr Lys Glu Pro Pro Pro Ala Pro Leu Phe
Page 1028

1 5 10 15
 Glu Pro Gly Glu Leu Ser Ser Trp Ser Phe Tyr Arg Ala Gly Ile Ala
 20 25 30
 Glu Phe Met Ala Thr Phe Leu Phe Leu Tyr Ile Thr Ile Leu Thr Val
 35 40 45
 Met Gly Leu Lys Arg Ser Asp Ser Leu Cys Ser Ser Val Gly Ile Gln
 50 55 60
 Gly Val Ala Trp Ala Phe Gly Gly Met Ile Phe Ala Leu Val Tyr Cys
 65 70 75 80
 Thr Ala Gly Ile Ser Gly Gly His Ile Asn Pro Ala Val Thr Phe Gly
 85 90 95
 Leu Phe Leu Ala Arg Lys Leu Ser Leu Thr Arg Ala Val Phe Tyr Met
 100 105 110
 Val Met Gln Cys Leu Gly Ala Ile Cys Gly Ala Gly Val Val Lys Gly
 115 120 125
 Phe Met Val Gly Pro Tyr Gln Arg Leu Gly Gly Gly Ala Asn Val Val
 130 135 140
 Asn Pro Gly Tyr Thr Lys Gly Asp Gly Leu Gly Ala Glu Ile Ile Gly
 145 150 155 160
 Thr Phe Val Leu Val Tyr Thr Val Phe Ser Ala Thr Asp Ala Lys Arg
 165 170 175
 Asn Ala Arg Asp Ser His Val Pro Ile Leu Ala Pro Leu Pro Ile Gly
 180 185 190
 Phe Ala Val Phe Leu Val His Leu Ala
 195 200

 <210> 1789
 <211> 76
 <212> PRT
 <213> Zea mays

 <400> 1789
 Ala Ala Glu Ile Ile Gly Thr Phe Val Leu Val Tyr Thr Val Phe Ser
 1 5 10 15
 Ala Thr Asp Pro Lys Arg Asn Ala Arg Asp Ser His Val Pro Val Leu
 20 25 30
 Ala Pro Leu Pro Ile Gly Phe Ala Val Phe Met Val His Leu Ala Thr
 35 40 45
 Ile Pro Ile Thr Gly Thr Gly Ile Asn Pro Ala Arg Ser Leu Gly Ala
 50 55 60

Ala Val Val Tyr Asn Asn Ser Lys Ala Trp Ser Asp
65 70 75

<210> 1790
<211> 126
<212> PRT
<213> Oryza sativa

<400> 1790
Met Ser Ser Ser Ala Thr Val Val Pro Leu Ala Tyr Gln Gly Asn Thr
1 5 10 15

Ser Ala Ser Val Ala Asp Trp Leu Asn Lys Gly Asp Asn Ala Trp Gln
20 25 30

Leu Val Ala Ala Thr Val Val Gly Leu Gln Ser Val Pro Gly Leu Val
35 40 45

Val Leu Tyr Gly Gly Val Val Lys Lys Lys Trp Ala Val Asn Ser Ala
50 55 60

Phe Met Ala Leu Tyr Ala Phe Ala Ala Val Trp Ile Cys Trp Val Thr
65 70 75 80

Trp Ala Tyr Asn Met Ser Phe Gly Glu Lys Leu Leu Pro Ile Trp Gly
85 90 95

Lys Ala Arg Pro Ala Leu Asp Gln Gly Leu Leu Val Gly Arg Ala Ala
100 105 110

Leu Pro Ala Thr Val His Tyr Arg Ala Asp Gly Ser Val Glu
115 120 125

<210> 1791
<211> 151
<212> PRT
<213> Zea mays

<400> 1791
Val Ser Gly Gly His Ile Asn Pro Ala Val Thr Phe Gly Leu Phe Leu
1 5 10 15

Ala Arg Lys Val Ser Leu Val Arg Ala Leu Leu Tyr Ile Val Ala Gln
20 25 30

Cys Leu Gly Ala Ile Cys Gly Val Gly Leu Val Lys Gly Phe Gln Ser
35 40 45

Ala Phe Tyr Val Arg Tyr Gly Gly Gly Ala Asn Glu Leu Ser Ala Gly
50 55 60

Tyr Ser Lys Gly Thr Gly Leu Ala Ala Glu Ile Ile Gly Thr Phe Val
65 70 75 80

Leu Val Tyr Thr Val Phe Ser Ala Thr Asp Pro Lys Arg Asn Ala Arg
Page 1030

Asp Ser His Val Pro Val Leu Ala Pro Leu Pro Ile Gly Phe Ala Val
100 105 110

Phe Met Val His Leu Ala Thr Ile Pro Ile Thr Gly Thr Gly Ile Asn
115 120 125

Pro Ala Arg Ser Leu Gly Ala Ala Val Ile Tyr Asn Asn Asp Lys Ala
130 135 140

Trp Asp Asp His Trp Ile Phe
145 150

<210> 1792

<211> 201

<212> PRT

<213> Zea mays

<400> 1792

Met Ala Gly Gly Gly Asp His Ser Gln Thr Asn Gly Gly His Val Asp
1 5 10 15

Gln Arg Ala Leu Glu Glu Gly Arg Lys Glu Glu Phe Ala Asp Gln Gly
20 25 30

Cys Ala Ala Met Val Val Ser Val Pro Phe Ile Gln Lys Ile Ile Ala
35 40 45

Glu Ile Phe Gly Thr Tyr Phe Leu Met Phe Ala Gly Cys Gly Ala Val
50 55 60

Thr Ile Asn Ala Ser Lys Asn Gly Gln Ile Thr Phe Pro Gly Val Ala
65 70 75 80

Ile Val Trp Gly Leu Ala Val Met Val Met Val Tyr Ala Val Gly His
85 90 95

Ile Ser Gly Ala His Phe Asn Pro Ala Val Thr Leu Ala Phe Ala Thr
100 105 110

Ser Gly Arg Phe Pro Trp Arg Gln Leu Pro Ala Tyr Val Leu Ala Gln
115 120 125

Met Leu Gly Ala Thr Leu Ala Ser Gly Thr Leu Arg Leu Met Phe Gly
130 135 140

Gly Arg His Glu His Phe Pro Gly Thr Leu Pro Thr Gly Ser Glu Val
145 150 155 160

Gln Ser Leu Val Ile Glu Ile Ile Thr Thr Phe Tyr Leu Met Phe Val
165 170 175

Ile Ser Gly Val Ala Thr Asp Asn Arg Ala Ile Gly Glu Leu Ala Gly
180 185 190

Leu Ala Val Gly Ala Thr Ile Leu Leu
195 200

<210> 1793
<211> 76
<212> PRT
<213> Zea mays

<400> 1793
Ala Pro Leu Ile Asp Ile Asp Glu Leu Gly Lys Trp Ser Leu Tyr Arg
1 5 10 15

Ala Val Ile Ala Glu Phe Val Ala Thr Leu Leu Phe Leu Tyr Ile Thr
20 25 30

Val Ala Thr Val Ile Gly Tyr Lys His Gln Thr Asp Ala Ser Ala Ser
35 40 45

Gly Pro Asp Ala Ala Cys Ser Gly Val Gly Ile Leu Gly Ile Ala Trp
50 55 60

Ala Phe Gly Gly Met Ile Phe Ile Leu Val Tyr Cys
65 70 75

<210> 1794
<211> 101
<212> PRT
<213> Solanum lycopersicum

<400> 1794
Cys Gly Phe Ile Ala Ala Trp Val Leu Ile Gly Phe Asn Ala Leu Ala
1 5 10 15

Ala Lys Leu Lys Tyr Asp Asp Pro Leu Glu Ala Ala Gln Leu His Gly
20 25 30

Gly Cys Gly Ser Trp Gly Ile Ile Phe Thr Gly Leu Phe Ala Lys Lys
35 40 45

Glu Tyr Val Asn Glu Val Tyr Pro Gly Phe Pro Asn Arg Pro Tyr Gly
50 55 60

Leu Phe Met Gly Gly Gly Gly Lys Leu Leu Gly Ala Gln Val Ile Gln
65 70 75 80

Val Val Val Ile Ile Gly Trp Val Ser Val Thr Met Gly Pro Leu Phe
85 90 95

Tyr Leu Leu His Lys
100

<210> 1795
<211> 151
<212> PRT
<213> Solanum lycopersicum

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<400> 1795

Ile Val Phe Ser Gly Leu Cys Phe Leu Ala Ala Ile Trp His Trp Val
1 5 10 15

Tyr Trp Asp Leu Glu Ile Phe Cys Asp Glu Arg Thr Gly Lys Pro Ser
20 25 30

Leu Asp Leu Pro Lys Ile Phe Gly Ile His Leu Phe Leu Ser Gly Val
35 40 45

Ala Cys Phe Gly Phe Gly Ala Phe His Val Thr Gly Leu Tyr Gly Pro
50 55 60

Gly Ile Trp Val Ser Asp Pro Tyr Gly Leu Thr Gly Lys Val Gln Pro
65 70 75 80

Val Asn Pro Ala Trp Gly Val Glu Gly Phe Asp Pro Phe Val Pro Gly
85 90 95

Gly Ile Ala Ser His His Ile Ala Ala Gly Thr Leu Gly Ile Leu Ala
100 105 110

Gly Leu Phe His Leu Ser Val Arg Pro Pro Gln Arg Leu Tyr Lys Gly
115 120 125

Leu Arg Met Gly Asn Ile Glu Thr Val Leu Ser Ser Ser Ile Ala Ala
130 135 140

Val Phe Phe Ala Ala Phe Val
145 150

<210> 1796

<211> 126

<212> PRT

<213> Zea mays

<400> 1796

Met Ser Thr Gly Val Arg Pro Gly Arg Arg Phe Thr Val Gly Arg Ser
1 5 10 15

Glu Asp Ala Thr His Pro Asp Thr Ile Arg Ala Ala Ile Ser Glu Phe
20 25 30

Ile Ala Thr Ala Ile Phe Val Phe Ala Ala Glu Gly Ser Val Leu Ser
35 40 45

Leu Gly Lys Met Tyr His Asp Met Ser Thr Ala Gly Gly Leu Val Ala
50 55 60

Val Ala Leu Ala His Ala Leu Ala Leu Ala Val Ala Val Ala Val Ala
65 70 75 80

Val Asn Ile Ser Gly Gly His Val Asn Pro Ala Val Thr Phe Gly Ala
85 90 95

Leu Val Gly Gly Arg Val Ser Leu Val Arg Ala Val Leu Tyr Trp Val
 100 105 110

Ala Gln Leu Leu Gly Ala Val Ala Ala Thr Leu Leu Leu Arg
 115 120 125

<210> 1797

<211> 226

<212> PRT

<213> Zea mays

<400> 1797

Gln Gly Ala Gly Ala Gly Asp Asp Asp Lys Asp Tyr Lys Glu Pro Pro
 1 5 10 15

Pro Ala Pro Leu Phe Glu Pro Gly Glu Leu Lys Ser Trp Ser Phe Tyr
 20 25 30

Arg Ala Gly Ile Ala Glu Phe Val Ala Thr Phe Leu Phe Leu Tyr Ile
 35 40 45

Thr Val Leu Thr Val Met Gly Val Ser Lys Ser Thr Ser Lys Cys Ala
 50 55 60

Thr Val Gly Ile Gln Gly Ile Ala Trp Ser Phe Gly Gly Met Ile Phe
 65 70 75 80

Ala Leu Val Tyr Cys Thr Ala Gly Ile Ser Gly Gly His Ile Asn Pro
 85 90 95

Ala Val Thr Phe Gly Leu Phe Leu Ala Arg Lys Leu Ser Leu Thr Arg
 100 105 110

Ala Ile Phe Tyr Ile Ile Met Gln Cys Leu Gly Ala Ile Cys Gly Ala
 115 120 125

Gly Val Val Lys Gly Phe Gln Gln Gly Leu Tyr Met Gly Asn Gly Gly
 130 135 140

Gly Ala Asn Val Val Ala Pro Gly Tyr Thr Lys Gly Asp Gly Leu Gly
 145 150 155 160

Ala Glu Ile Val Gly Thr Phe Ile Leu Val Tyr Thr Val Phe Ser Ala
 165 170 175

Thr Asp Ala Lys Arg Asn Ala Arg Asp Ser His Val Pro Ile Leu Ala
 180 185 190

Pro Leu Pro Ile Gly Phe Ala Val Phe Leu Val His Leu Ala Thr Ile
 195 200 205

Pro Ile Thr Gly Thr Gly Ile Asn Pro Ala Arg Ser Leu Gly Ala Ala
 210 215 220

Ile Ile

225

<210> 1798

<211> 151

<212> PRT

<213> Zea mays

<400> 1798

Ile Val Phe Ser Gly Leu Cys Phe Leu Ala Ala Ile Trp His Trp Val
1 5 10 15

Tyr Trp Asp Leu Glu Ile Phe Cys Asp Glu Arg Thr Gly Lys Pro Ser
20 25 30

Leu Asp Leu Pro Lys Ile Phe Gly Ile His Leu Phe Leu Ala Gly Val
35 40 45

Ala Cys Phe Gly Phe Gly Ala Phe His Val Thr Gly Leu Tyr Gly Pro
50 55 60

Gly Ile Trp Val Ser Asp Pro Tyr Gly Leu Thr Gly Lys Val Gln Ala
65 70 75 80

Val Asn Pro Ala Trp Gly Ala Glu Gly Phe Asp Pro Phe Val Pro Gly
85 90 95

Gly Ile Ala Ser His His Ile Ala Ala Gly Thr Leu Gly Ile Leu Ala
100 105 110

Gly Leu Phe His Leu Ser Val Arg Pro Pro Gln Arg Leu Tyr Lys Gly
115 120 125

Leu Arg Met Gly Asn Ile Glu Thr Val Leu Ser Ser Ser Ile Ala Ala
130 135 140

Val Phe Phe Ala Ala Phe Val
145 150

<210> 1799

<211> 251

<212> PRT

<213> Zea mays

<400> 1799

Met Gly Leu Pro Trp Tyr Arg Val His Thr Val Val Leu Asn Asp Pro
1 5 10 15

Gly Arg Leu Leu Ser Val His Ile Met His Thr Ala Leu Val Ser Gly
20 25 30

Trp Ala Gly Ser Met Ala Leu Tyr Glu Leu Ala Val Phe Asp Pro Ser
35 40 45

Asp Pro Val Leu Asp Pro Met Trp Arg Gln Gly Met Phe Val Ile Pro
50 55 60

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Phe Met Thr Arg Leu Gly Ile Thr Asn Ser Trp Gly Gly Trp Ser Ile
65 70 75 80

Ser Gly Gly Thr Val Thr Asn Pro Gly Ile Trp Ser Tyr Glu Gly Val
85 90 95

Ala Gly Ala His Ile Val Phe Ser Gly Leu Cys Phe Leu Ala Ala Ile
100 105 110

Trp His Trp Val Tyr Trp Asp Leu Glu Ile Phe Cys Asp Glu Arg Thr
115 120 125

Gly Lys Pro Ser Leu Asp Leu Pro Lys Ile Phe Gly Ile His Leu Phe
130 135 140

Leu Ala Gly Val Ala Cys Phe Gly Phe Gly Ala Phe His Val Thr Gly
145 150 155 160

Leu Tyr Gly Pro Gly Ile Trp Val Ser Asp Pro Tyr Gly Leu Thr Gly
165 170 175

Lys Val Gln Ala Val Asn Pro Ala Trp Gly Ala Glu Gly Phe Asp Pro
180 185 190

Phe Val Pro Gly Gly Ile Ala Ser His His Ile Ala Ala Gly Thr Leu
195 200 205

Gly Ile Leu Ala Gly Leu Phe His Leu Ser Val Arg Pro Pro Gln Arg
210 215 220

Leu Tyr Lys Gly Leu Arg Met Gly Asn Ile Glu Thr Val Leu Ser Ser
225 230 235 240

Ser Ile Ala Ala Val Phe Phe Ala Ala Phe Val
245 250

<210> 1800

<211> 251

<212> PRT

<213> Solanum lycopersicum

<400> 1800

Met Gly Leu Pro Trp Tyr Arg Val His Thr Val Val Leu Asn Asp Pro
1 5 10 15

Gly Arg Leu Leu Ser Val His Ile Met His Thr Ala Leu Val Ala Gly
20 25 30

Trp Ala Gly Ser Met Ala Leu Tyr Glu Leu Ala Val Phe Asp Pro Ser
35 40 45

Asp Pro Val Leu Asp Pro Met Trp Arg Gln Gly Met Phe Val Ile Pro
50 55 60

Phe Met Thr Arg Leu Gly Ile Thr Asn Ser Trp Gly Gly Trp Ser Ile

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65				70				75				80			
Thr	Gly	Gly	Thr	Val 85	Thr	Asn	Pro	Gly	Ile 90	Trp	Ser	Tyr	Glu	Gly 95	Val
Ala	Gly	Ala	His 100	Ile	Val	Phe	Ser	Gly 105	Leu	Cys	Phe	Leu	Ala 110	Ala	Ile
Trp	His	Trp 115	Val	Tyr	Trp	Asp	Leu 120	Glu	Ile	Phe	Cys	Asp 125	Glu	Arg	Thr
Gly	Lys 130	Pro	Ser	Leu	Asp	Leu 135	Pro	Lys	Ile	Phe	Gly 140	Ile	His	Leu	Phe
Leu 145	Ser	Gly	Val	Ala	Cys 150	Phe	Gly	Phe	Gly	Ala 155	Phe	His	Val	Thr	Gly 160
Leu	Tyr	Gly	Pro	Gly 165	Ile	Trp	Val	Ser	Asp 170	Pro	Tyr	Gly	Leu	Thr 175	Gly
Lys	Val	Gln	Pro 180	Val	Asn	Pro	Ala	Trp 185	Gly	Val	Glu	Gly	Phe 190	Asp	Pro
Phe	Val	Pro 195	Gly	Gly	Ile	Ala	Ser 200	His	His	Ile	Ala	Ala 205	Gly	Thr	Leu
Gly	Ile 210	Leu	Ala	Gly	Leu	Phe 215	His	Leu	Ser	Val	Arg 220	Pro	Pro	Gln	Arg
Leu 225	Tyr	Lys	Gly	Leu	Arg 230	Met	Gly	Asn	Ile	Glu 235	Thr	Val	Leu	Ser	Ser 240
Ser	Ile	Ala	Ala	Val 245	Phe	Phe	Ala	Ala	Phe 250	Val					
<210> 1801															
<211> 126															
<212> PRT															
<213> Zea mays															
<400> 1801															
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Ile	Leu	Gly	Gln 20	Gln	Val	Pro	Phe	Ser 25	Leu	Trp	Leu	Ser	Leu 30	Ala	Pro
Val	Val	Ile 35	Gly	Val	Ser	Met	Ala 40	Ser	Leu	Thr	Glu	Leu 45	Ser	Phe	Asn
Trp	Thr 50	Gly	Phe	Ile	Asn	Ala 55	Met	Ile	Ser	Asn	Ile 60	Ser	Phe	Thr	Tyr
Arg 65	Ser	Ile	Tyr	Ser	Lys 70	Lys	Ala	Met	Thr	Asp 75	Met	Asp	Ser	Thr	Asn 80

Val Tyr Ala Tyr Ile Ser Ile Ile Ala Leu Ile Val Cys Ile Pro Pro
85 90 95

Ala Leu Ile Phe Glu Gly Pro Lys Leu Met Gln His Gly Phe Ser Asp
100 105 110

Ala Ile Ala Lys Val Gly Leu Thr Lys Phe Val Ser Asp Leu
115 120 125

<210> 1802

<211> 76

<212> PRT

<213> Zea mays

<400> 1802

Met Thr Ile Arg Asn Gln Arg Phe Ser Leu Leu Lys Gln Pro Ile Tyr
1 5 10 15

Ser Thr Leu Asn Gln His Leu Ile Asp Tyr Pro Thr Pro Ser Asn Leu
20 25 30

Ser Tyr Trp Trp Gly Phe Gly Cys Leu Ala Gly Ile Cys Leu Val Ile
35 40 45

Gln Ile Val Thr Gly Val Phe Leu Ala Met His Tyr Thr Pro His Val
50 55 60

Asp Leu Ala Phe Asn Ser Val Glu His Ile Met Arg
65 70 75

<210> 1803

<211> 201

<212> PRT

<213> Zea mays

<400> 1803

Ile Ala Gly Leu Ala Gly Gly Thr Leu Val Lys Gln Leu Val Met Ala
1 5 10 15

Ser Ala Asp Leu Met His Asp Phe Lys Thr Gly His Leu Thr Met Thr
20 25 30

Ser Pro Arg Ser Leu Leu Val Ala Gln Phe Ile Gly Thr Ala Met Gly
35 40 45

Cys Val Val Ala Pro Leu Thr Phe Leu Leu Phe Tyr Asn Ala Phe Asp
50 55 60

Ile Gly Asn Pro Thr Gly Tyr Trp Lys Ala Pro Tyr Gly Leu Ile Tyr
65 70 75 80

Arg Asn Met Ala Ile Leu Gly Val Glu Gly Phe Ser Val Leu Pro Arg
85 90 95

His Cys Leu Ala Leu Ser Ala Gly Phe Phe Ala Phe Ala Phe Val Phe

100

105

110

Ser Val Ala Arg Asp Val Leu Pro Arg Lys Tyr Ala Arg Phe Val Pro
 115 120 125

Leu Pro Met Ala Met Ala Val Pro Phe Leu Val Gly Gly Ser Phe Ala
 130 135 140

Ile Asp Met Cys Val Gly Ser Leu Ala Val Phe Val Trp Glu Lys Val
 145 150 155 160

Asn Arg Lys Glu Ala Val Phe Met Val Pro Ala Val Ala Ser Gly Leu
 165 170 175

Ile Cys Gly Asp Gly Ile Trp Thr Phe Pro Ser Ser Ile Leu Ala Leu
 180 185 190

Ala Lys Ile Lys Pro Pro Ile Cys Met
 195 200

<210> 1804

<211> 126

<212> PRT

<213> Zea mays

<400> 1804

Met Ser Thr Ala Thr Gly Val Arg Ala Gly Arg Arg Phe Thr Val Gly
 1 5 10 15

Arg Ser Glu Asp Ala Thr His Pro Asp Thr Ile Arg Ala Ala Ile Ser
 20 25 30

Glu Phe Ile Ala Thr Ala Ile Phe Val Phe Ala Ala Glu Gly Ser Val
 35 40 45

Leu Ser Leu Gly Lys Met Tyr His Asp His Ser Thr Ile Ser Thr Ala
 50 55 60

Gly Gly Leu Val Ala Val Ala Leu Ala His Ala Leu Gly Leu Ala Val
 65 70 75 80

Ala Val Ala Val Ala Val Asn Val Ser Gly Gly His Val Asn Pro Ala
 85 90 95

Val Thr Phe Gly Ala Leu Val Gly Gly Arg Val Ser Leu Val Arg Ala
 100 105 110

Val Leu Tyr Trp Ala Ala Gln Leu Leu Gly Ala Val Ala Ala
 115 120 125

<210> 1805

<211> 201

<212> PRT

<213> Zea mays

<400> 1805

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Met Ser Thr Asn Ser Arg Ser Asn Ser Arg Ala Asn Phe Asn Asn Glu
1 5 10 15

Ile His Asp Ile Gly Thr Ala Gln Asn Ser Ser Met Pro Pro Thr Tyr
20 25 30

Tyr Asp Arg Ser Leu Ala Asp Ile Phe Pro Pro His Leu Leu Lys Lys
35 40 45

Val Val Ser Glu Val Val Ser Thr Phe Leu Leu Val Phe Val Thr Cys
50 55 60

Gly Ala Ala Gly Ile Tyr Gly Ser Asp Lys Asp Arg Ile Ser Gln Leu
65 70 75 80

Gly Gln Ser Val Ala Gly Gly Leu Ile Val Thr Val Met Ile Tyr Ala
85 90 95

Val Gly His Ile Ser Gly Ala His Met Asn Pro Ala Val Thr Leu Ala
100 105 110

Phe Ala Val Phe Arg His Phe Pro Trp Ile Gln Val Pro Phe Tyr Trp
115 120 125

Ala Ala Gln Phe Thr Gly Ser Ile Cys Ala Ser Phe Val Leu Lys Ala
130 135 140

Val Leu His Pro Ile Ala Val Leu Gly Thr Thr Thr Pro Thr Gly Pro
145 150 155 160

His Trp His Ser Leu Val Ile Glu Ile Ile Val Thr Phe Asn Met Met
165 170 175

Phe Val Thr Leu Ala Val Ala Thr Asp Thr Arg Ala Val Gly Glu Leu
180 185 190

Ala Gly Leu Ala Val Gly Ser Ala Val
195 200

<210> 1806

<211> 76

<212> PRT

<213> Zea mays

<400> 1806

Met Pro Pro Val Lys Ala Glu Asp Leu Val Val His Ala Val Lys Glu
1 5 10 15

Gln Phe Ala Gly Leu Asp Tyr Cys Ile Thr Ser Pro Pro Pro Trp Ile
20 25 30

Thr Thr Val Leu Val Gly Phe Gln His Tyr Leu Val Met Leu Gly Thr
35 40 45

Thr Val Leu Ile Ala Thr Ile Ile Val Pro Leu Met Gly Gly Gly His

50

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60

Ala Glu Lys Ala Ile Val Ile Gln Thr Ile Leu Phe
65 70 75

<210> 1807

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 1807

Trp Phe Gly Trp Tyr Gly Phe Asn Pro Gly Ser Phe Asn Lys Ile Leu
1 5 10 15

Val Thr Tyr Gly Ala Ser Gly Gly Tyr Tyr Gly Gln Trp Ser Ala Val
20 25 30

Gly Arg Thr Ala Val Thr Thr Thr Leu Ala Gly Cys Thr Ala Ala Leu
35 40 45

Thr Thr Leu Phe Gly Lys Arg Ile Leu Ser Gly His Trp Asn Val Thr
50 55 60

Asp Val Cys Asn Gly Leu Leu Gly Gly Phe Ala Ala Ile Thr Ala Gly
65 70 75 80

Cys Ser Val Val Glu Pro Trp Ala Ala Ile Ile Cys Gly Phe Val Ala
85 90 95

Ala Leu Val Leu Ile Gly Phe Asn Met Leu Ala Glu Lys Phe Lys Tyr
100 105 110

Asp Asp Pro Leu Glu Ala Ala Gln Leu His Gly Gly Cys Gly Ala Trp
115 120 125

Gly Ile Ile Phe Thr Gly Leu Phe Ala Lys Gly Glu Phe Val Asp Gln
130 135 140

Val Tyr Pro Gly Lys Pro Gly Arg Pro His Gly Leu Phe Met Gly Gly
145 150 155 160

Gly Gly Lys Leu Leu Gly Ala His Ile Ile Gln Ile Leu Val Ile Ile
165 170 175

Gly Trp Val Ser Ala Thr Met Gly Pro Leu Phe Tyr Ile Leu His Lys
180 185 190

Phe Lys Leu Leu Arg Ile Ser Ser Glu
195 200

<210> 1808

<211> 226

<212> PRT

<213> Zea mays

<400> 1808

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Met Ser Thr Ala Thr Gly Val Arg Ala Gly Arg Arg Phe Thr Val Gly
1 5 10 15

Arg Ser Glu Asp Ala Thr His Pro Asp Thr Ile Arg Ala Ala Ile Ser
20 25 30

Glu Phe Ile Ala Thr Ala Ile Phe Val Phe Ala Ala Glu Gly Ser Val
35 40 45

Leu Ser Leu Gly Lys Met Tyr His Asp His Ser Thr Ile Ser Thr Ala
50 55 60

Gly Gly Leu Val Ala Val Ala Leu Ala His Ala Leu Gly Leu Ala Val
65 70 75 80

Ala Val Ala Val Ala Val Asn Val Ser Gly Gly His Val Asn Pro Ala
85 90 95

Val Thr Phe Gly Ala Leu Val Gly Gly Arg Val Ser Leu Val Arg Ala
100 105 110

Val Leu Tyr Trp Ala Ala Gln Leu Leu Gly Ala Val Ala Ala Thr Leu
115 120 125

Leu Leu Arg Leu Ala Thr Gly Gly Ala Arg Pro Pro Gly Phe Ala Leu
130 135 140

Ala Ser Gly Val Gly Asp Gly His Ala Val Leu Leu Glu Ala Val Met
145 150 155 160

Thr Phe Gly Phe Val Tyr Ala Tyr Tyr Ala Thr Val Val Asp Pro Lys
165 170 175

Arg Gly His Leu Gly Thr Ile Ala Pro Leu Ala Val Gly Phe Leu Leu
180 185 190

Gly Ala Asn Val Leu Ala Gly Gly Pro Phe Asp Gly Ala Gly Met Asn
195 200 205

Pro Ala Arg Val Phe Gly Pro Ala Leu Val Gly Trp Arg Trp Arg His
210 215 220

His Trp
225

<210> 1809
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1809
Met Ala Val Val Thr Ala Met Leu Ser Ser Tyr Val Val Thr Thr Ile
1 5 10 15

Glu Glu Ala Ser Glu Ser Met Gly Ile Pro Val Arg Phe Ile Ser Ile
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20

25

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Ile Leu Leu Pro Ile Val Gly Asn Ala Ala Glu His Ala Gly Ala Ile
 35 40 45

Ile Phe Ala Phe Lys Asn Lys Ile Asp Ile Ser Leu Gly Ile Thr Leu
 50 55 60

Gly Ser Ala Thr Gln Ile Ser Met Leu Val Val Pro Val Ile Leu Ile
 65 70 75 80

Val Ser Trp Val Asn Ala Ile Pro Met Asp Leu Asp Phe Asn Leu Leu
 85 90 95

Glu Thr Gly Ser Leu
 100

<210> 1810

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1810

Val Gly Gly Val Ala Gly Leu Trp Gly Ala Leu Ile Glu Gly Pro Arg
 1 5 10 15

Ile Gly Arg Phe Asp His Ala Gly Arg Ser Val Ala Leu Arg Gly His
 20 25 30

Ser Ala Ser Leu Val Val Leu Gly Ser Phe Leu Leu Trp Phe Gly Trp
 35 40 45

Tyr Gly Phe Asn Pro Gly Ser Phe Leu Thr Ile Leu Lys Ser Tyr Gly
 50 55 60

Pro Pro Gly Ser Ile His Gly Gln Trp Ser Ala Val Gly Arg Thr Ala
 65 70 75 80

Val Thr Thr Thr Leu Ala Gly Ser Thr Ala Ala Leu Thr Thr Leu Phe
 85 90 95

Gly Lys Arg Leu Gln Thr Gly His Trp Asn Val Ile Asp Val Cys Asn
 100 105 110

Gly Leu Leu Gly Gly Phe Ala Ala Ile Thr Ala Gly Cys Ser Val Val
 115 120 125

Asp Pro Trp Ala Ala Ile Ile Cys Gly Phe Val Ser Ala Trp Val Leu
 130 135 140

Ile Gly Leu Asn Ala Leu Ala Ala Arg Leu Lys Phe Asp Asp Pro Leu
 145 150 155 160

Glu Ala Ala Gln Leu His Gly Gly Cys Gly Ala Trp Gly Val Ile Phe
 165 170 175

Thr Ala Leu Phe Ala Arg Lys Glu Tyr Val Asp Gln Ile Phe Gly Gln
 180 185 190

Pro Gly Arg Pro Tyr Gly Leu Phe Met
 195 200

<210> 1811

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 1811

Val Asn Gln Ser Tyr Pro Val Val Leu Glu Ile Ile Phe Tyr Ile Gly
 1 5 10 15

Phe Phe Ile Ala Phe Ala Val Lys Ser Pro Ile Ile Pro Leu His Thr
 20 25 30

Trp Leu Pro Asp Thr His Gly Glu Ala His Tyr Ser Thr Cys Met Leu
 35 40 45

Leu Ala Gly Ile Leu Leu Lys Met Gly Ala Tyr Gly Leu Ile Arg Ile
 50 55 60

Asn Met Glu Leu Leu Pro His Ala His Ser Ile Phe Ser Pro Trp Leu
 65 70 75 80

Met Ile Ile Gly Thr Ile Gln Ile Ile Tyr Ala Ala Ser Thr Ser Leu
 85 90 95

Gly Gln Arg Asn Leu Lys Lys Arg Ile Ala Tyr Ser Ser Val Ser His
 100 105 110

Met Gly Phe Ile Ile Ile Gly Ile Ser Ser Leu Thr Asp Thr Gly Leu
 115 120 125

Asn Gly Ala Leu Leu Gln Ile Ile Ser His Gly Phe Ile Gly Ala Ala
 130 135 140

Leu Phe Phe Leu Ala Gly Thr Thr Tyr Asp Arg Ile Arg Leu Val Tyr
 145 150 155 160

Leu Asp Glu Met Gly Gly Ile Ala Ile Pro Met Pro Lys Met Phe Thr
 165 170 175

<210> 1812

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1812

Phe Gly Phe Asn Pro Gly Ser Phe Thr Thr Ile Ser Lys Ile Tyr Gly
 1 5 10 15

Glu Ser Gly Thr Ile Asp Gly Gln Trp Ser Ala Val Gly Arg Thr Ala

20

25

30

Val Thr Thr Ser Leu Ala Gly Ser Val Ala Ala Leu Thr Thr Leu Tyr
35 40 45

Gly Lys Arg Trp Leu Thr Gly His Trp Asn Val Thr Asp Val Cys Asn
50 55 60

Gly Leu Leu Gly Gly Phe Ala Ala Ile Thr Ala Gly Cys Ser Val Val
65 70 75 80

Asp Pro Trp Ala Ser Val Ile Cys Gly Phe Val Ser Ala Trp Val Leu
85 90 95

Ile Gly Cys Asn Lys Leu Ser Leu Ile Leu Lys Phe Asp Asp Pro Leu
100 105 110

Glu Ala Thr Gln Leu His Ala Gly Cys Gly Ala Trp Gly Ile Ile Phe
115 120 125

Thr Ala Leu Phe Ala Arg Arg Glu Tyr Val Glu Leu Ile Tyr Gly Val
130 135 140

Pro Gly Arg Pro Tyr Gly Leu Phe Met Gly Gly Gly Gly Arg Leu Leu
145 150 155 160

Ala Ala His Ile Val Gln Ile Leu Val Ile Val Gly Trp Val Ser Ala
165 170 175

<210> 1813

<211> 226

<212> PRT

<213> Zea mays

<400> 1813

Met Ser Thr Gly Val Arg Pro Gly Arg Arg Phe Thr Val Gly Arg Ser
1 5 10 15

Glu Asp Ala Thr His Pro Asp Thr Ile Arg Ala Ala Ile Ser Glu Phe
20 25 30

Ile Ala Thr Ala Ile Phe Val Phe Ala Ala Glu Gly Ser Val Leu Ser
35 40 45

Leu Gly Lys Met Tyr His Asp Met Ser Thr Ala Gly Gly Leu Val Ala
50 55 60

Val Ala Leu Ala His Ala Leu Ala Leu Ala Val Ala Val Ala Val Ala
65 70 75 80

Val Asn Ile Ser Gly Gly His Val Asn Pro Ala Val Thr Phe Gly Ala
85 90 95

Leu Val Gly Gly Arg Val Ser Leu Val Arg Ala Val Leu Tyr Trp Val
100 105 110

Ala Gln Leu Leu Gly Ala Val Ala Ala Thr Leu Leu Leu Arg Leu Ala
115 120 125

Thr Gly Gly Met Arg Pro Pro Gly Phe Ala Leu Ala Ser Gly Val Gly
130 135 140

Asp Trp His Ala Val Leu Leu Glu Ala Val Met Thr Phe Gly Leu Met
145 150 155 160

Tyr Ala Tyr Tyr Ala Thr Val Ile Asp Pro Lys Arg Gly His Val Gly
165 170 175

Thr Ile Ala Pro Leu Ala Val Gly Phe Leu Leu Gly Ala Asn Val Leu
180 185 190

Ala Gly Gly Pro Phe Asp Gly Ala Gly Met Asn Pro Ala Arg Val Phe
195 200 205

Gly Pro Ala Leu Val Gly Trp Arg Trp Arg His His Trp Val Tyr Trp
210 215 220

Leu Gly
225

<210> 1814
<211> 176
<212> PRT
<213> Zea mays

<400> 1814
Met Ala Ala Ala Ser Thr Thr Ser Arg Thr Asn Ser Arg Val Asn Tyr
1 5 10 15

Ser Asn Glu Ile His Asp Leu Ser Thr Val Gln Ser Gly Ser Val Val
20 25 30

Pro Thr Leu Phe Tyr Pro Asp Lys Ser Ile Ala Asp Ile Phe Pro Pro
35 40 45

His Leu Gly Lys Lys Val Ile Ser Glu Val Val Ala Thr Phe Leu Leu
50 55 60

Val Phe Val Thr Cys Gly Ala Ala Ser Ile Tyr Gly Glu Asp Asn Arg
65 70 75 80

Arg Ile Ser Gln Leu Gly Gln Ser Val Ala Gly Gly Leu Ile Val Thr
85 90 95

Val Met Ile Tyr Ala Thr Gly His Ile Ser Gly Ala His Met Asn Pro
100 105 110

Ala Val Thr Leu Ser Phe Ala Cys Phe Arg His Phe Pro Trp Ile Gln
115 120 125

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Val Pro Phe Tyr Trp Ala Ala Gln Phe Thr Gly Ala Met Cys Ala Ala
130 135 140

Phe Val Leu Lys Ala Val Leu His Pro Ile Ala Val Ile Gly Thr Thr
145 150 155 160

Thr Pro Ser Gly Pro His Trp His Ala Leu Leu Ile Glu Ile Val Val
165 170 175

<210> 1815

<211> 151

<212> PRT

<213> Zea mays

<400> 1815

Leu Ala Arg Lys Leu Ser Leu Thr Arg Ala Leu Phe Tyr Ile Ile Met
1 5 10 15

Gln Cys Leu Gly Ala Val Cys Gly Ala Gly Val Val Lys Gly Phe Gln
20 25 30

Gln Gly Leu Tyr Met Gly Asn Gly Gly Gly Ala Asn Val Val Ala Pro
35 40 45

Gly Tyr Thr Lys Gly Asp Gly Leu Gly Ala Glu Ile Val Gly Thr Phe
50 55 60

Ile Leu Val Tyr Thr Val Phe Ser Ala Thr Asp Ala Lys Arg Asn Ala
65 70 75 80

Arg Asp Ser His Val Pro Ile Leu Ala Pro Leu Pro Ile Gly Phe Ala
85 90 95

Val Phe Leu Val His Leu Ala Thr Ile Pro Ile Thr Gly Thr Gly Ile
100 105 110

Asn Pro Ala Arg Ser Leu Gly Ala Ala Ile Ile Tyr Asn Arg Asp His
115 120 125

Ala Trp Asn Asp His Trp Ile Phe Trp Val Gly Pro Phe Ile Gly Ala
130 135 140

Ala Leu Ala Ala Ile Tyr His
145 150

<210> 1816

<211> 201

<212> PRT

<213> Zea mays

<400> 1816

Ala Pro Leu Ile Asp Ala Glu Glu Leu Thr Gln Trp Ser Leu Tyr Arg
1 5 10 15

Ala Val Ile Ala Glu Phe Ile Ala Thr Leu Leu Phe Leu Tyr Ile Thr
20 25 30

Val Ala Thr Val Ile Gly Tyr Lys His Gln Thr Asp Ala Ser Ala Ser
35 40 45

Gly Pro Asp Ala Ala Cys Gly Gly Val Gly Ile Leu Gly Ile Ala Trp
50 55 60

Ala Phe Gly Gly Met Ile Phe Ile Leu Val Tyr Cys Thr Ala Gly Ile
65 70 75 80

Ser Gly Gly His Ile Asn Pro Ala Val Thr Phe Gly Leu Phe Leu Ala
85 90 95

Arg Lys Val Ser Leu Val Arg Ala Leu Leu Tyr Ile Ile Ala Gln Cys
100 105 110

Leu Gly Ala Ile Cys Gly Val Gly Leu Val Lys Gly Phe Gln Ser Ala
115 120 125

Tyr Tyr Val Arg Tyr Gly Gly Gly Ala Asn Glu Leu Ser Asp Gly Tyr
130 135 140

Ser Lys Gly Thr Gly Leu Ala Ala Glu Ile Ile Gly Thr Phe Val Leu
145 150 155 160

Val Tyr Thr Val Phe Ser Ala Thr Asp Pro Lys Arg Ser Ala Arg Asp
165 170 175

Ser His Val Pro Val Leu Ala Pro Leu Pro Ile Gly Phe Ala Val Phe
180 185 190

Met Val His Leu Ala Thr Ile Pro Ile
195 200

<210> 1817
<211> 176
<212> PRT
<213> Zea mays

<400> 1817
His Phe Asn Pro Ala Val Thr Leu Ala Phe Ala Thr Ser Gly Arg Phe
1 5 10 15

Pro Trp Arg Gln Leu Pro Ala Tyr Val Leu Ala Gln Met Leu Gly Ala
20 25 30

Thr Leu Ala Ser Gly Thr Leu Arg Leu Met Phe Gly Gly Arg His Glu
35 40 45

His Phe Pro Gly Thr Leu Pro Thr Gly Ser Glu Val Gln Ser Leu Val
50 55 60

Ile Glu Ile Ile Thr Thr Phe Tyr Leu Met Phe Val Ile Ser Gly Val
65 70 75 80

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Ala Thr Asp Asn Arg Ala Ile Gly Glu Leu Ala Gly Leu Ala Val Gly
85 90 95

Ala Thr Ile Leu Leu Asn Val Leu Ile Ala Gly Pro Val Ser Gly Ala
100 105 110

Ser Met Asn Pro Ala Arg Ser Val Gly Pro Ala Leu Val Ser Gly Glu
115 120 125

Tyr Thr Ser Ile Trp Val Tyr Val Val Gly Pro Val Val Gly Ala Val
130 135 140

Ala Gly Ala Trp Ala Tyr Asn Leu Ile Arg Phe Thr Asn Lys Pro Leu
145 150 155 160

Arg Glu Ile Thr Lys Ser Thr Ser Phe Leu Lys Ser Thr Ser Arg Met
165 170 175

<210> 1818
<211> 126
<212> PRT
<213> Zea mays

<400> 1818
Val Val Lys Gly Phe Gln Glu Gly Leu Tyr Met Gly Ala Gly Gly Gly
1 5 10 15

Ala Asn Ala Val Asn Pro Gly Tyr Thr Lys Gly Asp Gly Leu Gly Ala
20 25 30

Glu Ile Val Gly Thr Phe Val Leu Val Tyr Thr Val Phe Ser Ala Thr
35 40 45

Asp Ala Lys Arg Ser Ala Arg Asp Ser His Val Pro Ile Leu Ala Pro
50 55 60

Leu Pro Ile Gly Phe Ala Val Phe Leu Val His Leu Ala Thr Ile Pro
65 70 75 80

Ile Thr Gly Thr Gly Ile Asn Pro Ala Arg Ser Leu Gly Ala Ala Ile
85 90 95

Val Tyr Asn Arg Ser His Ala Trp Asn Asp His Trp Ile Phe Trp Val
100 105 110

Gly Pro Phe Ile Gly Ala Ala Leu Ala Ala Ile Tyr His Val
115 120 125

<210> 1819
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1819
Ser Val Ile Leu Leu Pro Ile Val Gly Asn Ala Ala Glu His Ala Ser
1 5 10 15

Ala Ile Met Phe Ala Met Lys Asp Lys Leu Asp Ile Thr Leu Gly Val
20 25 30

Ala Ile Gly Ser Ser Thr Gln Ile Ser Met Phe Val Ile Pro Phe Cys
35 40 45

Val Val Ile Gly Trp Met Met Gly Gln Lys Met Asp Leu Asn Phe Gln
50 55 60

Leu Phe Glu Thr Ala Thr Leu Phe Ile Thr Val Leu
65 70 75

<210> 1820
<211> 101
<212> PRT
<213> Zea mays

<400> 1820
Phe Trp Ala Ser Ser His Ser Ser Leu Ala Pro Thr Val Glu Ile Gly
1 5 10 15

Gly Ile Trp Pro Pro Lys Gly Ile Gly Val Leu Asp Pro Trp Glu Ile
20 25 30

Pro Leu Leu Asn Thr Pro Ile Leu Pro Ser Ser Gly Ala Ala Val Thr
35 40 45

Trp Ala His His Ala Ile Leu Ala Gly Lys Glu Lys Arg Ala Val Tyr
50 55 60

Ala Leu Val Ala Thr Val Leu Leu Ala Leu Val Ser Thr Gly Phe Gln
65 70 75 80

Gly Met Glu Tyr Tyr Gln Ala Pro Ser Thr Ile Ser Asp Ser Ile Tyr
85 90 95

Gly Ser Thr Phe Leu
100

<210> 1821
<211> 76
<212> PRT
<213> Zea mays

<400> 1821
Met Asn Ile Thr Pro Cys Ser Ile Lys Thr Leu Lys Gly Leu Tyr Asp
1 5 10 15

Ile Ser Gly Val Glu Val Gly Gln His Phe Tyr Trp Gln Ile Gly Gly
20 25 30

Phe Gln Ile His Ala Gln Val Leu Ile Thr Ser Trp Val Val Ile Thr
35 40 45

Ile Leu Leu Gly Ser Val Ile Ile Ala Val Arg Asn Pro Gln Thr Ile
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55

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Pro Thr Asp Gly Gln Asn Phe Phe Glu Tyr Val Leu
65 70 75

<210> 1822
<211> 76
<212> PRT
<213> Zea mays

<400> 1822
Ala Pro Leu Ile Asp Ala Glu Glu Leu Thr Gln Trp Ser Leu Tyr Arg
1 5 10 15

Ala Val Ile Ala Glu Phe Ile Ala Thr Leu Leu Phe Leu Tyr Ile Thr
20 25 30

Val Ala Thr Val Ile Gly Tyr Lys His Gln Thr Asp Ala Ser Ala Ser
35 40 45

Gly Pro Asp Ala Ala Cys Gly Gly Val Gly Ile Leu Gly Ile Ala Trp
50 55 60

Ala Phe Gly Gly Met Ile Phe Ile Leu Val Tyr Cys
65 70 75

<210> 1823
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1823
Met Asn Ile Ile Pro Cys Ser Ile Lys Thr Leu Lys Gly Leu Tyr Asp
1 5 10 15

Ile Ser Gly Val Glu Val Gly Gln His Phe Tyr Trp Gln Ile Gly Gly
20 25 30

Phe Gln Ile His Ala Gln Val Leu Ile Thr Ser Trp Val Val Ile Thr
35 40 45

Ile Leu Leu Gly Ser Val Ile Ile Ala Val Arg Asn Pro Gln Thr Ile
50 55 60

Pro Thr Asp Gly Gln Asn Phe Phe Glu Tyr Val Leu
65 70 75

<210> 1824
<211> 151
<212> PRT
<213> Zea mays

<400> 1824
Gly Leu Phe Leu Ala Arg Lys Leu Ser Leu Thr Arg Ala Ile Phe Tyr
1 5 10 15

Ile Ile Met Gln Cys Leu Gly Ala Ile Cys Gly Ala Gly Val Val Lys
20 25 30

Gly Phe Gln Gln Gly Leu Tyr Met Gly Asn Gly Gly Gly Ala Asn Val
35 40 45

Val Ala Pro Gly Tyr Thr Lys Gly Asp Gly Leu Gly Ala Glu Ile Val
50 55 60

Gly Thr Phe Ile Leu Val Tyr Thr Val Phe Ser Ala Thr Asp Ala Lys
65 70 75 80

Arg Asn Ala Arg Asp Ser His Val Pro Ile Leu Ala Pro Leu Pro Ile
85 90 95

Gly Phe Ala Val Phe Leu Val His Leu Ala Thr Ile Pro Ile Thr Gly
100 105 110

Thr Gly Ile Asn Pro Ala Arg Ser Leu Gly Ala Ala Ile Ile Tyr Asn
115 120 125

Arg Asp His Ala Trp Ser Asp His Trp Ile Phe Trp Val Gly Pro Phe
130 135 140

Ile Gly Ala Ala Leu Ala Ala
145 150

<210> 1825

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 1825

Met Asn Val Leu Ser Cys Ser Ile Asn Thr Leu Lys Gly Leu Tyr Asp
1 5 10 15

Ile Ser Gly Val Glu Val Gly Gln His Phe Tyr Trp Gln Ile Gly Gly
20 25 30

Phe Gln Val His Gly Gln Val Leu Ile Thr Ser Trp Val Val Ile Ala
35 40 45

Ile Leu Leu Gly Ser Ala Thr Ile Ala Val Arg Asn Pro Gln Thr Ile
50 55 60

Pro Thr Gly Gly Gln Asn Phe Phe Glu Tyr Val Leu Glu Phe Ile Arg
65 70 75 80

Asp Val Ser Lys Thr Gln Ile Gly Glu Glu Tyr Gly Pro Trp Val Pro
85 90 95

Phe Ile Gly Thr Met Phe Leu Phe Ile Phe Val Ser Asn Trp Ser Gly
100 105 110

Ala Leu Leu Pro Trp Lys Ile Ile Gln Leu Pro His Gly Glu Leu Ala
115 120 125

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Ala Pro Thr Asn Asp Ile Asn Thr Thr Val Ala Leu Ala Leu Leu Thr
130 135 140

Ser Val Ala Tyr Phe Tyr Ala Gly Leu Thr Lys Arg Gly Leu Gly Tyr
145 150 155 160

Phe Gly Lys Tyr Ile Gln Pro Thr Pro Ile Leu Leu Pro Ile Asn Ile
165 170 175

<210> 1826

<211> 226

<212> PRT

<213> Oryza sativa

<400> 1826

Leu Ile Tyr Ser Ala Phe Leu Thr Gly Phe Val Tyr Pro Val Val Ser
1 5 10 15

His Trp Phe Trp Ser Thr Asp Gly Trp Ala Ser Ala Gly Arg Leu Thr
20 25 30

Gly Pro Leu Leu Phe Lys Ser Gly Val Ile Asp Phe Ala Gly Ser Gly
35 40 45

Val Val His Leu Val Gly Gly Ile Ala Gly Leu Trp Gly Ala Phe Ile
50 55 60

Glu Gly Pro Arg Ile Gly Arg Phe Asp Ala Ala Gly Arg Thr Val Ala
65 70 75 80

Met Lys Gly His Ser Ala Ser Leu Val Val Leu Gly Thr Phe Leu Leu
85 90 95

Trp Phe Gly Trp Phe Gly Phe Asn Pro Gly Ser Phe Thr Thr Ile Ser
100 105 110

Lys Ile Tyr Gly Glu Ser Gly Thr Ile Asp Gly Gln Trp Ser Ala Val
115 120 125

Gly Arg Thr Ala Val Thr Thr Ser Leu Ala Gly Ser Val Ala Ala Leu
130 135 140

Thr Thr Leu Tyr Gly Lys Arg Trp Leu Thr Gly His Trp Asn Val Thr
145 150 155 160

Asp Val Cys Asn Gly Leu Leu Gly Gly Phe Ala Ala Ile Thr Ala Gly
165 170 175

Cys Ser Val Val Asp Pro Trp Ala Ser Val Ile Cys Gly Phe Val Ser
180 185 190

Ala Trp Val Leu Ile Gly Cys Asn Lys Leu Ser Leu Ile Leu Lys Phe
195 200 205

Asp Asp Pro Leu Glu Ala Thr Gln Leu His Ala Gly Cys Gly Ala Trp
 210 215 220

Gly Ile
 225

<210> 1827
 <211> 126
 <212> PRT
 <213> Solanum lycopersicum

<400> 1827
 Leu Tyr Gly Ser Ser Gly Gly Glu Ile Glu Leu Gln Glu Ile Val Asn
 1 5 10 15

Gly Leu Ile Asn Thr Gln Met Tyr Asn Ser Pro Gly Ile Ser Ile Ala
 20 25 30

Leu Ile Phe Ile Thr Val Gly Ile Gly Phe Lys Leu Ser Pro Ala Pro
 35 40 45

Ser His Gln Trp Thr Pro Asp Val Tyr Glu Gly Ser Pro Thr Pro Val
 50 55 60

Val Ala Phe Leu Ser Val Thr Ser Lys Val Ala Ala Ser Ala Ser Ala
 65 70 75 80

Thr Arg Ile Phe Asn Ile Pro Phe Tyr Phe Ser Ser Asn Glu Trp His
 85 90 95

Leu Leu Leu Glu Ile Leu Ala Ile Leu Ser Met Ile Leu Gly Asn Leu
 100 105 110

Ile Ala Ile Thr Gln Thr Ser Met Lys Arg Met Leu Ala Tyr
 115 120 125

<210> 1828
 <211> 126
 <212> PRT
 <213> Solanum lycopersicum

<400> 1828
 Leu Tyr Gly Ser Ser Gly Gly Glu Ile Glu Leu Gln Glu Ile Val Asn
 1 5 10 15

Gly Leu Ile Asn Thr Gln Met Tyr Asn Ser Pro Gly Ile Ser Ile Ala
 20 25 30

Leu Ile Phe Ile Thr Val Gly Ile Gly Phe Lys Leu Ser Pro Ala Pro
 35 40 45

Ser His Gln Trp Thr Pro Asp Val Tyr Glu Gly Ser Pro Thr Pro Val
 50 55 60

Val Ala Phe Leu Ser Val Thr Ser Lys Val Ala Ala Ser Ala Ser Ala
 65 70 75 80

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Thr Arg Ile Phe Asn Ile Pro Phe Tyr Phe Ser Ser Asn Glu Trp His
85 90 95

Leu Leu Leu Glu Ile Leu Ala Ile Leu Ser Met Ile Leu Gly Asn Leu
100 105 110

Ile Ala Ile Thr Gln Thr Ser Met Lys Arg Met Leu Ala Tyr
115 120 125

<210> 1829

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1829

Met Glu Gln Thr Tyr Glu Tyr Ala Trp Ile Ile Pro Phe Ile Pro Leu
1 5 10 15

Pro Val Pro Met Leu Ile Gly Ala Gly Leu Ile Leu Phe Pro Thr Ala
20 25 30

Thr Lys Arg Phe Arg Arg Met Trp Ala Phe Gln Ser Val Leu Leu Leu
35 40 45

Ser Ile Val Met Ile Phe Ser Ile Tyr Leu Ser Ile Gln Gln Ile Asn
50 55 60

Ser Ser Ser Val Tyr Gln Tyr Val Trp Ser Trp Ile Ile Asn Asn Asp
65 70 75 80

Phe Ser Leu Asp Phe Gly Tyr Leu Ile Asp Pro Leu Thr Ser Ile Met
85 90 95

Ser Ile Leu Ile Thr Thr Val Gly Ile Met Val Leu Ile Tyr Ser Asp
100 105 110

Asn Tyr Met Ala His Asp Gln Gly Tyr Leu Arg Phe Phe Ala
115 120 125

<210> 1830

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1830

Gln Thr Gly His Trp Asn Val Ile Asp Val Cys Asn Gly Leu Leu Gly
1 5 10 15

Gly Phe Ala Ala Ile Thr Ala Gly Cys Ser Val Val Asp Pro Trp Ala
20 25 30

Ala Ile Ile Cys Gly Phe Val Ser Ala Trp Val Leu Ile Gly Leu Asn
35 40 45

Ala Leu Ala Ala Arg Leu Lys Phe Asp Asp Pro Leu Glu Ala Ala Gln
50 55 60

Leu His Gly Gly Cys Gly Ala Trp Gly Val Ile Phe Thr Ala Leu Phe
65 70 75 80

Ala Arg Lys Glu Tyr Val Asp Gln Ile Phe Gly Gln Pro Gly Arg Pro
85 90 95

Tyr Gly Leu Phe Met Gly Gly Gly Gly Arg Leu Leu Gly Ala His Ile
100 105 110

Val Val Ile Leu Val Ile Ala Ala Trp Val Ser Phe Thr Met
115 120 125

<210> 1831

<211> 201

<212> PRT

<213> Zea mays

<400> 1831

Ala Pro Leu Ile Asp Ile Asp Glu Leu Gly Lys Trp Ser Leu Tyr Arg
1 5 10 15

Ala Val Ile Ala Glu Phe Val Ala Thr Leu Leu Phe Leu Tyr Ile Thr
20 25 30

Val Ala Thr Val Ile Gly Tyr Lys His Gln Thr Asp Ala Ser Ala Ser
35 40 45

Gly Pro Asp Ala Ala Cys Ser Gly Val Gly Ile Leu Gly Ile Ala Trp
50 55 60

Ala Phe Gly Gly Met Ile Phe Ile Leu Val Tyr Cys Thr Ala Gly Ile
65 70 75 80

Ser Gly Gly His Ile Asn Pro Ala Val Thr Phe Gly Leu Phe Leu Ala
85 90 95

Arg Lys Val Ser Leu Val Arg Ala Leu Leu Tyr Met Ala Ala Gln Ser
100 105 110

Leu Gly Ala Ile Cys Gly Val Ala Leu Val Lys Gly Phe Gln Ser Gly
115 120 125

Phe Tyr Ala Arg Tyr Gly Gly Gly Ala Asn Glu Val Ser Ala Gly Tyr
130 135 140

Ser Thr Gly Thr Gly Leu Ala Ala Glu Ile Ile Gly Thr Phe Val Leu
145 150 155 160

Val Tyr Thr Val Phe Ser Ala Thr Asp Pro Lys Arg Asn Ala Arg Asp
165 170 175

Ser His Val Pro Val Leu Ala Pro Leu Pro Ile Gly Phe Ala Val Phe
180 185 190

Met Val His Leu Ala Thr Ile Pro Ile
195 200

<210> 1832
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1832
Lys Ser Ile Ile Asn Thr Leu Ile Phe Asn Ser Phe Val Phe Cys Gln
1 5 10 15

Val Phe Asn Glu Ile Asn Ser Arg Glu Met Gln Lys Ile Asn Val Phe
20 25 30

Arg Gly Ile Ile Ser Asn Trp Ile Phe Ile Ala Val Ile Ala Ala Thr
35 40 45

Val Ala Phe Gln Val Val Ile Ile Glu Phe Leu Gly Thr Phe Ala Ser
50 55 60

Thr ValPro Leu Asn Trp Gln His Trp Leu Leu Ser
65 70 75

<210> 1833
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1833
Met Leu Ser Tyr Tyr Leu Val Asp Ala Ile Asp Gly Ala Ser Lys Ala
1 5 10 15

Trp Asn Ile Pro Val Ala Phe Ile Ser Val Val Leu Leu Pro Val Val
20 25 30

Gly Asn Ser Ala Gly His Ala Asn Ala Val Met Phe Ala Val Lys Asp
35 40 45

Lys Leu Asp Ile Ser Leu Gly Val Ala Ile Gly Ser Ser Ile Gln Ile
50 55 60

Ser Met Phe Gly Ile Pro Phe Cys Val Val Met Gly Trp Met Met Gly
65 70 75 80

Lys Pro Met Asp Leu Asn Phe His Leu Phe Glu Thr Ala Ser Leu Leu
85 90 95

Thr Thr Val Leu Val
100

<210> 1834
<211> 226
<212> PRT
<213> Zea mays

<400> 1834

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Gln Leu Gln Pro Ile Phe Ala Gln Trp Ile Gln Asn Ile His Ala Gly
1 5 10 15

Ala Pro Gly Val Thr Ala Pro Gly Ala Thr Thr Ser Thr Ser Leu Thr
20 25 30

Trp Gly Gly Gly Glu Leu Val Ala Ile Gly Gly Lys Val Ala Leu Leu
35 40 45

Pro Ile Pro Leu Gly Thr Ala Asp Phe Leu Val His His Ile His Ala
50 55 60

Phe Thr Ile His Val Thr Val Leu Ile Leu Leu Lys Gly Val Leu Phe
65 70 75 80

Ala Arg Ser Ser Arg Leu Ile Pro Asp Lys Ala Asn Leu Gly Phe Arg
85 90 95

Phe Pro Cys Asp Gly Pro Gly Arg Gly Gly Thr Cys Gln Val Ser Ala
100 105 110

Trp Asp His Val Phe Leu Gly Leu Phe Trp Met Tyr Asn Ser Ile Ser
115 120 125

Val Val Ile Phe His Phe Ser Trp Lys Met Gln Ser Asp Val Trp Gly
130 135 140

Thr Ile Ser Asp Gln Gly Ile Val Thr His Ile Thr Gly Gly Asn Phe
145 150 155 160

Ala Gln Ser Ser Ile Thr Ile Asn Gly Trp Leu Arg Asp Phe Leu Trp
165 170 175

Ala Gln Ala Ser Gln Val Ile Gln Ser Tyr Gly Ser Ser Leu Ser Ala
180 185 190

Tyr Gly Leu Phe Phe Leu Gly Ala His Phe Val Trp Ala Phe Ser Leu
195 200 205

Met Phe Leu Phe Ser Gly Arg Gly Tyr Trp Gln Glu Leu Ile Glu Ser
210 215 220

Ile Val
225

<210> 1835
<211> 226
<212> PRT
<213> Zea mays

<400> 1835
Leu His Ile Phe Arg Gly Leu Tyr His Ala Ser Tyr Ser Ser Pro Arg
1 5 10 15

Glu Phe Val Trp Cys Leu Gly Val Val Ile Phe Leu Leu Met Ile Val
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20

25

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Thr Ala Phe Ile Gly Tyr Val Pro Pro Trp Gly Gln Met Ser Phe Trp
 35 40 45

Gly Ala Thr Val Ile Thr Ser Leu Ala Ser Ala Ile Pro Val Val Gly
 50 55 60

Asp Thr Ile Val Thr Trp Leu Trp Gly Gly Phe Ser Val Asp Asn Ala
 65 70 75 80

Thr Leu Asn Arg Phe Phe Ser Leu His His Leu Leu Pro Leu Ile Leu
 85 90 95

Ala Gly Ala Ser Leu Leu His Leu Ala Ala Leu His Gln Tyr Gly Ser
 100 105 110

Asn Asn Pro Leu Gly Val His Ser Glu Met Asp Lys Ile Ala Ser Tyr
 115 120 125

Pro Tyr Phe Tyr Val Lys Asp Leu Val Gly Arg Val Ala Ser Ala Ile
 130 135 140

Phe Phe Ser Ile Trp Ile Phe Phe Ala Pro Asn Val Leu Gly His Pro
 145 150 155 160

Asp Asn Tyr Ile Pro Ala Asn Pro Met Pro Thr Pro Pro His Ile Val
 165 170 175

Pro Glu Trp Tyr Phe Leu Pro Ile His Ala Ile Leu Arg Ser Ile Pro
 180 185 190

Asp Lys Ala Gly Gly Val Ala Ala Ile Ala Pro Val Phe Ile Ser Leu
 195 200 205

Leu Ala Leu Pro Phe Phe Lys Glu Met Tyr Val Arg Ser Ser Ser Phe
 210 215 220

Arg Pro
 225

<210> 1836

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1836

Leu Gln Pro Val Phe Ala Gln Trp Ile Gln Asn Thr His Ala Leu Ala
 1 5 10 15

Pro Gly Ala Thr Ala Pro Gly Ala Thr Ala Ser Thr Ser Leu Thr Trp
 20 25 30

Gly Gly Gly Asp Leu Val Ala Val Gly Gly Lys Val Ala Leu Leu Pro
 35 40 45

Ile Pro Leu Gly Thr Ala Asp Phe Leu Val His His Ile His Ala Phe
50 55 60

Thr Ile His Val Thr Val Leu Ile Leu Leu Lys Gly Val Leu Phe Ala
65 70 75 80

Arg Ser Ser Arg Leu Ile Pro Asp Lys Ala Asn Leu Gly Phe Arg Phe
85 90 95

Pro Cys Asp Gly Pro Gly Arg Gly Gly Thr Cys Gln Val Ser Ala Trp
100 105 110

Asp His Val Phe Leu Gly Leu Phe Trp Met Tyr Asn Ser Ile Ser Val
115 120 125

Val Ile Phe His Phe Ser Trp Lys Met Gln Ser Asp Val Trp Gly Ser
130 135 140

Val Ser Asp Gln Gly Val Val Thr His Ile Thr Gly Gly Asn Phe Ala
145 150 155 160

Gln Ser Ser Ile Thr Ile Asn Gly Trp Leu Arg Asp Phe Leu Trp Ala
165 170 175

Gln Ala Ser Gln Val Ile Gln Ser Tyr Gly Ser Ser Leu Ser Ala Tyr
180 185 190

Gly Leu Phe Phe Leu Gly Ala His Phe Val Trp Ala Phe Ser Leu Met
195 200 205

Phe Leu Phe Ser Gly Arg Gly Tyr Trp Gln Glu Leu Ile Glu Ser Ile
210 215 220

Val Trp
225

<210> 1837
<211> 76
<212> PRT
<213> Zea mays

<400> 1837
Met Thr Asn Leu Val Arg Trp Leu Phe Ser Thr Asn His Lys Asp Ile
1 5 10 15

Gly Thr Leu Tyr Phe Ile Phe Gly Ala Ile Ala Gly Val Met Gly Thr
20 25 30

Cys Phe Ser Val Leu Ile Arg Met Glu Leu Ala Arg Pro Gly Asp Gln
35 40 45

Ile Leu Gly Gly Asn His Gln Leu Tyr Asn Val Leu Ile Thr Ala His
50 55 60

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Ala Phe Leu Met Ile Phe Phe Met Val Met Pro Ala
65 70 75

<210> 1838
<211> 226
<212> PRT
<213> Zea mays

<400> 1838
Thr Tyr Ile Tyr Pro Ala Val Ala Ile Ile Leu Ser Pro Arg Tyr Ala
1 5 10 15

Leu Leu Ile Asp Pro Leu Glu Arg Phe Val Phe Thr Met Arg Ser Leu
20 25 30

Gln Gly Ala Leu Ile Ile Ala Gly Val Phe Gln Ala Val Val Gly Phe
35 40 45

Phe Gly Ile Trp Arg Val Phe Ile Arg Phe Leu Ser Pro Leu Ala Ala
50 55 60

Val ProPhe Val Thr Leu Thr Gly Leu Gly Leu Phe Phe Phe Ala Phe
65 70 75 80

Pro Gly Val Thr Lys Cys Ile Glu Val Gly Leu Pro Ala Leu Val Leu
85 90 95

Leu Val Ile Phe Ala Glu Tyr Ala Ser His Leu Phe Ala Lys Gly Ser
100 105 110

Phe Val Phe Ser Arg Cys Ala Val Leu Val Thr Val Val Ile Ile Trp
115 120 125

Ile Tyr Ala Glu Ile Leu Thr Ala Ala Gly Ala Tyr Asn Glu Arg Gly
130 135 140

Pro Val Thr Gln Phe Ser Cys Arg Ala Asp Arg Ser Gly Ile Ile Gln
145 150 155 160

Gly Ser Pro Trp Val Arg Phe Pro Tyr Pro Phe Gln Trp Gly Tyr Pro
165 170 175

Ile Phe Cys Phe Gln Asp Cys Phe Ala Met Leu Ala Ala Ser Phe Ala
180 185 190

Ser Leu Ile Glu Ser Thr Gly Thr Leu Ile Ala Val Ser Arg Tyr Ser
195 200 205

Gly Ala Thr Phe Cys Pro Pro Ser Val Phe Ser Arg Gly Ile Gly Trp
210 215 220

Glu Gly
225

<210> 1839

<211> 276

<212> PRT

<213> Zea mays

<400> 1839

Met Thr Ile Arg Asn Gln Arg Phe Ser Leu Leu Lys Gln Pro Ile Tyr
1 5 10 15

Ser Thr Leu Asn Gln His Leu Ile Asp Tyr Pro Thr Pro Ser Asn Leu
20 25 30

Ser Tyr Trp Trp Gly Phe Gly Cys Leu Ala Gly Ile Cys Leu Val Ile
35 40 45

Gln Ile Val Thr Gly Val Phe Leu Ala Met His Tyr Thr Pro His Val
50 55 60

Asp Leu Ala Phe Asn Ser Val Glu His Ile Met Arg Asp Val Glu Gly
65 70 75 80

Gly Trp Leu Leu Arg Tyr Met His Ala Asn Gly Ala Ser Met Phe Leu
85 90 95

Ile Val Val His Leu His Ile Phe Arg Gly Leu Tyr His Ala Ser Tyr
100 105 110

Ser Ser Pro Arg Glu Phe Val Trp Cys Leu Gly Val Val Ile Phe Leu
115 120 125

Leu Met Ile Val Thr Ala Phe Ile Gly Tyr Val Pro Pro Trp Gly Gln
130 135 140

Met Ser Phe Trp Gly Ala Thr Val Ile Thr Ser Leu Ala Ser Ala Ile
145 150 155 160

Pro Val Val Gly Asp Thr Ile Val Thr Trp Leu Trp Gly Gly Phe Ser
165 170 175

Val Asp Asn Ala Thr Leu Asn Arg Phe Phe Ser Leu His His Leu Leu
180 185 190

Pro Leu Ile Leu Ala Gly Ala Ser Leu Leu His Leu Ala Ala Leu His
195 200 205

Gln Tyr Gly Ser Asn Asn Pro Leu Gly Val His Ser Glu Met Asp Lys
210 215 220

Ile Ala Ser Tyr Pro Tyr Phe Tyr Val Lys Asp Leu Val Gly Arg Val
225 230 235 240

Ala Ser Ala Ile Phe Phe Ser Ile Trp Ile Phe Phe Ala Pro Asn Val
245 250 255

Leu Gly His Pro Asp Asn Tyr Ile Pro Ala Asn Pro Met Pro Thr Pro

260

265

270

Pro His Ile Val
275

<210> 1840
<211> 276
<212> PRT
<213> Zea mays

<400> 1840
Met Pro Pro Val Lys Ala Glu Asp Leu Val Val His Ala Val Lys Glu
1 5 10 15

Gln Phe Ala Gly Leu Asp Tyr Cys Ile Thr Ser Pro Pro Pro Trp Ile
20 25 30

Thr Thr Val Leu Val Gly Phe Gln His Tyr Leu Val Met Leu Gly Thr
35 40 45

Thr Val Leu Ile Ala Thr Ile Ile Val Pro Leu Met Gly Gly Gly His
50 55 60

Ala Glu Lys Ala Ile Val Ile Gln Thr Ile Leu Phe Leu Ser Gly Ile
65 70 75 80

Asn Thr Leu Leu Gln Val His Phe Gly Thr Arg Leu Pro Ala Val Met
85 90 95

Ser Gly Ser Tyr Thr Tyr Ile Tyr Pro Ala Val Ala Ile Ile Leu Ser
100 105 110

Pro Arg Tyr Ala Leu Leu Ile Asp Pro Leu Glu Arg Phe Val Phe Thr
115 120 125

Met Arg Ser Leu Gln Gly Ala Leu Ile Ile Ala Gly Val Phe Gln Ala
130 135 140

Val Val Gly Phe Phe Gly Ile Trp Arg Val Phe Ile Arg Phe Leu Ser
145 150 155 160

Pro Leu Ala Ala Val Pro Phe Val Thr Leu Thr Gly Leu Gly Leu Phe
165 170 175

Phe Phe Ala Phe Pro Gly Val Thr Lys Cys Ile Glu Val Gly Leu Pro
180 185 190

Ala Leu Val Leu Leu Val Ile Phe Ala Glu Tyr Ala Ser His Leu Phe
195 200 205

Ala Lys Gly Ser Phe Val Phe Ser Arg Cys Ala Val Leu Val Thr Val
210 215 220

Val Ile Ile Trp Ile Tyr Ala Glu Ile Leu Thr Ala Ala Gly Ala Tyr
225 230 235 240

Asn Glu Arg Gly Pro Val Thr Gln Phe Ser Cys Arg Ala Asp Arg Ser
245 250 255

Gly Ile Ile Gln Gly Ser Pro Trp Val Arg Phe Pro Tyr Pro Phe Gln
260 265 270

Trp Gly Tyr Pro
275

<210> 1841
<211> 276
<212> PRT
<213> Zea mays

<400> 1841
Glu Lys Tyr Pro Ala Leu Val Thr Gly Phe Phe Phe Phe Met Trp Tyr
1 5 10 15

Phe Leu Asn Val Ile Phe Asn Ile Leu Asn Lys Lys Ile Tyr Asn Tyr
20 25 30

Phe Pro Tyr Pro Tyr Phe Val Ser Leu Ile His Leu Val Val Gly Val
35 40 45

Val Tyr Cys Leu Ile Ser Trp Ser Val Gly Leu Pro Lys Arg Ala Pro
50 55 60

Ile Asn Gly Thr Leu Leu Lys Leu Leu Phe Pro Val Ala Leu Cys His
65 70 75 80

Gly Ile Gly His Ile Thr Ser Asn Val Ser Phe Ala Ala Val Ala Val
85 90 95

Ser Phe Ala His Thr Ile Lys Ala Leu Glu Pro Phe Phe Ser Ala Ala
100 105 110

Ala Thr Gln Phe Ile Leu Gly Gln Gln Val Pro Phe Ser Leu Trp Leu
115 120 125

Ser Leu Ala Pro Val Val Ile Gly Val Ser Met Ala Ser Leu Thr Glu
130 135 140

Leu Ser Phe Asn Trp Thr Gly Phe Ile Asn Ala Met Ile Ser Asn Ile
145 150 155 160

Ser Phe Thr Tyr Arg Ser Ile Tyr Ser Lys Lys Ala Met Thr Asp Met
165 170 175

Asp Ser Thr Asn Val Tyr Ala Tyr Ile Ser Ile Ile Ala Leu Ile Val
180 185 190

Cys Ile Pro Pro Ala Leu Ile Phe Glu Gly Pro Lys Leu Met Gln His
195 200 205

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Gly Phe Ser Asp Ala Ile Ala Lys Val Gly Leu Thr Lys Phe Val Ser
210 215 220

Asp Leu Phe Leu Val Gly Leu Phe Tyr His Leu Tyr Asn Gln Ile Ala
225 230 235 240

Thr Asn Thr Leu Glu Arg Val Ala Pro Leu Thr His Ala Val Gly Asn
245 250 255

Val Leu Lys Arg Val Phe Val Ile Gly Phe Ser Ile Ile Val Phe Gly
260 265 270

Asn Lys Ile Ser
275

<210> 1842

<211> 76

<212> PRT

<213> Zea mays

<400> 1842

Ser Leu Pro Val Leu Ala Gly Ala Ile Thr Met Leu Leu Thr Asp Arg
1 5 10 15

Asn Phe Asn Thr Thr Phe Phe Asp Pro Ala Gly Gly Gly Asp Pro Ile
20 25 30

Leu Tyr Gln His Leu Phe Trp Phe Phe Gly His Pro Glu Val Tyr Ile
35 40 45

Leu Ile Leu Pro Gly Phe Gly Ile Ile Ser His Ile Val Ser Thr Phe
50 55 60

Ser Arg Lys Pro Val Phe Gly Tyr Leu Gly Met Val
65 70 75

<210> 1843

<211> 176

<212> PRT

<213> Zea mays

<400> 1843

Ser Glu Leu Ser Ser Trp Ser Phe Tyr Arg Ala Gly Ile Ala Glu Phe
1 5 10 15

Val Ala Thr Phe Leu Phe Leu Tyr Val Thr Val Leu Thr Val Met Gly
20 25 30

Val Ser Lys Ser Pro Ser Lys Cys Gly Thr Val Gly Ile Gln Gly Ile
35 40 45

Ala Trp Ala Phe Gly Gly Met Ile Phe Ala Leu Val Tyr Cys Thr Ala
50 55 60

Gly Val Ser Gly Gly His Ile Asn Pro Ala Val Thr Phe Gly Leu Leu
65 70 75 80

Leu Ala Arg Lys Leu Ser Leu Thr Arg Ala Val Tyr Tyr Val Val Met
 85 90 95
 Gln Cys Leu Gly Ala Val Cys Gly Ala Gly Val Val Lys Ala Phe Gly
 100 105 110
 Ser Ala Leu Tyr Glu Ser Ala Gly Gly Gly Ala Asn Ala Val Ser Pro
 115 120 125
 Gly Tyr Thr Lys Gly Asp Gly Leu Gly Ala Glu Val Val Gly Thr Phe
 130 135 140
 Val Leu Val Tyr Thr Val Phe Ser Ala Thr Asp Ala Lys Arg Thr Ala
 145 150 155 160
 Arg Asp Ser His Val Pro Ala Leu Ala Pro Leu Pro Ile Gly Phe Ala
 165 170 175

 <210> 1844
 <211> 151
 <212> PRT
 <213> Zea mays

 <400> 1844
 Ser Ile Ser Val Val Ile Phe His Phe Ser Trp Lys Met Gln Ser Asp
 1 5 10 15
 Val Trp Gly Thr Ile Ser Asp Gln Gly Ile Val Thr His Ile Thr Gly
 20 25 30
 Gly Asn Phe Ala Gln Ser Ser Ile Thr Ile Asn Gly Trp Leu Arg Asp
 35 40 45
 Phe Leu Trp Ala Gln Ala Ser Gln Val Ile Gln Ser Tyr Gly Ser Ser
 50 55 60
 Leu Ser Ala Tyr Gly Leu Phe Phe Leu Gly Ala His Phe Val Trp Ala
 65 70 75 80
 Phe Ser Leu Met Phe Leu Phe Ser Gly Arg Gly Tyr Trp Gln Glu Leu
 85 90 95
 Ile Glu Ser Ile Val Trp Ala His Asn Lys Leu Lys Val Ala Pro Ala
 100 105 110
 Thr Gln Pro Arg Ala Leu Ser Ile Ile Gln Gly Arg Ala Val Gly Val
 115 120 125
 Thr His Tyr Leu Leu Gly Gly Ile Ala Thr Thr Trp Ala Phe Phe Leu
 130 135 140
 Ala Arg Ile Ile Ala Val Gly
 145 150

<210> 1845
 <211> 101
 <212> PRT
 <213> Oryza sativa

<400> 1845
 Leu Ile Tyr Ser Ala Phe Leu Thr Gly Phe Val Tyr Pro Val Val Ser
 1 5 10 15
 His Trp Phe Trp Ser Thr Asp Gly Trp Ala Ser Ala Gly Arg Leu Thr
 20 25 30
 Gly Pro Leu Leu Phe Lys Ser Gly Val Ile Asp Phe Ala Gly Ser Gly
 35 40 45
 Val Val His Leu Val Gly Gly Ile Ala Gly Leu Trp Gly Ala Phe Ile
 50 55 60
 Glu Gly Pro Arg Ile Gly Arg Phe Asp Ala Ala Gly Arg Thr Val Ala
 65 70 75 80
 Met Lys Gly His Ser Ala Ser Leu Val Val Leu Gly Thr Phe Leu Leu
 85 90 95
 Trp Phe Gly Trp Phe
 100

<210> 1846
 <211> 126
 <212> PRT
 <213> Oryza sativa

<400> 1846
 Val Met Asp Tyr Ser Gly Gly Tyr Val Ile His Leu Ser Ser Gly Val
 1 5 10 15
 Ala Gly Phe Thr Ala Ala Tyr Trp Val Gly Pro Arg Ser Thr Lys Asp
 20 25 30
 Arg Glu Arg Phe Pro Pro Asn Asn Val Leu Leu Met Leu Thr Gly Ala
 35 40 45
 Gly Ile Leu Trp Met Gly Trp Ala Gly Phe Asn Gly Gly Asp Pro Tyr
 50 55 60
 Ser Ala Asn Ile Asp Ser Ser Leu Ala Val Leu Asn Thr Asn Ile Cys
 65 70 75 80
 Ala Ala Thr Ser Leu Leu Val Trp Thr Cys Leu Asp Val Ile Phe Phe
 85 90 95
 Lys Lys Pro Ser Val Ile Gly Ala Val Gln Gly Met Ile Thr Gly Leu
 100 105 110
 Val Cys Ile Thr Pro Gly Ala Gly Leu Val Gln Gly Trp Ala
 115 120 125

<210> 1847
 <211> 201
 <212> PRT
 <213> Zea mays

<400> 1847
 Pro Ala Pro Leu Ile Asp Ala Ala Glu Leu Gly Ser Trp Ser Leu Tyr
 1 5 10 15

Arg Ala Val Ile Ala Glu Phe Ile Ala Thr Leu Leu Phe Leu Tyr Ile
 20 25 30

Thr Val Ala Thr Val Ile Gly Tyr Lys His Gln Thr Asp Ala Ser Ala
 35 40 45

Ser Gly Ala Asp Ala Ala Cys Gly Gly Val Gly Val Leu Gly Ile Ala
 50 55 60

Trp Ala Phe Gly Gly Met Ile Phe Val Leu Val Tyr Cys Thr Ala Gly
 65 70 75 80

Ile Ser Gly Gly His Ile Asn Pro Ala Val Thr Phe Gly Leu Phe Leu
 85 90 95

Ala Arg Lys Val Ser Leu Val Arg Ala Leu Leu Tyr Ile Val Ala Gln
 100 105 110

Cys Leu Gly Ala Ile Cys Gly Val Gly Leu Val Lys Ala Phe Gln Ser
 115 120 125

Ala Tyr Phe Asp Arg Tyr Gly Gly Gly Ala Asn Ser Leu Ala Ser Gly
 130 135 140

Tyr Ser Arg Gly Thr Gly Leu Gly Ala Glu Ile Ile Gly Thr Phe Val
 145 150 155 160

Leu Val Tyr Thr Val Phe Ser Ala Thr Asp Pro Lys Arg Asn Ala Arg
 165 170 175

Asp Ser His Val Pro Val Leu Ala Pro Leu Pro Ile Gly Phe Ala Val
 180 185 190

Phe Met Val His Leu Ala Thr Ile Pro
 195 200

<210> 1848
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1848
 Pro Val Leu Ala Pro Leu Pro Ile Gly Phe Ala Val Phe Met Val His
 1 5 10 15

Leu Ala Thr Ile Pro Ile Thr Gly Thr Gly Ile Asn Pro Ala Arg Ser
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25

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Leu Gly Ala Ala Val Ile Tyr Asn Asn Asp Lys Ala Trp Asp Asp His
 35 40 45

Trp Ile Phe Trp Val Gly Pro Phe Ile Gly Ala Ala Ile Ala Ala Ala
 50 55 60

Tyr His Gln Tyr Val Leu Arg Ala Ser Ala Ala Lys
 65 70 75

<210> 1849

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1849

Asn Pro Val Lys Met Arg Gly His Asn Ala Thr Leu Val Val Leu Gly
 1 5 10 15

Thr Leu Leu Leu Trp Phe Gly Trp Phe Gly Phe Asn Pro Gly Ser Phe
 20 25 30

Asn Lys Ile Leu Val Ala Tyr Pro His Met Ala Asp Gln Gly Asn Trp
 35 40 45

Thr Ser Val Gly Arg Thr Ala Val Thr Thr Thr Leu Ala Gly Ser Thr
 50 55 60

Ala Gly Ile Val Thr Leu Phe Gly Arg Arg Leu Leu Val Gly His Trp
 65 70 75 80

Asp Ala Met Asp Val Cys Asn Gly Val Leu Gly Gly Phe Val Ala Ile
 85 90 95

Thr Ser Gly Cys Ser
 100

<210> 1850

<211> 126

<212> PRT

<213> Zea mays

<400> 1850

Met Ala Lys Leu His Arg Leu Ile Ser Ala Val Leu Arg Leu Ala Ala
 1 5 10 15

Ala Gly Ala Ala Ala Ala Ala Ala Val Ile Met Val Thr Ser His Glu
 20 25 30

Thr Thr Ser Leu Phe Gly Ile Glu Met Glu Ala Lys Tyr Ser Tyr Thr
 35 40 45

Pro Ser Phe Val Phe Phe Val Val Ala Phe Ala Val Thr Phe Ala Tyr
 50 55 60

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Ser Leu Leu Ala Ala Val Leu Val Arg Pro Gly Thr Thr Ala Ser Arg
65 70 75 80

Leu Val Leu Leu Ser Asp Val Thr Val Gly Met Leu Leu Thr Gly Ala
85 90 95

Val Ala Ala Thr Gly Ala Ile Ser Gln Val Gly Lys Ser Gly Asn Glu
100 105 110

His Ala Gly Trp Leu Pro Ile Cys Ala Gln Val Gln Ala Tyr
115 120 125

<210> 1851

<211> 226

<212> PRT

<213> Oryza sativa

<400> 1851

Val Met Asp Tyr Ser Gly Gly Tyr Val Ile His Leu Ser Ser Gly Val
1 5 10 15

Ala Gly Phe Thr Ala Ala Tyr Trp Val Gly Pro Arg Ser Thr Lys Asp
20 25 30

Arg Glu Arg Phe Pro Pro Asn Asn Val Leu Leu Met Leu Thr Gly Ala
35 40 45

Gly Ile Leu Trp Met Gly Trp Ala Gly Phe Asn Gly Gly Asp Pro Tyr
50 55 60

Ser Ala Asn Ile Asp Ser Ser Leu Ala Val Leu Asn Thr Asn Ile Cys
65 70 75 80

Ala Ala Thr Ser Leu Leu Val Trp Thr Cys Leu Asp Val Ile Phe Phe
85 90 95

Lys Lys Pro Ser Val Ile Gly Ala Val Gln Gly Met Ile Thr Gly Leu
100 105 110

Val Cys Ile Thr Pro Gly Ala Gly Leu Val Gln Gly Trp Ala Ala Ile
115 120 125

Val Met Gly Ile Leu Ser Gly Ser Ile Pro Trp Phe Thr Met Met Val
130 135 140

Val His Lys Arg Ser Arg Leu Leu Gln Gln Val Asp Asp Thr Leu Gly
145 150 155 160

Val Phe His Thr His Ala Val Ala Gly Phe Leu Gly Gly Ala Thr Thr
165 170 175

Gly Leu Phe Ala Glu Pro Val Leu Cys Ser Leu Phe Leu Pro Val Thr
180 185 190

Asn Ser Arg Gly Ala Phe Tyr Pro Gly Arg Gly Gly Gly Leu Gln Phe

195

200

205

Val Arg Gln Val Ala Gly Ala Leu Phe Ile Ile Cys Trp Asn Val Val
 210 215 220

Val Thr
 225

<210> 1852
 <211> 76
 <212> PRT
 <213> Oryza sativa

<400> 1852
 Thr Ala Leu Leu Ser Gly Tyr Val Val Ser Thr Ile Glu Ala Ala Ser
 1 5 10 15

Glu Ser Trp Glu Leu Ser Val Ser Phe Ile Ser Ile Ile Leu Leu Pro
 20 25 30

Ile Val Gly Asn Ala Ala Glu His Ala Gly Ala Val Ile Phe Ala Leu
 35 40 45

Lys Asn Lys Met Asp Ile Thr Leu Gly Val Ser Leu Gly Ser Ala Thr
 50 55 60

Gln Ile Ser Met Phe Val Val Pro Val Ser Val Ile
 65 70 75

<210> 1853
 <211> 101
 <212> PRT
 <213> Oryza sativa

<400> 1853
 Ser Gly Ser Ile Pro Trp Tyr Thr Met Met Val Leu His Lys Lys Trp
 1 5 10 15

Ser Phe Met Gln Arg Ile Asp Asp Thr Leu Gly Val Phe His Thr His
 20 25 30

Ala Val Ala Gly Phe Leu Gly Gly Ala Thr Thr Gly Leu Phe Ala Glu
 35 40 45

Pro Ile Leu Cys Ser Leu Phe Leu Ser Ile Pro Asp Ser Lys Gly Ala
 50 55 60

Phe Tyr Gly Gly Pro Gly Gly Ser Gln Phe Gly Lys Gln Ile Ala Gly
 65 70 75 80

Ala Leu Phe Val Thr Ala Trp Asn Ile Val Ile Thr Ser Ile Ile Cys
 85 90 95

Val Ile Ile Ser Leu
 100

<210> 1854
 <211> 176
 <212> PRT
 <213> Zea mays

<400> 1854

Met Thr Ile Arg Asn Gln Arg Phe Ser Leu Leu Lys Gln Pro Ile Tyr
 1 5 10 15

Ser Thr Leu Asn Gln His Leu Ile Asp Tyr Pro Thr Pro Ser Asn Leu
 20 25 30

Ser Tyr Trp Trp Gly Phe Gly Cys Leu Ala Gly Ile Cys Leu Val Ile
 35 40 45

Gln Ile Val Thr Gly Val Phe Leu Ala Met His Tyr Thr Pro His Val
 50 55 60

Asp Leu Ala Phe Asn Ser Val Glu His Ile Met Arg Asp Val Glu Gly
 65 70 75 80

Gly Trp Leu Leu Arg Tyr Met His Ala Asn Gly Ala Ser Met Phe Leu
 85 90 95

Ile Val Val His Leu His Ile Phe Arg Gly Leu Tyr His Ala Ser Tyr
 100 105 110

Ser Ser Pro Arg Glu Phe Val Trp Cys Leu Gly Val Val Ile Phe Leu
 115 120 125

Leu Met Ile Val Thr Ala Phe Ile Gly Tyr Val Pro Pro Trp Gly Gln
 130 135 140

Met Ser Phe Trp Gly Ala Thr Val Ile Thr Ser Leu Ala Ser Ala Ile
 145 150 155 160

Pro Val Val Gly Asp Thr Ile Val Thr Trp Leu Trp Gly Gly Phe Ser
 165 170 175

<210> 1855
 <211> 276
 <212> PRT
 <213> Zea mays

<400> 1855

Ala Glu Tyr Ala Ser His Leu Phe Ala Lys Gly Ser Phe Val Phe Ser
 1 5 10 15

Arg Cys Ala Val Leu Val Thr Val Val Ile Ile Trp Ile Tyr Ala Glu
 20 25 30

Ile Leu Thr Ala Ala Gly Ala Tyr Asn Glu Arg Gly Pro Val Thr Gln
 35 40 45

Phe Ser Cys Arg Ala Asp Arg Ser Gly Ile Ile Gln Gly Ser Pro Trp
 50 55 60

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Val Arg Phe Pro Tyr Pro Phe Gln Trp Gly Tyr Pro Ile Phe Cys Phe
65 70 75 80

Gln Asp Cys Phe Ala Met Leu Ala Ala Ser Phe Ala Ser Leu Ile Glu
85 90 95

Ser Thr Gly Thr Leu Ile Ala Val Ser Arg Tyr Ser Gly Ala Thr Phe
100 105 110

Cys Pro Pro Ser Val Phe Ser Arg Gly Ile Gly Trp Glu Gly Ile Ser
115 120 125

Ile Ile Leu Asp Gly Met Cys Gly Thr Leu Thr Gly Thr Ala Ala Ser
130 135 140

Val Glu Asn Ala Gly Leu Leu Ala Val Thr Arg Val Gly Ser Arg Arg
145 150 155 160

Val Ile Lys Ile Ser Ala Leu Phe Met Ile Phe Phe Ser Leu Phe Ala
165 170 175

Lys Phe Gly Ala Val Leu Ala Ser Ile Pro Leu Pro Ile Phe Ala Ala
180 185 190

Leu Tyr Cys Val Leu Phe Ala Tyr Ser Ala Gly Ala Gly Phe Ser Leu
195 200 205

Leu Gln Tyr Cys Asn Leu Asn Ser Leu Arg Thr Lys Phe Ile Leu Ser
210 215 220

Ile Ser Leu Phe Leu Gly Leu Ser Ile Pro Gln Tyr Phe Arg Val Tyr
225 230 235 240

Glu Met Phe Phe Gly Phe Gly Pro Val His Thr His Ser Val Ala Phe
245 250 255

Asn Val Met Val Asn Val Ile Phe Ser Ser Pro Ala Thr Val Ala Ala
260 265 270

Ile Leu Ala Tyr
275

<210> 1856

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1856

Ala Leu Asp Gln Gly Leu Leu Val Gly Arg Ala Ala Leu Pro Ala Thr
1 5 10 15

Val His Tyr Arg Ala Asp Gly Ser Val Glu Thr Ala Ala Val Glu Pro
20 25 30

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Leu Tyr Pro Met Ala Thr Val Val Tyr Phe Gln Cys Val Phe Ala Ala
35 40 45

Ile Thr Leu Ile Leu Val Ala Gly Ser Leu Leu Gly Arg Met Ser Phe
50 55 60

Leu Ala Trp Met Ile Phe Val Pro Leu Trp Leu Thr Phe Ser Tyr Thr
65 70 75 80

Val Gly Ala Phe Ser Leu Trp Gly Gly Gly Phe Leu Phe His Trp Gly
85 90 95

Val Ile Asp Tyr Cys Gly Gly Tyr Val Ile His Val Ser Ala Gly Ile
100 105 110

Ala Gly Phe Thr Ala Ala Tyr Trp Val Gly Pro Arg Ala Gln Lys Asp
115 120 125

Arg Glu Arg Phe Pro Pro Asn Asn Ile Leu Phe Thr Leu Thr Gly Ala
130 135 140

Gly Leu Leu Trp Met Gly Trp
145 150

<210> 1857

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1857

Leu Val Asp Ala Ile Gln Gly Ala Ser Glu Ser Leu Asn Met Pro Val
1 5 10 15

Ala Phe Ile Ser Val Ile Leu Leu Pro Ile Val Gly Asn Ala Ala Glu
20 25 30

His Ala Ser Ala Ile Met Phe Ala Met Lys Asp Lys Leu Asp Ile Thr
35 40 45

Leu Gly Val Ala Ile Gly Ser Ser Thr Gln Ile Ser Met Phe Val Ile
50 55 60

Pro Phe Cys Val Val Ile Gly Trp Ile Met Gly Gln
65 70 75

<210> 1858

<211> 176

<212> PRT

<213> Zea mays

<400> 1858

Ser Phe Tyr Arg Ala Gly Ile Ala Glu Phe Val Ala Thr Phe Leu Phe
1 5 10 15

Leu Tyr Ile Ser Ile Leu Thr Val Met Gly Val Ser Lys Ser Ser Ser
20 25 30

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Lys Cys Ala Thr Val Gly Ile Gln Gly Ile Ala Trp Ser Phe Gly Gly
35 40 45

Met Ile Phe Ala Leu Val Tyr Cys Thr Ala Gly Ile Ser Gly Gly His
50 55 60

Ile Asn Pro Ala Val Thr Phe Gly Leu Phe Leu Ala Arg Lys Leu Ser
65 70 75 80

Leu Thr Arg Ala Leu Phe Tyr Met Val Met Gln Cys Leu Gly Ala Ile
85 90 95

Cys Gly Ala Gly Val Val Lys Gly Phe Gln Glu Gly Leu Tyr Met Gly
100 105 110

Ala Gly Gly Gly Ala Asn Ala Val Asn Pro Gly Tyr Thr Lys Gly Asp
115 120 125

Gly Leu Gly Ala Glu Ile Val Gly Thr Phe Val Leu Val Tyr Thr Val
130 135 140

Phe Ser Ala Thr Asp Ala Lys Arg Ser Ala Arg Asp Ser His Val Pro
145 150 155 160

Ile Leu Ala Pro Leu Pro Ile Gly Phe Ala Val Phe Leu Val His Leu
165 170 175

<210> 1859

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1859

Ala Gly Phe Thr Ala Ala Tyr Trp Val Gly Pro Arg Leu Lys Ser Asp
1 5 10 15

Arg Glu Arg Phe Ser Pro Asn Asn Ile Leu Leu Met Ile Ala Gly Gly
20 25 30

Gly Leu Leu Trp Met Gly Trp Ala Gly Phe Asn Gly Gly Ala Pro Tyr
35 40 45

Ala Ala Asn Ile Ala Ala Ser Val Ala Val Leu Asn Thr Asn Val Cys
50 55 60

Ala Ala Thr Ser Leu Leu Met Trp Thr Cys Leu Asp Val Ile Phe Phe
65 70 75 80

Arg Lys Pro Ser Val Ile Gly Ala Val Gln Gly Met Met Thr Gly Leu
85 90 95

Val Cys Ile Thr Pro Gly Ala Gly Leu Val Gln Thr Trp Ala Ala Val
100 105 110

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Val Met Gly Ile Phe Ala Gly Ser Val Pro Trp Phe Thr Met Met Ile
 115 120 125

Leu His Lys Lys Ser Ala Leu Leu Met Lys Val Asp Asp Thr Leu Ala
 130 135 140

Val Phe His Thr His Ala Val
 145 150

<210> 1860
 <211> 76
 <212> PRT
 <213> Oryza sativa

<400> 1860
 Met Glu Lys Ile Asn Val Phe Ser Gly Ile Phe Ser Ser Trp Ile Phe
 1 5 10 15

Ser Ala Val Val Gly Val Thr Ala Gly Phe Gln Val Ile Met Val Glu
 20 25 30

Leu Leu Gly Thr Phe Ala Asn Thr Val His Leu Ser Gly Lys Leu Trp
 35 40 45

Leu Thr Ser Val Leu Ile Gly Ser Val Gly Leu Val Ile Gly Ala Ile
 50 55 60

Leu Lys Cys Ile Pro Val Glu Ser Gly Ser Asp Ala
 65 70 75

<210> 1861
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 1861
 Pro Ala Pro Leu Ile Asp Ala Ala Glu Leu Gly Ser Trp Ser Leu Tyr
 1 5 10 15

Arg Ala Val Ile Ala Glu Phe Ile Ala Thr Leu Leu Phe Leu Tyr Ile
 20 25 30

Thr Val Ala Thr Val Ile Gly Tyr Lys His Gln Thr Asp Ala Ser Ala
 35 40 45

Ser Gly Ala Asp Ala Ala Cys Gly Gly Val Gly Val Leu Gly Ile Ala
 50 55 60

Trp Ala Phe Gly Gly Met Ile Phe Val Leu Val Tyr
 65 70 75

<210> 1862
 <211> 176
 <212> PRT
 <213> Oryza sativa

<400> 1862
 Glu Arg Phe Pro Pro Asn Asn Ile Leu Leu Val Leu Ala Gly Ala Gly

1 5 10 15
 Leu Leu Trp Leu Gly Trp Thr Gly Phe Asn Gly Gly Asp Pro Tyr Ser
 20 25 30
 Ala Asn Ile Asp Ser Ser Met Ala Val Leu Asn Thr His Ile Cys Ala
 35 40 45
 Ser Thr Ser Leu Leu Val Trp Thr Ile Leu Asp Val Phe Phe Phe Gly
 50 55 60
 Lys Pro Ser Val Ile Gly Ala Val Gln Gly Met Ile Thr Gly Leu Val
 65 70 75 80
 Cys Ile Thr Pro Gly Ala Gly Leu Val Gln Gly Trp Ala Ala Ile Val
 85 90 95
 Met Gly Ile Leu Ser Gly Ser Ile Pro Trp Tyr Thr Met Met Val Leu
 100 105 110
 His Lys Lys Trp Ser Phe Met Gln Arg Ile Asp Asp Thr Leu Gly Val
 115 120 125
 Phe His Thr His Ala Val Ala Gly Phe Leu Gly Gly Ala Thr Thr Gly
 130 135 140
 Leu Phe Ala Glu Pro Ile Leu Cys Ser Leu Phe Leu Ser Ile Pro Asp
 145 150 155 160
 Ser Lys Gly Ala Phe Tyr Gly Gly Pro Gly Gly Ser Gln Phe Gly Lys
 165 170 175

 <210> 1863
 <211> 126
 <212> PRT
 <213> Oryza sativa

 <400> 1863
 Ala Phe Ala Ile Ala Ala Ala Gly Ile Thr Ser Gly Ser Ile Ala Glu
 1 5 10 15
 Arg Thr Gln Phe Val Ala Tyr Leu Ile Tyr Ser Ala Phe Leu Thr Gly
 20 25 30
 Phe Val Tyr Pro Val Val Ser His Trp Ile Trp Ser Ala Asp Gly Trp
 35 40 45
 Ala Ser Ala Ser Arg Thr Ser Gly Pro Leu Leu Phe Gly Ser Gly Val
 50 55 60
 Ile Asp Phe Ala Gly Ser Gly Val Val His Met Val Gly Gly Val Ala
 65 70 75 80
 Gly Leu Trp Gly Ala Leu Ile Glu Gly Pro Arg Ile Gly Arg Phe Asp
 85 90 95

His Ala Gly Arg Ser Val Ala Leu Lys Gly His Ser Ala Ser Leu Val
100 105 110

Val Leu Gly Thr Phe Leu Leu Trp Phe Gly Trp Tyr Gly Phe
115 120 125

<210> 1864
<211> 276
<212> PRT
<213> Zea mays

<400> 1864
Ser Leu Pro Val Leu Ala Gly Ala Ile Thr Met Leu Leu Thr Asp Arg
1 5 10 15

Asn Phe Asn Thr Thr Phe Phe Asp Pro Ala Gly Gly Gly Asp Pro Ile
20 25 30

Leu Tyr Gln His Leu Phe Trp Phe Phe Gly His Pro Glu Val Tyr Ile
35 40 45

Leu Ile Leu Pro Gly Phe Gly Ile Ile Ser His Ile Val Ser Thr Phe
50 55 60

Ser Arg Lys Pro Val Phe Gly Tyr Leu Gly Met Val Tyr Ala Met Ile
65 70 75 80

Ser Ile Gly Val Leu Gly Phe Leu Val Trp Ala His His Met Phe Thr
85 90 95

Val Gly Leu Asp Val Asp Thr Arg Ala Tyr Phe Thr Ala Ala Thr Met
100 105 110

Ile Ile Ala Val Pro Thr Gly Ile Lys Ile Phe Ser Trp Ile Ala Thr
115 120 125

Met Trp Gly Gly Ser Ile Gln Tyr Lys Thr Pro Met Leu Phe Ala Val
130 135 140

Gly Phe Ile Phe Leu Phe Thr Ile Gly Gly Leu Thr Gly Ile Val Leu
145 150 155 160

Ala Asn Ser Gly Leu Asp Ile Ala Leu His Asp Thr Tyr Tyr Val Val
165 170 175

Ala His Phe His Tyr Val Leu Ser Met Gly Ala Val Phe Ala Leu Phe
180 185 190

Ala Gly Phe Tyr Tyr Trp Val Gly Lys Ile Phe Gly Arg Thr Tyr Pro
195 200 205

Glu Thr Leu Gly Gln Ile His Phe Trp Ile Thr Phe Phe Gly Val Asn
210 215 220

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Leu Thr Phe Phe Pro Met His Phe Leu Gly Leu Ser Gly Met Pro Arg
225 230 235 240

Arg Ile Pro Asp Tyr Pro Asp Ala Tyr Ala Gly Trp Asn Ala Leu Ser
245 250 255

Ser Phe Gly Ser Tyr Ile Ser Val Val Gly Ile Arg Arg Phe Phe Val
260 265 270

Val Val Ala Ile
275

<210> 1865

<211> 76

<212> PRT

<213> Zea mays

<400> 1865

Pro Ala Pro Leu Val Asp Ala Ala Glu Leu Gly Ser Trp Ser Leu Tyr
1 5 10 15

Arg Ala Val Ile Ala Glu Phe Ile Ala Thr Leu Leu Phe Leu Tyr Val
20 25 30

Thr Val Ala Thr Val Ile Gly Tyr Lys His Gln Thr Asp Ala Ser Ala
35 40 45

Ser Gly Ala Gly Ala Asp Ala Ala Cys Gly Gly Val Gly Val Leu Gly
50 55 60

Ile Ala Trp Ala Phe Gly Gly Met Ile Phe Val Leu
65 70 75

<210> 1866

<211> 101

<212> PRT

<213> Zea mays

<400> 1866

Gly Leu Phe Tyr Trp Val Ala Gln Leu Leu Gly Ala Ser Val Ala Cys
1 5 10 15

Leu Leu Leu Arg Phe Val Thr His Gly Lys Ala Ile Pro Thr His Gly
20 25 30

Val Ser Gly Gly Thr Thr Glu Leu Glu Gly Val Val Phe Glu Ile Val
35 40 45

Ile Thr Phe Ala Leu Val Tyr Thr Val Tyr Ala Thr Ala Ala Asp Pro
50 55 60

Lys Lys Gly Ser Leu Gly Thr Ile Ala Pro Ile Ala Ile Gly Phe Ile
65 70 75 80

Val Gly Ala Asn Ile Leu Ala Ala Gly Pro Phe Ser Gly Gly Ser Met
85 90 95

Asn Pro Ala Arg Ser
100

<210> 1867
<211> 276
<212> PRT
<213> Oryza sativa

<400> 1867
Ala Trp Gln Met Thr Ser Ala Thr Leu Val Gly Leu Gln Ser Met Pro
1 5 10 15

Gly Leu Val Ile Leu Tyr Gly Ser Ile Val Lys Lys Lys Trp Ala Ile
20 25 30

Asn Ser Ala Phe Met Ala Leu Tyr Ala Phe Ala Ala Val Trp Ile Cys
35 40 45

Trp Val Val Trp Ala Tyr Asn Met Ser Phe Gly Asp Arg Leu Leu Pro
50 55 60

Phe Trp Gly Lys Ala Arg Pro Ala Leu Gly Gln Ser Phe Leu Val Ala
65 70 75 80

Gln Ser Glu Leu Thr Ala Thr Ala Ile Arg Tyr His Asn Gly Ser Ala
85 90 95

Glu Ala Pro Met Leu Lys Pro Leu Tyr Pro Val Ala Thr Met Val Tyr
100 105 110

Phe Gln Cys Met Phe Ala Ser Ile Thr Ile Ile Ile Leu Ala Gly Ser
115 120 125

Leu Leu Gly Arg Met Asn Ile Lys Ala Trp Met Ala Phe Val Pro Leu
130 135 140

Trp Ile Thr Phe Ser Tyr Thr Val Cys Ala Phe Ser Leu Trp Gly Gly
145 150 155 160

Gly Phe Leu Phe Gln Trp Gly Val Ile Asp Tyr Ser Gly Gly Tyr Val
165 170 175

Ile His Leu Ser Ser Gly Ile Ala Gly Leu Thr Ala Ala Tyr Trp Val
180 185 190

Gly Pro Arg Ser Ala Ser Asp Arg Glu Arg Phe Pro Pro Asn Asn Ile
195 200 205

Leu Leu Val Leu Ala Gly Ala Gly Leu Leu Trp Leu Gly Trp Thr Gly
210 215 220

Phe Asn Gly Gly Asp Pro Tyr Ser Ala Asn Ile Asp Ser Ser Met Ala
225 230 235 240

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Val Leu Asn Thr His Ile Cys Ala Ser Thr Ser Leu Leu Val Trp Thr
245 250 255

Ile Leu Asp Val Phe Phe Phe Gly Lys Pro Ser Val Ile Gly Ala Val
260 265 270

Gln Gly Met Ile
275

<210> 1868

<211> 226

<212> PRT

<213> Oryza sativa

<400> 1868

Met Ser Ser Ser Ala Thr Val Val Pro Leu Ala Tyr Gln Gly Asn Thr
1 5 10 15

Ser Ala Ser Val Ala Asp Trp Leu Asn Lys Gly Asp Asn Ala Trp Gln
20 25 30

Leu Val Ala Ala Thr Val Val Gly Leu Gln Ser Val Pro Gly Leu Val
35 40 45

Val Leu Tyr Gly Gly Val Val Lys Lys Lys Trp Ala Val Asn Ser Ala
50 55 60

Phe Met Ala Leu Tyr Ala Phe Ala Ala Val Trp Ile Cys Trp Val Thr
65 70 75 80

Trp Ala Tyr Asn Met Ser Phe Gly Glu Lys Leu Leu Pro Ile Trp Gly
85 90 95

Lys Ala Arg Pro Ala Leu Asp Gln Gly Leu Leu Val Gly Arg Ala Ala
100 105 110

Leu Pro Ala Thr Val His Tyr Arg Ala Asp Gly Ser Val Glu Thr Ala
115 120 125

Ala Val Glu Pro Leu Tyr Pro Met Ala Thr Val Val Tyr Phe Gln Cys
130 135 140

Val Phe Ala Ala Ile Thr Leu Ile Leu Val Ala Gly Ser Leu Leu Gly
145 150 155 160

Arg Met Ser Phe Leu Ala Trp Met Ile Phe Val Pro Leu Trp Leu Thr
165 170 175

Phe Ser Tyr Thr Val Gly Ala Phe Ser Leu Trp Gly Gly Gly Phe Leu
180 185 190

Phe His Trp Gly Val Ile Asp Tyr Cys Gly Gly Tyr Val Ile His Val
195 200 205

Ser Ala Gly Ile Ala Gly Phe Thr Ala Ala Tyr Trp Val Gly Pro Arg
 210 215 220

Ala Gln
 225

<210> 1869
 <211> 176
 <212> PRT
 <213> Zea mays

<400> 1869
 Ser Leu Pro Val Leu Ala Gly Ala Ile Thr Met Leu Leu Thr Asp Arg
 1 5 10 15

Asn Phe Asn Thr Thr Phe Phe Asp Pro Ala Gly Gly Gly Asp Pro Ile
 20 25 30

Leu Tyr Gln His Leu Phe Trp Phe Phe Gly His Pro Glu Val Tyr Ile
 35 40 45

Leu Ile Leu Pro Gly Phe Gly Ile Ile Ser His Ile Val Ser Thr Phe
 50 55 60

Ser Arg Lys Pro Val Phe Gly Tyr Leu Gly Met Val Tyr Ala Met Ile
 65 70 75 80

Ser Ile Gly Val Leu Gly Phe Leu Val Trp Ala His His Met Phe Thr
 85 90 95

Val Gly Leu Asp Val Asp Thr Arg Ala Tyr Phe Thr Ala Ala Thr Met
 100 105 110

Ile Ile Ala Val Pro Thr Gly Ile Lys Ile Phe Ser Trp Ile Ala Thr
 115 120 125

Met Trp Gly Gly Ser Ile Gln Tyr Lys Thr Pro Met Leu Phe Ala Val
 130 135 140

Gly Phe Ile Phe Leu Phe Thr Ile Gly Gly Leu Thr Gly Ile Val Leu
 145 150 155 160

Ala Asn Ser Gly Leu Asp Ile Ala Leu His Asp Thr Tyr Tyr Val Val
 165 170 175

<210> 1870
 <211> 176
 <212> PRT
 <213> Zea mays

<400> 1870
 Glu Lys Tyr Pro Ala Leu Val Thr Gly Phe Phe Phe Phe Met Trp Tyr
 1 5 10 15

Phe Leu Asn Val Ile Phe Asn Ile Leu Asn Lys Lys Ile Tyr Asn Tyr
 20 25 30

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Phe Pro Tyr Pro Tyr Phe Val Ser Leu Ile His Leu Val Val Gly Val
35 40 45

Val Tyr Cys Leu Ile Ser Trp Ser Val Gly Leu Pro Lys Arg Ala Pro
50 55 60

Ile Asn Gly Thr Leu Leu Lys Leu Leu Phe Pro Val Ala Leu Cys His
65 70 75 80

Gly Ile Gly His Ile Thr Ser Asn Val Ser Phe Ala Ala Val Ala Val
85 90 95

Ser Phe Ala His Thr Ile Lys Ala Leu Glu Pro Phe Phe Ser Ala Ala
100 105 110

Ala Thr Gln Phe Ile Leu Gly Gln Gln Val Pro Phe Ser Leu Trp Leu
115 120 125

Ser Leu Ala Pro Val Val Ile Gly Val Ser Met Ala Ser Leu Thr Glu
130 135 140

Leu Ser Phe Asn Trp Thr Gly Phe Ile Asn Ala Met Ile Ser Asn Ile
145 150 155 160

Ser Phe Thr Tyr Arg Ser Ile Tyr Ser Lys Lys Ala Met Thr Asp Met
165 170 175

<210> 1871
<211> 226
<212> PRT
<213> Oryza sativa

<400> 1871
Cys Gly Gly Tyr Val Ile His Val Ser Ala Gly Ile Ala Gly Phe Thr
1 5 10 15

Ala Ala Tyr Trp Val Gly Pro Arg Ala Gln Lys Asp Arg Glu Arg Phe
20 25 30

Pro Pro Asn Asn Ile Leu Phe Thr Leu Thr Gly Ala Gly Leu Leu Trp
35 40 45

Met Gly Trp Ala Gly Phe Asn Gly Gly Gly Pro Tyr Ala Ala Asn Ser
50 55 60

Val Ala Ser Met Ala Val Leu Asn Thr Asn Ile Cys Thr Ala Met Ser
65 70 75 80

Leu Ile Val Trp Thr Cys Leu Asp Val Ile Phe Phe Lys Lys Pro Ser
85 90 95

Val Val Gly Ala Val Gln Gly Met Ile Thr Gly Leu Val Cys Ile Thr
100 105 110

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Pro Ala Ala Gly Val Val Gln Gly Trp Ala Ala Leu Val Met Gly Val
 115 120 125

Leu Ala Gly Ser Ile Pro Trp Tyr Thr Met Met Ile Leu His Lys Arg
 130 135 140

Ser Lys Ile Leu Gln Arg Val Asp Asp Thr Leu Gly Val Phe His Thr
 145 150 155 160

His Gly Val Ala Gly Leu Leu Gly Gly Leu Leu Thr Gly Leu Phe Ala
 165 170 175

Glu Pro Thr Leu Cys Asn Leu Phe Leu Pro Val Ala Asp Ser Arg Gly
 180 185 190

Ala Phe Tyr Gly Gly Ala Gly Gly Ala Gln Phe Gly Lys Gln Ile Ala
 195 200 205

Gly Gly Leu Phe Val Val Ala Trp Asn Val Ala Val Thr Ser Leu Ile
 210 215 220

Cys Leu
 225

<210> 1872

<211> 251

<212> PRT

<213> Oryza sativa

<400> 1872

Ile Gly Lys His Phe Phe Gly Leu Lys Gln Val Pro Gln Val Gly Phe
 1 5 10 15

Asp Tyr Ser Phe Phe Leu Phe Gln Trp Ala Phe Ala Ile Ala Ala Ala
 20 25 30

Gly Ile Thr Ser Gly Ser Ile Ala Glu Arg Thr Gln Phe Val Ala Tyr
 35 40 45

Leu Ile Tyr Ser Ala Phe Leu Thr Gly Phe Val Tyr Pro Val Val Ser
 50 55 60

His Trp Ile Trp Ser Ala Asp Gly Trp Ala Ser Ala Ser Arg Thr Ser
 65 70 75 80

Gly Ser Leu Leu Phe Gly Ser Gly Val Ile Asp Phe Ala Gly Ser Gly
 85 90 95

Val Val His Met Val Gly Gly Val Ala Gly Leu Trp Gly Ala Leu Ile
 100 105 110

Glu Gly Pro Arg Ile Gly Arg Phe Asp His Ala Gly Arg Ser Val Ala
 115 120 125

Leu Arg Gly His Ser Ala Ser Leu Val Val Leu Gly Ser Phe Leu Leu

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130 135 140

Trp Phe Gly Trp Tyr Gly Phe Asn Pro Gly Ser Phe Leu Thr Ile Leu
145 150 155 160

Lys Ser Tyr Gly Pro Pro Gly Ser Ile His Gly Gln Trp Ser Ala Val
165 170 175

Gly Arg Thr Ala Val Thr Thr Thr Leu Ala Gly Ser Thr Ala Ala Leu
180 185 190

Thr Thr Leu Phe Gly Lys Arg Leu Gln Thr Gly His Trp Asn Val Ile
195 200 205

Asp Val Cys Asn Gly Leu Leu Gly Gly Phe Ala Ala Ile Thr Ala Gly
210 215 220

Cys Ser Val Val Asp Pro Trp Ala Ala Ile Ile Cys Gly Phe Val Ser
225 230 235 240

Ala Trp Val Leu Ile Gly Leu Asn Ala Leu Ala
245 250

<210> 1873
<211> 76
<212> PRT
<213> Zea mays

<400> 1873
Gly Ile Leu Tyr Trp Val Ala Gln Leu Leu Gly Ala Ser Val Ala Cys
1 5 10 15

Phe Leu Leu Gln Tyr Val Thr His Gly Gln Ala Ile Pro Thr His Gly
20 25 30

Val Ser Gly Ile Ser Glu Ile Glu Gly Val Val Met Glu Ile Val Ile
35 40 45

Thr Phe Ala Leu Val Tyr Thr Val Tyr Ala Thr Ala Ala Asp Pro Lys
50 55 60

Lys Gly Ser Leu Gly Thr Ile Ala Pro Met Ala Ile
65 70 75

<210> 1874
<211> 151
<212> PRT
<213> Zea mays

<400> 1874
Met Ala Ser Asn Asn Leu Leu Val Asp Leu Lys Arg Cys Phe Ser Ala
1 5 10 15

Pro Ser Leu Arg Ser Tyr Leu Ala Glu Phe Ile Ser Thr Phe Leu Phe
20 25 30

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Val Phe Thr Ala Val Gly Ser Ala Ile Ser Ala Arg Met Leu Thr Thr
35 40 45

Pro Asp Val Thr Ser Ser Ala Gly Pro Leu Val Ala Thr Ala Val Ala
50 55 60

Gln Ala Phe Gly Leu Phe Ala Ala Val Leu Ile Ala Ala Asp Val Ser
65 70 75 80

Gly Gly His Val Asn Pro Ala Val Thr Phe Ala Tyr Ala Ile Gly Gly
85 90 95

Arg Ile Gly Val Pro Ser Ala Met Phe Tyr Trp Ala Ser Gln Leu Leu
100 105 110

Gly Ala Thr Phe Ala Cys Leu Ser Leu Asn Leu Phe Ser Ala Gly Glu
115 120 125

Glu Val Pro Thr Thr Arg Ile Ala Val Ala Met Thr Gly Phe Gly Gly
130 135 140

Ala Val Leu Glu Gly Val Leu
145 150

<210> 1875

<211> 251

<212> PRT

<213> Oryza sativa

<400> 1875

Ala Leu Asp Gln Gly Leu Leu Val Gly Arg Ala Ala Leu Pro Ala Thr
1 5 10 15

Val His Tyr Arg Ala Asp Gly Ser Val Glu Thr Ala Ala Val Glu Pro
20 25 30

Leu Tyr Pro Met Ala Thr Val Val Tyr Phe Gln Cys Val Phe Ala Ala
35 40 45

Ile Thr Leu Ile Leu Val Ala Gly Ser Leu Leu Gly Arg Met Ser Phe
50 55 60

Leu Ala Trp Met Ile Phe Val Pro Leu Trp Leu Thr Phe Ser Tyr Thr
65 70 75 80

Val Gly Ala Phe Ser Leu Trp Gly Gly Gly Phe Leu Phe His Trp Gly
85 90 95

Val Ile Asp Tyr Cys Gly Gly Tyr Val Ile His Val Ser Ala Gly Ile
100 105 110

Ala Gly Phe Thr Ala Ala Tyr Trp Val Gly Pro Arg Ala Gln Lys Asp
115 120 125

Arg Glu Arg Phe Pro Pro Asn Asn Ile Leu Phe Thr Leu Thr Gly Ala

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Met Asn Ile Lys Ala Trp Met Ala Phe Val Pro Leu Trp Ile Thr Phe
35 40 45

Ser Tyr Thr Val Cys Ala Phe Ser Leu Trp Gly Gly Gly Phe Leu Phe
50 55 60

Gln Trp Gly Val Ile Asp Tyr Ser Gly Gly Tyr Val Ile His Leu Ser
65 70 75 80

Ser Gly Ile Ala Gly Leu Thr Ala Ala Tyr Trp Val Gly Pro Arg Ser
85 90 95

Ala Ser Asp Arg Glu
100

<210> 1878

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1878

Tyr Gln Trp Ala Phe Ala Ile Ala Val Ala Gly Ile Thr Ser Gly Ser
1 5 10 15

Ile Ala Glu Arg Thr Gln Phe Thr Ala Tyr Leu Val Phe Ser Phe Phe
20 25 30

Leu Thr Gly Phe Val Tyr Pro Val Val Ala His Trp Leu Trp Ser Ser
35 40 45

Asn Gly Trp Leu Ser Pro Asn Ser Thr Tyr Leu Leu Phe Gly Ser Gly
50 55 60

Ala Ile Asp Phe Ala Gly Ser Gly Val Val His Leu Val Gly Gly Ile
65 70 75 80

Ala Gly Phe Trp Gly Ser Ile Val Glu Gly Pro Arg Val Gly Arg Phe
85 90 95

Asp Ala Phe Gly Asn Pro Val Lys Met Arg Gly His Asn Ala Thr Leu
100 105 110

Val Val Leu Gly Thr Leu Leu Leu Trp Phe Gly Trp Phe Gly Phe Asn
115 120 125

Pro Gly Ser Phe Asn Lys Ile Leu Val Ala Tyr Pro His Met Ala Asp
130 135 140

Gln Gly Asn Trp Thr Ser Val Gly Arg Thr Ala Val Thr Thr Thr Leu
145 150 155 160

Ala Gly Ser Thr Ala Gly Ile Val Thr Leu Phe Gly Arg Arg Leu Leu
165 170 175

Val Gly His Trp Asp Ala Met Asp Val Cys Asn Gly Val Leu Gly Gly

180

185

190

Phe Val Ala Ile Thr Ser Gly Cys Ser Val Val Glu Pro Trp Ala Ala
195 200 205

Ile Leu Cys Gly Phe Cys Ala Ala Trp Val Leu Ile Gly Leu Asn Ile
210 215 220

Leu Ala
225

<210> 1879
<211> 76
<212> PRT
<213> Zea mays

<400> 1879
Val Asp Thr Arg Ala Tyr Phe Thr Ala Ala Thr Met Ile Ile Ala Val
1 5 10 15

Pro Thr Gly Ile Lys Ile Phe Ser Trp Ile Ala Thr Met Trp Gly Gly
20 25 30

Ser Ile Gln Tyr Lys Thr Pro Met Leu Phe Ala Val Gly Phe Ile Phe
35 40 45

Leu Phe Thr Ile Gly Gly Leu Thr Gly Ile Val Leu Ala Asn Ser Gly
50 55 60

Leu Asp Ile Ala Leu His Asp Thr Tyr Tyr Val Val
65 70 75

<210> 1880
<211> 226
<212> PRT
<213> Oryza sativa

<400> 1880
Ala Phe Ala Ile Ala Ala Ala Gly Ile Thr Ser Gly Ser Ile Ala Glu
1 5 10 15

Arg Thr Gln Phe Val Ala Tyr Leu Ile Tyr Ser Ala Phe Leu Thr Gly
20 25 30

Phe Val Tyr Pro Val Val Ser His Trp Ile Trp Ser Ala Asp Gly Trp
35 40 45

Ala Ser Ala Ser Arg Thr Ser Gly Pro Leu Leu Phe Gly Ser Gly Val
50 55 60

Ile Asp Phe Ala Gly Ser Gly Val Val His Met Val Gly Gly Val Ala
65 70 75 80

Gly Leu Trp Gly Ala Leu Ile Glu Gly Pro Arg Ile Gly Arg Phe Asp
85 90 95

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His Ala Gly Arg Ser Val Ala Leu Lys Gly His Ser Ala Ser Leu Val
 100 105 110

Val Leu Gly Thr Phe Leu Leu Trp Phe Gly Trp Tyr Gly Phe Asn Pro
 115 120 125

Gly Ser Phe Thr Thr Ile Leu Lys Thr Tyr Gly Pro Ala Gly Gly Ile
 130 135 140

Asn Gly Gln Trp Ser Gly Val Gly Arg Thr Ala Val Thr Thr Thr Leu
 145 150 155 160

Ala Gly Ser Val Ala Ala Leu Thr Thr Leu Phe Gly Lys Arg Leu Gln
 165 170 175

Thr Gly His Trp Asn Val Val Asp Val Cys Asn Gly Leu Leu Gly Gly
 180 185 190

Phe Ala Ala Ile Thr Ala Gly Cys Ser Val Val Asp Pro Trp Ala Ala
 195 200 205

Ile Ile Cys Gly Phe Val Ser Ala Trp Val Leu Ile Gly Leu Asn Ala
 210 215 220

Leu Ala
 225

<210> 1881
 <211> 101
 <212> PRT
 <213> Zea mays

<400> 1881
 Gly Val Phe Tyr Trp Val Ala Gln Leu Leu Gly Ala Thr Val Ala Cys
 1 5 10 15

Leu Leu Leu Gly Phe Val Thr His Gly Lys Ala Ile Pro Thr His Ala
 20 25 30

Val Ala Gly Ile Ser Glu Leu Glu Gly Val Val Phe Glu Val Val Ile
 35 40 45

Thr Phe Ala Leu Val Tyr Thr Val Tyr Ala Thr Ala Ala Asp Pro Lys
 50 55 60

Lys Gly Ser Leu Gly Thr Ile Ala Pro Ile Ala Ile Gly Phe Ile Val
 65 70 75 80

Gly Ala Asn Ile Leu Ala Ala Gly Pro Phe Ser Gly Gly Ser Met Asn
 85 90 95

Pro Ala Arg Ser Phe
 100

<210> 1882

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 1882

Thr Gln Phe Val Ala Tyr Leu Ile Tyr Ser Ser Phe Leu Thr Gly Phe
1 5 10 15

Val Tyr Pro Val Val Ser His Trp Phe Trp Thr Pro Asp Gly Trp Ala
20 25 30

Ser Pro Thr Asn Ser Asn Leu Leu Phe Gly Ser Gly Val Ile Asp Phe
35 40 45

Ala Gly Ser Gly Val Val His Met Val Gly Gly Ile Ala Gly Phe Tyr
50 55 60

Gly Ala Leu Ile Glu Gly Pro Arg Ile Gly Arg Tyr Asp His Thr Gly
65 70 75 80

Arg Ser Val Ala Leu Arg Gly His Ser Ala Ser Leu Val Val Leu Gly
85 90 95

Thr Phe Leu Leu Trp Phe Gly Trp Tyr Gly Phe Asn Pro Gly Ser Phe
100 105 110

Asn Lys Ile Leu Val Thr Tyr Gly Ala Ser Gly Gly Tyr Tyr Gly Gln
115 120 125

Trp Ser Ala Val Gly Arg Thr Ala Val Thr Thr Thr Leu Ala Gly Cys
130 135 140

Thr Ala Ala Leu Thr Thr Leu Phe Gly Lys Arg Ile Leu Ser Gly His
145 150 155 160

Trp Asn Val Thr Asp Val Cys Asn Gly Leu Leu Gly Gly Phe Ala Ala
165 170 175

Ile Thr Ala Gly Cys Ser Val Val Glu Pro Trp Ala Ala Ile Ile Cys
180 185 190

Gly Phe Val Ala Ala Leu Val Leu Ile
195 200

<210> 1883

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1883

Met Ala Lys Val His Arg Leu Met Asn Ala Val Leu Arg Leu Ala Ala
1 5 10 15

Ala Ala Ala Ala Ala Thr Ala Ala Val Val Met Val Thr Ser Arg Glu
20 25 30

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Thr Thr Ser Phe Phe Gly Ile Gln Met Glu Ala Lys Tyr Ser Tyr Thr
35 40 45

Pro Ser Phe Ile Phe Phe Val Val Ala Tyr Ala Val Ala Ala Ala Tyr
50 55 60

Ser Leu Leu Val Leu Ala Val Pro Ala Gly Ser Ala Leu Ser Arg Leu
65 70 75 80

Ala Leu Thr Thr Asp Val Val Leu Gly Met Val Leu Ala Gly Ala Val
85 90 95

Ala Ser Ala Gly Ala Ile Ser Asp Ile Ala Lys Asn Gly Asn Ser His
100 105 110

Ala Gly Trp Leu Pro Val Cys Gly Gln Ile His Ala Tyr Cys Asn His
115 120 125

Val Met Ala Ala Leu Ile Ala Gly Phe Val Ala Leu Ala Val His Phe
130 135 140

Val Val Val Met Tyr Ser Leu
145 150

<210> 1884

<211> 226

<212> PRT

<213> Zea mays

<400> 1884

Gln Gly Gly Ser Ala Ala Ala Ala Ala Ala Ala Leu Phe Tyr Pro Asp
1 5 10 15

Ser Lys Ser Ile Ala Asp Ile Phe Pro Pro His Leu Gly Lys Lys Val
20 25 30

Ile Ser Glu Val Val Ala Thr Phe Leu Leu Val Phe Val Thr Cys Gly
35 40 45

Ala Ala Ser Ile Tyr Gly Glu Asp Asn Ala Arg Ile Ser Gln Leu Gly
50 55 60

Gln Ser Val Ala Gly Gly Leu Ile Val Thr Val Met Ile Tyr Ala Thr
65 70 75 80

Gly His Ile Ser Gly Ala His Met Asn Pro Ala Val Thr Leu Ser Phe
85 90 95

Ala Cys Phe Arg His Phe Pro Trp Ile Gln Val Pro Phe Tyr Trp Ala
100 105 110

Ala Gln Phe Thr Gly Ala Met Cys Ala Ala Phe Val Leu Lys Ala Val
115 120 125

Leu Gln Pro Ile Ala Val Ile Gly Thr Thr Thr Pro Ser Gly Pro His

[illegible]

<210> 1886
<211> 126
<212> PRT
<213> Oryza sativa

<400> 1886
Cys Gly Gly Tyr Val Ile His Val Ser Ala Gly Ile Ala Gly Phe Thr
1 5 10 15
Ala Ala Tyr Trp Val Gly Pro Arg Ala Gln Lys Asp Arg Glu Arg Phe
20 25 30
Pro Pro Asn Asn Ile Leu Phe Thr Leu Thr Gly Ala Gly Leu Leu Trp
35 40 45

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Met Gly Trp Ala Gly Phe Asn Gly Gly Gly Pro Tyr Ala Ala Asn Ser
50 55 60

Val Ala Ser Met Ala Val Leu Asn Thr Asn Ile Cys Thr Ala Met Ser
65 70 75 80

Leu Ile Val Trp Thr Cys Leu Asp Val Ile Phe Phe Lys Lys Pro Ser
85 90 95

Val Val Gly Ala Val Gln Gly Met Ile Thr Gly Leu Val Cys Ile Thr
100 105 110

Pro Ala Ala Gly Val Val Gln Gly Trp Ala Ala Leu Val Met
115 120 125

<210> 1887

<211> 101

<212> PRT

<213> Zea mays

<400> 1887

Ser Gly Ala His Met Asn Pro Ala Val Thr Leu Ala Phe Ala Val Phe
1 5 10 15

Arg His Phe Pro Trp Ile Gln Val Pro Phe Tyr Trp Ala Ala Gln Phe
20 25 30

Thr Gly Ser Ile Cys Ala Ser Phe Val Leu Lys Ala Val Leu His Pro
35 40 45

Ile Ala Val Leu Gly Thr Thr Thr Pro Thr Gly Pro His Trp His Ser
50 55 60

Leu Val Ile Glu Ile Ile Val Thr Phe Asn Met Met Phe Val Thr Leu
65 70 75 80

Ala Val Ala Thr Asp Thr Arg Ala Val Gly Glu Leu Ala Gly Leu Ala
85 90 95

Val Gly Ser Ala Val
100

<210> 1888

<211> 226

<212> PRT

<213> Zea mays

<400> 1888

Met Pro Val Ser Arg Ile Ala Val Gly Ala Pro Gly Glu Leu Ser His
1 5 10 15

Pro Asp Thr Ala Lys Ala Ala Val Ala Glu Phe Ile Ser Thr Leu Ile
20 25 30

Phe Val Phe Ala Gly Ser Gly Ser Gly Met Ala Phe Ser Lys Leu Thr
35 40 45

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Asp Gly Gly Ala Ala Thr Pro Ala Gly Leu Ile Ala Ala Ser Leu Ala
 50 55 60
 His Ala Leu Ala Leu Phe Val Ala Val Ser Val Gly Ala Asn Ile Ser
 65 70 75 80
 Gly Gly His Val Asn Pro Ala Val Thr Phe Gly Ala Phe Val Gly Gly
 85 90 95
 Asn Ile Ser Leu Leu Lys Ala Leu Val Tyr Trp Val Ala Gln Leu Leu
 100 105 110
 Gly Ser Val Val Ala Cys Leu Leu Leu Lys Ile Ala Thr Gly Gly Ala
 115 120 125
 Ala Leu Gly Ala Phe Ser Leu Ser Ala Gly Val Gly Ala Met Asn Ala
 130 135 140
 Val Val Leu Glu Met Val Met Thr Phe Gly Leu Val Tyr Thr Val Tyr
 145 150 155 160
 Ala Thr Ala Val Asp Pro Lys Lys Gly Asp Leu Gly Val Ile Ala Pro
 165 170 175
 Ile Ala Ile Gly Phe Ile Val Gly Ala Asn Ile Leu Ala Gly Gly Ala
 180 185 190
 Phe Asp Gly Ala Ser Met Asn Pro Ala Val Ser Phe Gly Pro Ala Val
 195 200 205
 Val Thr Gly Val Trp Glu Asn His Trp Val Tyr Trp Val Gly Pro Leu
 210 215 220
 Ala Gly
 225
 <210> 1889
 <211> 76
 <212> PRT
 <213> Zea mays
 <400> 1889
 Ser Glu Leu Ser Ser Trp Ser Phe Tyr Arg Ala Gly Ile Ala Glu Phe
 1 5 10 15
 Val Ala Thr Phe Leu Phe Leu Tyr Val Thr Val Leu Thr Val Met Gly
 20 25 30
 Val Ser Lys Ser Pro Ser Lys Cys Gly Thr Val Gly Ile Gln Gly Ile
 35 40 45
 Ala Trp Ala Phe Gly Gly Met Ile Phe Ala Leu Val Tyr Cys Thr Ala
 50 55 60

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Gly Val Ser Gly Gly His Ile Asn Pro Ala Val Thr
65 70 75

<210> 1890

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1890

Leu Lys Pro Leu Tyr Pro Val Ala Thr Met Val Tyr Phe Gln Cys Met
1 5 10 15

Phe Ala Ser Ile Thr Ile Ile Ile Leu Ala Gly Ser Leu Leu Gly Arg
20 25 30

Met Asn Ile Lys Ala Trp Met Ala Phe Val Pro Leu Trp Ile Thr Phe
35 40 45

Ser Tyr Thr Val Cys Ala Phe Ser Leu Trp Gly Gly Gly Phe Leu Phe
50 55 60

Gln Trp Gly Val Ile Asp Tyr Ser Gly Gly Tyr Val Ile His Leu Ser
65 70 75 80

Ser Gly Ile Ala Gly Leu Thr Ala Ala Tyr Trp Val Gly Pro Arg Ser
85 90 95

Ala Ser Asp Arg Glu Arg Phe Pro Pro Asn Asn Ile Leu Leu Val Leu
100 105 110

Ala Gly Ala Gly Leu Leu Trp Leu Gly Trp Thr Gly Phe Asn Gly Gly
115 120 125

Asp Pro Tyr Ser Ala Asn Ile Asp Ser Ser Met Ala Val Leu Asn Thr
130 135 140

His Ile Cys Ala Ser Thr Ser Leu Leu Val Trp Thr Ile Leu Asp Val
145 150 155 160

Phe Phe Phe Gly Lys Pro Ser Val Ile Gly Ala Val Gln Gly Met Ile
165 170 175

Thr Gly Leu Val Cys Ile Thr Pro Gly Ala Gly Leu Val Gln Gly Trp
180 185 190

Ala Ala Ile Val Met Gly Ile Leu Ser
195 200

<210> 1891

<211> 126

<212> PRT

<213> Zea mays

<400> 1891

Leu Lys Ala Leu Val Tyr Trp Val Ala Gln Leu Leu Gly Ser Val Val
1 5 10 15

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Ala Cys Leu Leu Leu Lys Ile Ala Thr Gly Gly Ala Ala Leu Gly Ala
20 25 30

Phe Ser Leu Ser Ala Gly Val Gly Ala Met Asn Ala Val Val Leu Glu
35 40 45

Met Val Met Thr Phe Gly Leu Val Tyr Thr Val Tyr Ala Thr Ala Val
50 55 60

Asp Pro Lys Lys Gly Asp Leu Gly Val Ile Ala Pro Ile Ala Ile Gly
65 70 75 80

Phe Ile Val Gly Ala Asn Ile Leu Ala Gly Gly Ala Phe Asp Gly Ala
85 90 95

Ser Met Asn Pro Ala Val Ser Phe Gly Pro Ala Val Val Thr Gly Val
100 105 110

Trp Glu Asn His Trp Val Tyr Trp Val Gly Pro Leu Ala Gly
115 120 125

<210> 1892

<211> 226

<212> PRT

<213> Zea mays

<400> 1892

Met Val Lys Leu Ala Phe Gly Ser Val Gly Asp Ser Phe Ser Val Thr
1 5 10 15

Ser Ile Lys Ala Tyr Val Ala Glu Phe Ile Ala Thr Leu Leu Phe Val
20 25 30

Phe Ala Gly Val Gly Ser Ala Ile Ala Phe Gly Gln Leu Thr Asn Gly
35 40 45

Gly Ala Leu Asp Pro Ala Gly Leu Val Ala Ile Ala Val Ala His Ala
50 55 60

Leu Ala Leu Phe Val Gly Val Ser Val Ala Ala Asn Thr Ser Gly Gly
65 70 75 80

His Leu Asn Pro Ala Val Thr Phe Gly Leu Ala Val Gly Gly His Ile
85 90 95

Thr Val Leu Thr Gly Leu Phe Tyr Trp Val Ala Gln Leu Leu Gly Ala
100 105 110

Ser Val Ala Cys Leu Leu Leu Arg Phe Val Thr His Gly Lys Ala Ile
115 120 125

Pro Thr His Gly Val Ser Gly Gly Thr Thr Glu Leu Glu Gly Val Val
130 135 140

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Phe Glu Ile Val Ile Thr Phe Ala Leu Val Tyr Thr Val Tyr Ala Thr
145 150 155 160

Ala Ala Asp Pro Lys Lys Gly Ser Leu Gly Thr Ile Ala Pro Ile Ala
165 170 175

Ile Gly Phe Ile Val Gly Ala Asn Ile Leu Ala Ala Gly Pro Phe Ser
180 185 190

Gly Gly Ser Met Asn Pro Ala Arg Ser Phe Gly Pro Ala Val Ala Ala
195 200 205

Ala Asp Phe Ala Gly Asn Trp Val Tyr Trp Val Gly Pro Leu Ile Gly
210 215 220

Gly Gly
225

<210> 1893
<211> 226
<212> PRT
<213> Zea mays

<400> 1893
Met Pro Ile Asn Arg Ile Ala Leu Gly Ser His Gln Glu Val Tyr His
1 5 10 15

Pro Gly Ala Leu Lys Ala Ala Phe Ala Glu Phe Ile Ser Thr Leu Ile
20 25 30

Phe Val Phe Ala Gly Gln Gly Ser Gly Met Ala Phe Ser Lys Leu Thr
35 40 45

Gly Gly Gly Pro Thr Thr Pro Ala Gly Leu Ile Ala Ala Ala Val Ala
50 55 60

His Ala Phe Ala Leu Phe Val Ala Val Ser Val Gly Ala Asn Ile Ser
65 70 75 80

Gly Gly His Val Asn Pro Ala Val Thr Phe Gly Ala Phe Val Gly Gly
85 90 95

Asn Ile Thr Leu Phe Arg Gly Leu Leu Tyr Trp Val Ala Gln Leu Leu
100 105 110

Gly Ser Thr Val Ala Cys Phe Leu Leu Arg Phe Ser Thr Gly Gly Gln
115 120 125

Ala Thr Gly Thr Phe Gly Leu Thr Gly Val Ser Val Trp Glu Ala Leu
130 135 140

Val Leu Glu Ile Val Met Thr Phe Gly Leu Val Tyr Thr Val Tyr Ala
145 150 155 160

Thr Ala Val Asp Pro Lys Lys Gly Ser Leu Gly Thr Ile Ala Pro Ile
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165

170

175

Ala Ile Gly Phe Ile Val Gly Ala Asn Ile Leu Val Gly Gly Ala Phe
 180 185 190

Asp Gly Ala Ser Met Asn Pro Ala Val Ser Phe Gly Pro Ala Leu Val
 195 200 205

Ser Trp Glu Trp Gly Tyr Gln Trp Val Tyr Trp Val Gly Pro Leu Ile
 210 215 220

Gly Gly
 225

<210> 1894
 <211> 226
 <212> PRT
 <213> Zea mays

<400> 1894
 Met Val Lys Leu Ala Phe Gly Ser Phe Arg Asp Ser Leu Ser Ala Ala
 1 5 10 15

Ser Leu Lys Ala Tyr Val Ala Glu Phe Ile Ala Thr Leu Leu Phe Val
 20 25 30

Phe Ala Gly Val Gly Ser Ala Ile Ala Tyr Ser Gln Leu Thr Lys Gly
 35 40 45

Gly Ala Leu Asp Pro Ala Gly Leu Val Ala Ile Ala Ile Ala His Ala
 50 55 60

Phe Ala Leu Phe Val Gly Val Ser Met Ala Ala Asn Ile Ser Gly Gly
 65 70 75 80

His Leu Asn Pro Ala Val Thr Phe Gly Leu Ala Val Gly Gly His Ile
 85 90 95

Thr Ile Leu Thr Gly Ile Leu Tyr Trp Val Ala Gln Leu Leu Gly Ala
 100 105 110

Ser Val Ala Cys Phe Leu Leu Gln Tyr Val Thr His Gly Gln Ala Ile
 115 120 125

Pro Thr His Gly Val Ser Gly Ile Ser Glu Ile Glu Gly Val Val Met
 130 135 140

Glu Ile Val Ile Thr Phe Ala Leu Val Tyr Thr Val Tyr Ala Thr Ala
 145 150 155 160

Ala Asp Pro Lys Lys Gly Ser Leu Gly Thr Ile Ala Pro Met Ala Ile
 165 170 175

Gly Phe Ile Val Gly Ala Asn Ile Leu Ala Ala Gly Pro Phe Ser Gly
 180 185 190

Gly Ser Met Asn Pro Ala Arg Ser Phe Gly Pro Ala Val Ala Ala Gly
195 200 205

Asn Phe Ala Gly Asn Trp Val Tyr Trp Val Gly Pro Leu Val Gly Gly
210 215 220

Gly Leu
225

<210> 1895
<211> 226
<212> PRT
<213> Zea mays

<400> 1895
Met Val Lys Leu Ala Phe Gly Ser Val Gly Asp Ser Phe Ser Ala Thr
1 5 10 15

Ser Ile Lys Ala Tyr Val Ala Glu Phe Ile Ala Thr Leu Leu Phe Val
20 25 30

Phe Ala Gly Val Gly Ser Ala Ile Ala Tyr Gly Gln Leu Thr Asn Gly
35 40 45

Gly Ala Leu Asp Pro Ala Gly Leu Val Ala Ile Ala Ile Ala His Ala
50 55 60

Leu Ala Leu Phe Val Gly Val Ser Val Ala Ala Asn Ile Ser Gly Gly
65 70 75 80

His Leu Asn Pro Ala Val Thr Phe Gly Leu Ala Val Gly Gly His Ile
85 90 95

Thr Ile Leu Thr Gly Val Phe Tyr Trp Val Ala Gln Leu Leu Gly Ala
100 105 110

Thr Val Ala Cys Leu Leu Leu Gly Phe Val Thr His Gly Lys Ala Ile
115 120 125

Pro Thr His Ala Val Ala Gly Ile Ser Glu Leu Glu Gly Val Val Phe
130 135 140

Glu Val Val Ile Thr Phe Ala Leu Val Tyr Thr Val Tyr Ala Thr Ala
145 150 155 160

Ala Asp Pro Lys Lys Gly Ser Leu Gly Thr Ile Ala Pro Ile Ala Ile
165 170 175

Gly Phe Ile Val Gly Ala Asn Ile Leu Ala Ala Gly Pro Phe Ser Gly
180 185 190

Gly Ser Met Asn Pro Ala Arg Ser Phe Gly Pro Ala Val Ala Ala Gly
195 200 205

Asp Phe Ala Gly Asn Trp Val Tyr Trp Val Gly Pro Leu Val Gly Gly
 210 215 220

Gly Leu
 225

<210> 1896
 <211> 126
 <212> PRT
 <213> Zea mays

<400> 1896
 Met Pro Ile Asn Arg Ile Ala Leu Gly Ser His Gln Glu Val Tyr His
 1 5 10 15

Pro Gly Ala Leu Lys Ala Ala Phe Ala Glu Phe Ile Ser Thr Leu Ile
 20 25 30

Phe Val Phe Ala Gly Gln Gly Ser Gly Met Ala Phe Ser Lys Leu Thr
 35 40 45

Gly Gly Gly Pro Thr Thr Pro Ala Gly Leu Ile Ala Ala Ala Val Ala
 50 55 60

His Ala Phe Ala Leu Phe Val Ala Val Ser Val Gly Ala Asn Ile Ser
 65 70 75 80

Gly Gly His Val Asn Pro Ala Val Thr Phe Gly Ala Phe Val Gly Gly
 85 90 95

Asn Ile Thr Leu Phe Arg Gly Leu Leu Tyr Trp Val Ala Gln Leu Leu
 100 105 110

Gly Ser Thr Val Ala Cys Phe Leu Leu Arg Phe Ser Thr Gly
 115 120 125

<210> 1897
 <211> 151
 <212> PRT
 <213> Zea mays

<400> 1897
 Ala Thr Gly His Ile Ser Gly Ala His Met Asn Pro Ala Val Thr Leu
 1 5 10 15

Ser Phe Ala Cys Phe Arg His Phe Pro Trp Ile Gln Val Pro Phe Tyr
 20 25 30

Trp Ala Ala Gln Phe Thr Gly Ala Met Cys Ala Ala Phe Val Leu Lys
 35 40 45

Ala Val Leu His Pro Ile Ala Val Ile Gly Thr Thr Thr Pro Ser Gly
 50 55 60

Pro His Trp His Ala Leu Leu Ile Glu Ile Val Val Thr Phe Asn Met
 65 70 75 80

Met Phe Val Thr Cys Ala Val Ala Thr Asp Ser Arg Ala Val Gly Glu
85 90 95

Leu Ala Gly Leu Ala Val Gly Ser Ala Val Cys Ile Thr Ser Ile Phe
100 105 110

Ala Gly Pro Val Ser Gly Gly Ser Met Asn Pro Ala Arg Thr Leu Ala
115 120 125

Pro Ala Val Ala Ser Asn Val Phe Thr Gly Leu Trp Ile Tyr Phe Leu
130 135 140

Gly Pro Val Ile Gly Thr Leu
145 150

<210> 1898
<211> 76
<212> PRT
<213> Zea mays

<400> 1898
Ser Phe Tyr Arg Ala Gly Ile Ala Glu Phe Val Ala Thr Phe Leu Phe
1 5 10 15

Leu Tyr Ile Ser Ile Leu Thr Val Met Gly Val Ser Lys Ser Ser Ser
20 25 30

Lys Cys Ala Thr Val Gly Ile Gln Gly Ile Ala Trp Ser Phe Gly Gly
35 40 45

Met Ile Phe Ala Leu Val Tyr Cys Thr Ala Gly Ile Ser Gly Gly His
50 55 60

Ile Asn Pro Ala Val Thr Phe Gly Leu Phe Leu Ala
65 70 75

<210> 1899
<211> 126
<212> PRT
<213> Zea mays

<400> 1899
His Phe Pro Trp Ile Gln Val Pro Phe Tyr Trp Ala Ala Gln Phe Thr
1 5 10 15

Gly Ala Met Cys Ala Ala Phe Val Leu Lys Ala Val Leu Gln Pro Ile
20 25 30

Ala Val Ile Gly Thr Thr Thr Pro Ser Gly Pro His Trp His Ala Leu
35 40 45

Ala Ile Glu Ile Val Val Thr Phe Asn Met Met Phe Val Thr Cys Ala
50 55 60

Val Ala Thr Asp Ser Arg Ala Val Gly Glu Leu Ala Gly Leu Ala Val
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65 70 75 80

Gly Ser Ala Val Cys Ile Thr Ser Ile Phe Ala Gly Pro Val Ser Gly
85 90 95

Gly Ser Met Asn Pro Ala Arg Thr Leu Ala Pro Ala Val Ala Ser Asn
100 105 110

Val Phe Thr Gly Leu Trp Ile Tyr Phe Leu Gly Pro Val Val
115 120 125

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Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg Gly Ser Gln Gln
65 70 75 80

Tyr Arg Ala Leu Thr Val Pro Glu Leu Thr Gln Gln Met Trp Asp Ala
85 90 95

Lys Asn Met Met Cys
100

<210> 1902
<211> 101
<212> PRT
<213> Zea mays

<400> 1902
Val Leu Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe Arg Thr Leu Lys
1 5 10 15

Leu Thr Thr Pro Ser Phe Gly Asp Leu Asn His Leu Ile Ser Ala Thr
20 25 30

Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn Ser
35 40 45

Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe Pro Arg Leu His
50 55 60

Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg Gly Ser Gln Gln
65 70 75 80

Tyr Arg Ala Leu Thr Val Pro Glu Leu Thr Gln Gln Met Trp Asp Ala
85 90 95

Lys Asn Met Met Cys
100

<210> 1903
<211> 101
<212> PRT
<213> Zea mays

<400> 1903
Val Leu Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe Arg Thr Leu Lys
1 5 10 15

Leu Thr Thr Pro Ser Phe Gly Asp Leu Asn His Leu Ile Ser Ala Thr
20 25 30

Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn Ser
35 40 45

Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe Pro Arg Leu His
50 55 60

Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg Gly Ser Gln Gln
65 70 75 80

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Tyr Arg Ala Leu Thr Val Pro Glu Leu Thr Gln Gln Met Trp Asp Ala
85 90 95

Lys Asn Met Met Cys
100

<210> 1904
<211> 101
<212> PRT
<213> Zea mays

<400> 1904
Val Leu Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe Arg Thr Leu Lys
1 5 10 15

Leu Thr Thr Pro Ser Phe Gly Asp Leu Asn His Leu Ile Ser Ala Thr
20 25 30

Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn Ser
35 40 45

Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe Pro Arg Leu His
50 55 60

Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg Gly Ser Gln Gln
65 70 75 80

Tyr Arg Ala Leu Thr Val Pro Glu Leu Thr Gln Gln Met Trp Asp Ala
85 90 95

Lys Asn Met Met Cys
100

<210> 1905
<211> 101
<212> PRT
<213> Zea mays

<400> 1905
Val Leu Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe Arg Thr Leu Lys
1 5 10 15

Leu Thr Thr Pro Ser Phe Gly Asp Leu Asn His Leu Ile Ser Ala Thr
20 25 30

Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn Ser
35 40 45

Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe Pro Arg Leu His
50 55 60

Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg Gly Ser Gln Gln
65 70 75 80

Tyr Arg Ser Leu Thr Val Pro Glu Leu Thr Gln Gln Met Trp Asp Ser
85 90 95

Lys Asn Met Met Cys
100

<210> 1906
<211> 101
<212> PRT
<213> Solanum lycopersicum

<400> 1906
Pro Trp Leu Asp Gly Ser Leu Pro Gly Asp Phe Gly Phe Asp Pro Leu
1 5 10 15

Gly Leu Ala Ser Asp Pro Glu Ser Leu Arg Trp Asn Gln Gln Ala Glu
20 25 30

Leu Val His Cys Arg Trp Ala Met Leu Gly Ala Ala Gly Ile Phe Ile
35 40 45

Pro Glu Leu Leu Thr Lys Ile Gly Ile Leu Asn Thr Pro Ser Trp Tyr
50 55 60

Thr Ala Gly Glu Gln Glu Tyr Phe Thr Asp Thr Thr Leu Phe Ile
65 70 75 80

Val Glu Leu Val Leu Ile Gly Trp Ala Glu Gly Arg Arg Trp Ala Asp
85 90 95

Ile Ile Lys Pro Gly
100

<210> 1907
<211> 101
<212> PRT
<213> Solanum lycopersicum

<400> 1907
Pro Lys Lys Ser Trp Ile Pro Ala Val Lys Ser Gly Gly Asn Leu Val
1 5 10 15

Asp Pro Glu Trp Leu Asp Gly Ser Leu Pro Gly Asp Phe Gly Phe Asp
20 25 30

Pro Leu Gly Leu Gly Lys Asp Pro Ala Phe Leu Lys Trp Tyr Arg Glu
35 40 45

Ala Glu Leu Ile His Gly Arg Trp Ala Met Ala Ala Val Leu Gly Ile
50 55 60

Phe Val Gly Gln Ala Trp Ser Gly Ile Pro Trp Phe Glu Ala Gly Ala
65 70 75 80

Asp Pro Gly Ala Ile Ala Pro Phe Ser Phe Gly Ser Leu Leu Gly Thr
85 90 95

Gln Leu Leu Leu Met

100

<210> 1908

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1908

Leu Ile His Lys Glu Glu Phe Gln Leu Ala Leu Phe Arg Asn Ser Asn
 1 5 10 15

Lys Lys Asn Leu Phe Ala Asn Arg Ile Phe Asp Leu Phe Asp Leu Lys
 20 25 30

Arg Asn Gly Val Ile Asp Phe Gly Glu Phe Val Arg Ser Leu Ser Ile
 35 40 45

Phe His Pro Glu Thr Pro Leu Gly Asp Lys Ile Ala Phe Ala Phe Arg
 50 55 60

Leu Tyr Asp Leu Arg Gly Thr Gly Cys Ile Glu Arg Glu Glu Leu His
 65 70 75 80

Glu Met Val Leu Ala Leu Leu Asn Glu Ser Asp Leu Phe Leu Ser Glu
 85 90 95

Glu Ala Val Glu Gln Ile Val Asp Gln Thr Phe Lys Gln Ala Asp Leu
 100 105 110

Asn Asp Asp Gly Lys Ile Asp Pro Asp Glu Trp Lys Thr Phe Ala Ser
 115 120 125

Lys Asn Pro Ala Leu Leu Lys Asn Met Thr Leu Pro Tyr Leu Lys Asp
 130 135 140

Ile Thr Met Val Phe Pro Ser
 145 150

<210> 1909

<211> 76

<212> PRT

<213> Zea mays

<400> 1909

Asp Leu Met Ile Lys Ala Lys Met Leu Glu Ala Leu Gln Asp Ile Glu
 1 5 10 15

Ile Ala Ser Lys Ile Val Gly Phe Asp Ser Asp Ser Asp Glu Ser Leu
 20 25 30

Asp Asp Lys Tyr Met Lys Leu His Cys Asp Ile Thr Pro Leu Ala His
 35 40 45

Asp Ser Glu Asp Tyr Lys Leu Ile Glu Gln Tyr Leu Leu Asn Thr His
 50 55 60

Ala Pro Thr His Lys Asp Trp Ser Leu Glu Leu Glu
65 70 75

<210> 1910

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1910

Val Thr Lys Asp Met Glu Leu Ala Asn Leu Lys Glu Tyr Leu Gln Phe
1 5 10 15

His Glu Gly Gly Leu Ser Lys Thr Glu Leu Glu Ser Phe Gly Ser Leu
20 25 30

Met Ser Gln Asn Glu Leu Glu Ser Met Asp Phe Arg Lys Cys Met Thr
35 40 45

Leu Ser Asp Val Phe Met Glu His Gly Lys Met Gly Glu Phe Leu Asp
50 55 60

Gly Leu Arg Ser Leu Ala Lys Asp Glu Phe Lys Lys Leu Lys Lys Ser
65 70 75 80

Ile Asp Glu Leu Arg Gly Ser Asn Ser Val Ser Asn Lys Ile Ser Arg
85 90 95

Ser Glu Met Ala Lys Leu Glu Gly Ile Leu Gln Glu Lys Glu Ser Gly
100 105 110

Ile Trp Val Gln Leu Asp Lys Thr Leu Asp Asn Ile Arg Met
115 120 125

<210> 1911

<211> 76

<212> PRT

<213> Zea mays

<400> 1911

Glu Leu Lys Glu Met Leu Leu Lys Lys Tyr Ser Gly Cys Leu Ser Arg
1 5 10 15

Leu Arg Ser Glu Phe Leu Lys Lys Arg Lys Lys Gly Lys Leu Pro Lys
20 25 30

Asp Ala Arg Thr Val Leu Leu Glu Trp Trp Asn Thr His Tyr Arg Trp
35 40 45

Pro Tyr Pro Thr Glu Glu Asp Lys Val Arg Leu Ala Ala Met Thr Gly
50 55 60

Leu Asp Pro Lys Gln Ile Asn Asn Trp Phe Ile Asn
65 70 75

<210> 1912

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1912

Met Leu Gln Cys Leu Glu Gly Val Lys Gln Leu Cys Gly Val Leu Leu
1 5 10 15Lys Cys Cys Asp Leu Asp Leu Lys Gln Pro Lys Gly Leu Glu Asp Pro
20 25 30Glu Ile Leu Ala Arg Glu Thr Val Phe Ser Val Ser Glu Val Glu Ala
35 40 45Leu Tyr Glu Leu Phe Lys Lys Ile Ser Ser Ala Val Ile Asp Asp Gly
50 55 60Leu Ile Asn Lys Glu Glu Phe Gln Leu Ala Leu Phe Lys Thr Asn Lys
65 70 75 80Lys Glu Ser Leu Phe Ala Asp Arg Val Phe Asp Leu Phe Asp Thr Lys
85 90 95His Asn Gly Ile Leu Gly Phe Glu Glu Phe Ala Arg Ala Leu Ser Val
100 105 110Phe His Pro Asn Ala Pro Leu Asp Glu Lys Ile Asp Phe Ser Phe Gln
115 120 125Leu Tyr Asp Leu Lys Gln Gln Gly Phe Ile Glu Arg Gln Glu Val Lys
130 135 140Gln Met Val Val Ala Thr Leu Ala Glu Ser Gly Met Asn Leu Ser Asp
145 150 155 160Glu Val Ile Glu Ser Ile Ile Asp Lys Thr Phe Glu Glu Ala Asp Thr
165 170 175Lys His Asp Gly Lys Ile Asp Lys Glu Glu Trp Arg Asn Leu Val Leu
180 185 190Arg His Pro Ser Leu Leu Lys Asn Met
195 200

<210> 1913

<211> 251

<212> PRT

<213> Oryza sativa

<400> 1913

Cys Glu Gly Asn Thr Glu Asn Phe Gly Ala Glu Leu Leu Glu Thr Leu
1 5 10 15Leu Lys Met Ala Pro Thr Lys Glu Glu Glu Ile Lys Leu Arg Glu Phe
20 25 30Lys Glu Glu Thr Ser Pro Ile Lys Leu Gly Pro Ala Glu Lys Phe Leu
35 40 45

Lys Ala Val Leu Asp Ile Pro Phe Ala Phe Lys Arg Val Asp Ala Met
50 55 60

Leu Tyr Ile Ala Asn Phe Glu Ser Glu Val Asn Tyr Leu Lys Lys Ser
65 70 75 80

Phe Glu Thr Leu Glu Thr Ala Cys Asp Glu Leu Arg Asn Ser Arg Leu
85 90 95

Phe Leu Lys Leu Leu Glu Ala Val Leu Lys Thr Gly Asn Arg Met Asn
100 105 110

Val Gly Thr Asn Arg Gly Asp Ala His Ala Phe Lys Leu Asp Thr Leu
115 120 125

Leu Lys Leu Val Asp Val Lys Gly Thr Asp Gly Lys Thr Thr Leu Leu
130 135 140

His Phe Val Val Gln Glu Ile Ile Arg Thr Glu Gly Ser His Leu Ser
145 150 155 160

Ala Ser Asn Gln Ser Thr Pro Arg Thr Gln Ala Asn Pro Leu Arg Asp
165 170 175

Glu Leu Glu Cys Lys Lys Leu Gly Leu Gln Val Val Ala Gly Leu Gly
180 185 190

Asn Glu Leu Ser Asn Val Lys Lys Ala Ala Ala Met Asp Ser Asp Val
195 200 205

Leu Ser Ser Tyr Val Ser Lys Leu Ala Gly Gly Ile Glu Lys Ile Thr
210 215 220

Glu Val Leu Arg Leu Asn Glu Glu Val Lys Ser Arg Glu Asp Ala Trp
225 230 235 240

Arg Phe His Asp Ser Met Gln Lys Phe Leu Lys
245 250

<210> 1914
<211> 176
<212> PRT
<213> Zea mays

<400> 1914
Ser Glu Met Lys Ser Ser Leu Ala Pro Gln Leu Leu Glu Leu Met Lys
1 5 10 15

Met Leu Phe Asn Val Glu Thr Tyr Arg Ala Ala Met Met Glu Phe Glu
20 25 30

Ile Asn Met Ser Glu Met Pro Leu Gly Lys Leu Ser Lys Glu Asn Ile
35 40 45

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Glu Lys Gly Phe Glu Ala Leu Thr Glu Ile Gln Asn Leu Leu Lys Asp
50 55 60

Thr Ala Asp Gln Ala Leu Ala Val Arg Glu Ser Leu Ile Val Ala Ala
65 70 75 80

Ser Asn Arg Phe Phe Thr Leu Ile Pro Ser Ile His Pro His Ile Ile
85 90 95

Arg Asp Glu Asp Asp Leu Met Ile Lys Ala Lys Met Leu Glu Ala Leu
100 105 110

Gln Asp Ile Glu Ile Ala Ser Lys Ile Val Gly Phe Asp Ser Asp Ser
115 120 125

Asp Glu Ser Leu Asp Asp Lys Tyr Met Lys Leu His Cys Asp Ile Thr
130 135 140

Pro Leu Ala His Asp Ser Glu Asp Tyr Lys Leu Ile Glu Gln Tyr Leu
145 150 155 160

Leu Asn Thr His Ala Pro Thr His Lys Asp Trp Ser Leu Glu Leu Glu
165 170 175

<210> 1915
<211> 151
<212> PRT
<213> Oryza sativa

<400> 1915
Thr Ser Glu Glu Asn Gln Gly Ser Leu Ser Leu Pro Asn Leu Asn Ala
1 5 10 15

Phe Asp Ile Ile Ser Leu Ser Thr Gly Phe Asn Leu Ser Gly Phe Phe
20 25 30

Glu Asp Thr His Gly His Gln Glu Glu Arg Phe Thr Thr Arg Gln Pro
35 40 45

Val Thr Thr Val Leu Gly Lys Leu Lys Glu Leu Ala Lys Arg Leu Lys
50 55 60

Leu Lys Val Lys Lys Lys Asp Asn Gly Val Leu Arg Leu Ala Ala Pro
65 70 75 80

Lys Glu Gly Lys Lys Gly Phe Leu Glu Leu Asp Ala Glu Ile Phe Glu
85 90 95

Val Thr Pro Ser Phe Leu Leu Val Glu Leu Lys Lys Thr Asn Gly Asp
100 105 110

Thr Met Glu Tyr Arg Lys Leu Val Lys Glu Asp Ile Arg Pro Ala Leu
115 120 125

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Lys Asp Ile Val Trp Val Trp Gln Gly Asp Glu His Leu Asn Ser Gln
 130 135 140

Ser Ile Leu Gln Gly Glu Gln
 145 150

<210> 1916
 <211> 201
 <212> PRT
 <213> Zea mays

<400> 1916
 Ser Glu Val Leu Ala Ala Tyr Thr Asn Asp Val Val Ser Arg Ser Val
 1 5 10 15

Leu Gly Ser Thr His Arg Lys Lys Gly Arg Asn Thr Leu Phe Arg Glu
 20 25 30

Met Thr Met Thr Asn Val Asp Leu Leu Val Gly Phe Asn Leu Glu Tyr
 35 40 45

Tyr Ile Pro Arg Trp Pro Leu Thr Asp Leu Leu Phe Arg Leu Val Cys
 50 55 60

Trp Lys Val Thr Arg His Leu Lys Arg Trp Asp Ala Leu Leu Glu Glu
 65 70 75 80

Val Ile His Glu His Val Glu Met Arg Lys Leu Ser Gly Asp Lys Glu
 85 90 95

Lys Glu Ser Asp Asp Phe Ile Asp Ile Phe Leu Ser Arg Tyr Glu Glu
 100 105 110

Tyr Gly Phe Thr Met Asp Asn Val Lys Ser Leu Leu Met Asn Val Phe
 115 120 125

Glu Ala Ala Ile Glu Thr Ser Tyr Leu Val Leu Glu Ser Ala Met Ala
 130 135 140

Glu Leu Met Asn His Arg Arg Val Met Lys Lys Leu Gln Ala Glu Val
 145 150 155 160

Arg Ala Tyr Gly Ala Glu Lys Lys Leu Asp Met Ile Arg Glu Asp Asp
 165 170 175

Leu Ser Ser Leu Pro Tyr Leu Lys Ala Ser Met Lys Glu Ala Leu Arg
 180 185 190

Leu His Pro Pro Gly Pro Leu Leu Leu
 195 200

<210> 1917
 <211> 176
 <212> PRT
 <213> Solanum lycopersicum

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<400> 1917

Lys Gln Lys Ile Ser Phe Thr Tyr Pro Pro Ser Leu Ser Thr Phe Trp
1 5 10 15

Lys Met Ile Lys Arg Lys Ile Pro Leu Leu Ser Leu Gln Lys Thr Leu
20 25 30

Pro Asn Glu Leu Asp Thr Gln Trp Val Ser Thr Asn Lys Glu Lys Ser
35 40 45

Asn Asn Leu Asn Lys Glu Phe Leu Asn Arg Leu Glu Ile Leu Asp Lys
50 55 60

Glu Ser Leu Ser Leu Asp Ile Leu Glu Thr Arg Thr Arg Phe Cys Asn
65 70 75 80

Asp Asp Thr Lys Lys Glu Tyr Val Pro Lys Met Tyr Asp Pro Leu Leu
85 90 95

Asn Gly Leu Tyr Arg Gly Thr Ile Lys Lys Gly Val Ser Ser Ser Ile
100 105 110

Ile Asn Asn Thr Leu Leu Glu Asn Trp Glu Lys Arg Val Arg Leu Asn
115 120 125

Arg Ile His Thr Ile Phe Leu Pro Asn Ile Asp Tyr Gln Glu Phe Glu
130 135 140

Gln Lys Ala Tyr Thr Ile Asp Lys Lys Pro Leu Ser Thr Glu Ile Asp
145 150 155 160

Glu Phe Leu Thr Leu Ile Asn Glu Leu Gly Asn Glu Ala Lys Ser Ser
165 170 175

<210> 1918

<211> 251

<212> PRT

<213> Oryza sativa

<400> 1918

Thr Thr Pro Arg Pro Lys Leu Lys Pro Leu His Trp Asp Lys Val Arg
1 5 10 15

Ala Ser Ser Asp Arg Val Met Val Trp Asp Gln Leu Lys Ser Ser Ser
20 25 30

Phe Gln Val Asn Glu Glu Met Ile Glu Thr Leu Phe Ile Cys Asn Pro
35 40 45

Ala Asn Ser Ala Pro Pro Lys Glu Pro Ala Thr Arg Arg Pro Val Leu
50 55 60

Pro Thr Pro Lys Thr Asp Asn Lys Val Leu Asp Pro Lys Lys Ser Gln
65 70 75 80

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Asn Ile Ala Ile Leu Leu Arg Ala Leu Asn Val Ser Lys Glu Gln Val
85 90 95

Cys Asp Ala Leu Cys Glu Gly Asn Thr Glu Asn Phe Gly Ala Glu Leu
100 105 110

Leu Glu Thr Leu Leu Lys Met Ala Pro Thr Lys Glu Glu Glu Ile Lys
115 120 125

Leu Arg Glu Phe Lys Glu Glu Thr Ser Pro Ile Lys Leu Gly Pro Ala
130 135 140

Glu Lys Phe Leu Lys Ala Val Leu Asp Ile Pro Phe Ala Phe Lys Arg
145 150 155 160

Val Asp Ala Met Leu Tyr Ile Ala Asn Phe Glu Ser Glu Val Asn Tyr
165 170 175

Leu Lys Lys Ser Phe Glu Thr Leu Glu Thr Ala Cys Asp Glu Leu Arg
180 185 190

Asn Ser Arg Leu Phe Leu Lys Leu Leu Glu Ala Val Leu Lys Thr Gly
195 200 205

Asn Arg Met Asn Val Gly Thr Asn Arg Gly Asp Ala His Ala Phe Lys
210 215 220

Leu Asp Thr Leu Leu Lys Leu Val Asp Val Lys Gly Thr Asp Gly Lys
225 230 235 240

Thr Thr Leu Leu His Phe Val Val Gln Glu Ile
245 250

<210> 1919

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1919

Asn Lys Gly Asn Leu Ser Pro Val Phe Ser Lys His Gln Thr Asp Leu
1 5 10 15

Glu Lys Asp Tyr Val Glu Ser Asp Thr Lys Lys Gly Lys Asn Lys Lys
20 25 30

Gln Tyr Lys Ser Asn Thr Glu Ala Glu Leu Asp Leu Phe Leu Lys Arg
35 40 45

Tyr Leu Leu Phe Gln Leu Arg Trp Asn Gly Ala Leu Asn Gln Arg Met
50 55 60

Phe Glu Asn Ile Lys Val Tyr Cys Leu Leu Leu Arg Leu Ile Asn Pro
65 70 75 80

Thr Lys Ile Thr Ile Ser Ser Ile Gln Arg Arg Glu Met Ser Leu Asp

Ile Met Leu Ile Gln
100

<210> 1920
<211> 76
<212> PRT
<213> Oryza sativa

<400> 1920
Tyr Ser Val Leu Pro Cys Trp Lys Ala Gly Ser Val Leu Asp Leu Val
1 5 10 15

Lys Thr Met Lys Phe Met Glu Tyr Pro Leu Leu Glu Asp Gln Leu Lys
20 25 30

Lys Leu Asn Asn Ala Leu Lys Gly Leu Cys Val Thr Val Ser His Arg
35 40 45

Lys Thr Glu Glu Lys Tyr Thr Val Lys Gly Leu Thr Asp Lys Pro Ala
50 55 60

Asp Gln Ile Thr Phe Lys Asp Ser Lys Ser Gly Gln
65 70 75

<210> 1921
<211> 201
<212> PRT
<213> Solanum lycopersicum

<400> 1921
Met Ala Glu Arg Val Leu Thr Arg Val His Arg Leu Arg Glu Arg Val
1 5 10 15

Asp Ala Thr Leu Cys Ala His Arg Asn Glu Ile Leu Leu Phe Leu Ser
20 25 30

Arg Ile Glu Ser His Gly Lys Gly Ile Leu Lys Pro His Glu Leu Leu
35 40 45

Ala Glu Phe Asp Ala Ile Arg Gln Asp Asp Lys Asp Lys Leu Asn Glu
50 55 60

His Ala Phe Glu Glu Leu Leu Lys Ser Thr Gln Glu Ala Ile Val Leu
65 70 75 80

Pro Pro Trp Val Ala Leu Ala Ile Arg Leu Arg Pro Gly Val Trp Glu
85 90 95

Tyr Val Arg Val Asn Val Asn Ala Leu Val Val Glu Glu Leu Ser Val
100 105 110

Pro Glu Tyr Leu Gln Phe Lys Glu Glu Leu Val Asp Gly Ala Ser Asn
115 120 125

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Gly Asn Phe Val Leu Glu Leu Asp Phe Glu Pro Phe Thr Ala Ser Phe
130 135 140

Pro Lys Pro Thr Leu Thr Lys Ser Ile Gly Asn Gly Val Glu Phe Leu
145 150 155 160

Asn Arg His Leu Ser Ala Lys Met Phe His Asp Lys Glu Ser Met Ala
165 170 175

Pro Leu Leu Glu Phe Leu Arg Ala His His Tyr Lys Gly Lys Thr Met
180 185 190

Met Leu Asn Asp Arg Ile His Asn Ser
195 200

<210> 1922

<211> 76

<212> PRT

<213> Zea mays

<400> 1922

Met Asp Lys Leu Ser Gly Ser Ala Arg Leu Met Ile Val Ser Asp Leu
1 5 10 15

Asp His Thr Met Val Asp His His Asp Glu Glu Asn Leu Ser Leu Leu
20 25 30

Arg Phe Gly Ala Leu Trp Glu Ser Val Tyr Cys Glu Asp Ser Leu Leu
35 40 45

Val Phe Ser Thr Gly Arg Ser Pro Thr Leu Tyr Lys Glu Leu Arg Lys
50 55 60

Glu Lys Pro Met Leu Thr Pro Asp Ile Thr Ile Met
65 70 75

<210> 1923

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1923

Val Ile Leu Phe Val Leu Leu Ala Gly Tyr Leu Pro Phe His Asp Lys
1 5 10 15

Asn Leu Met Asp Met Tyr Lys Lys Ile Gly Lys Ala Glu Phe Lys Cys
20 25 30

Pro Ser Trp Phe Asn Thr Asp Val Arg Arg Leu Leu Leu Arg Ile Leu
35 40 45

Asp Pro Asn Pro Ser Thr Arg Ile Ser Met Asp Lys Ile Met Glu Asn
50 55 60

Pro Trp Phe Arg Lys Gly Leu Asp Ala Lys Leu Leu Arg Tyr Asn Leu
65 70 75 80

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Gln Pro Lys Asp Ala Ile Pro Val Asp Met Ser Thr Asp Phe Asp Ser
85 90 95

Phe Asn Ser Ala Pro Thr Leu Glu Lys Lys Pro Ser Asn Leu Asn Ala
100 105 110

Phe Asp Ile Ile Ser Leu Ser Thr Gly Leu Asp Leu Ser Gly Met Phe
115 120 125

Glu Glu Ser Asp Lys Lys Glu Ser Lys Phe Thr Ser Thr Ser Thr Ala
130 135 140

Ser Thr Ile Ile Ser Lys Ile Glu Asp Ile Ala Lys Gly Leu Arg Leu
145 150 155 160

Lys Leu Thr Lys Lys Asp Gly Gly Leu Leu Lys Met Glu Gly Ser Lys
165 170 175

<210> 1924

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1924

Tyr Gly Leu Glu Val Phe Asp Asp Val Glu Phe Asp Lys Trp Val Glu
1 5 10 15

Asn Gly Thr Ala Pro Ala Leu Gly Ser Ser Leu Lys Leu Tyr Gln Glu
20 25 30

Val Leu Lys Leu Gly Phe Lys Val Phe Leu Leu Thr Gly Arg Ser Glu
35 40 45

Arg His Arg Ser Val Thr Val Glu Asn Leu Met Asn Ala Gly Phe His
50 55 60

Asp Trp His Lys Leu Ile Leu Arg Gly Ser Asp Asp
65 70 75

<210> 1925

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1925

Leu Lys His Pro Trp Ile Cys Asp Asn Gly Val Ala Thr Asn Arg Ala
1 5 10 15

Leu Asp Pro Ser Val Leu Pro Arg Leu Lys Gln Phe Ser Ala Met Asn
20 25 30

Arg Leu Lys Lys Leu Ser Leu Gln Ile Ile Ala Glu Arg Leu Ser Glu
35 40 45

Glu Glu Ile Val Gly Leu Arg Glu Met Phe Lys Ala Met Asp Thr Lys
50 55 60

Asn Arg Ser Val Val Thr Phe Gly Glu Leu Lys Gly
65 70 75

<210> 1926

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1926

Leu His Trp Ile Lys Val Thr Arg Ala Leu Gln Gly Ser Leu Trp Glu
1 5 10 15

Glu Leu Gln Arg Asn Asp Asp Ser Gln Ser Val Ser Glu Phe Asp Leu
20 25 30

Ser Glu Leu Glu Ser Leu Phe Pro Ala Ala Val Pro Lys Pro Asn Asp
35 40 45

Ser Ser Lys Ser Asp Ser Arg Arg Lys Ser Leu Gly Ser Lys Pro Glu
50 55 60

Lys Val His Leu Ile Glu Leu Arg Arg Ala Asn Asn Thr Glu Ile Met
65 70 75 80

Leu Thr Lys Val Lys Met Pro Leu Pro Asp Leu Val Ser Ala Ala Leu
85 90 95

Ala Leu Asp Gln Ser Thr Leu Asp Val Asp Gln Val Glu Asn Leu Ile
100 105 110

Lys Phe Cys Pro Thr Lys Glu Glu Met Glu Leu Leu Lys Asn Tyr Thr
115 120 125

Gly Asp Lys Glu Asn Leu Gly Lys Cys Glu Gln Phe Phe Leu Glu Leu
130 135 140

Met Lys Val Pro Arg Met Glu Ser Lys Leu Arg Val Phe Ser Phe Lys
145 150 155 160

Ile Gln Phe Gly Ser Gln Val Ala Asp Leu Arg Lys Ser Leu Asn Thr
165 170 175

Ile Asp Ser Ser Cys Asp Glu Ile Arg Ser Ser Leu Lys Leu Lys Glu
180 185 190

Ile Met Lys Lys Ile Leu Leu Leu Gly Asn Thr Leu Asn Gln Gly Thr
195 200 205

Ala Arg Gly Ala Ala Val Gly Phe Arg Leu Asp Ser Leu Leu Lys Leu
210 215 220

Thr Asp Thr Arg Ala Thr Asn Asn Lys Met Thr Leu Met His Tyr Leu
225 230 235 240

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Cys Lys Val Leu Ala Ala Lys Ser Ser Gln Leu Leu Asp Phe Tyr Met
245 250 255

Asp Leu Val Ser Leu Glu Ala Thr Ser Lys Ile Gln Leu Lys Met Leu
260 265 270

Ala Glu Glu Met
275

<210> 1927
<211> 151
<212> PRT
<213> Oryza sativa

<400> 1927
Leu Glu Ala Val Leu Lys Thr Gly Asn Arg Met Asn Val Gly Thr Asn
1 5 10 15

Arg Gly Asp Ala His Ala Phe Lys Leu Asp Thr Leu Leu Lys Leu Val
20 25 30

Asp Val Lys Gly Thr Asp Gly Lys Thr Thr Leu Leu His Phe Val Val
35 40 45

Gln Glu Ile Ile Arg Thr Glu Gly Ser His Leu Ser Ala Ser Asn Gln
50 55 60

Ser Thr Pro Arg Thr Gln Ala Asn Pro Leu Arg Asp Glu Leu Glu Cys
65 70 75 80

Lys Lys Leu Gly Leu Gln Val Val Ala Gly Leu Gly Asn Glu Leu Ser
85 90 95

Asn Val Lys Lys Ala Ala Ala Met Asp Ser Asp Val Leu Ser Ser Tyr
100 105 110

Val Ser Lys Leu Ala Gly Gly Ile Glu Lys Ile Thr Glu Val Leu Arg
115 120 125

Leu Asn Glu Glu Val Lys Ser Arg Glu Asp Ala Trp Arg Phe His Asp
130 135 140

Ser Met Gln Lys Phe Leu Lys
145 150

<210> 1928
<211> 151
<212> PRT
<213> Oryza sativa

<400> 1928
Glu Arg Ala Ala Leu Lys Lys Ile Lys Leu Asp Asp Gly Lys Glu Gly
1 5 10 15

Phe Pro Arg Gln Ile Leu Arg Glu Ile Lys Leu Leu Lys Lys Leu Asp
20 25 30

His Glu Asn Ile Ile Arg Leu Lys Glu Ile Val Val Ser Pro Gly Thr
35 40 45

Ala His Gly Ala Gly Gly Ser Asp Asp Tyr Met Tyr Arg Gly Asp Ile
50 55 60

Tyr Met Val Phe Glu Tyr Met Asp His Asp Leu Lys Lys Val Leu His
65 70 75 80

His Ser Thr Pro Ser Gln Val Lys Tyr Tyr Met Glu Gln Leu Leu Lys
85 90 95

Gly Leu His Tyr Cys His Val Asn Asn Val Leu His Arg Asp Ile Lys
100 105 110

Gly Ala Asn Leu Leu Ile Ser Gly Gly Gly Lys Leu Leu Lys Leu Ala
115 120 125

Asp Phe Gly Leu Ala Arg Pro Phe Thr Arg Asp Gly Ser Phe Thr Asn
130 135 140

His Val Ile Thr Leu Trp Tyr
145 150

<210> 1929

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1929

Ser Asn Glu Asp Leu Gly Val Gly Glu Phe Leu Asp Leu Lys Leu Leu
1 5 10 15

Val Asp Trp Ala Val Asn Ser Gly Phe His Leu Val Gln Leu Leu Pro
20 25 30

Ile Asn Asp Thr Ser Val His Gly Met Trp Trp Asp Ser Tyr Pro Tyr
35 40 45

Ser Ser Leu Ser Val Phe Ala Leu His Pro Leu Tyr Leu Arg Val Gln
50 55 60

Ala Leu Ser Asp Ala Ile Pro Gly Asp Ile Lys Asp Glu Ile Ser Gln
65 70 75 80

Ala Lys Lys Gln Leu Asp Lys Lys Asp Val Asp Tyr Glu Ala Ser Leu
85 90 95

Ala Ser Lys Leu Ser Ile Ala Arg Lys Ile Phe Lys Leu Glu Lys Asp
100 105 110

Lys Val Leu Asn Ser Ser Ser Phe Lys Gln Phe Leu Ser Glu Asn Glu
115 120 125

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Glu Trp Leu Lys Pro Tyr Ala Ala Phe Cys Phe Leu Arg Asp Phe Phe
130 135 140

Glu Thr Ser Asp His Ser Gln Trp Gly Arg Phe Ser Gln Phe Ser Lys
145 150 155 160

Glu Lys Leu Asp Lys Leu Val Ser Glu Gly Thr Leu His His Asp Val
165 170 175

<210> 1930

<211> 251

<212> PRT

<213> Zea mays

<400> 1930

Glu Leu Asp Arg Lys Lys Lys Ser Ile Ser Lys Gln Thr Asn Arg Lys
1 5 10 15

Arg Val Arg Ile Ser Lys His Lys Glu Pro Gly Ile Gly Glu Ala Leu
20 25 30

Phe Gly Trp Leu Ala Ser Arg Lys Leu Ile Glu Val Lys Lys Pro Val
35 40 45

Phe Leu Phe Asp Lys Lys Asn Lys Lys Pro Lys Asn Val Ile Tyr Pro
50 55 60

Gly Tyr Val Asp Cys Leu Phe Asp Ile Lys Asp Leu Pro Phe Cys Ser
65 70 75 80

Thr Leu Pro Met Val Tyr Pro Pro Ala Asp Trp Glu Leu Trp Pro Thr
85 90 95

Ala Thr Ala Glu Val Ser Asp Pro Tyr Ile Thr Asn Leu Thr Pro Leu
100 105 110

Ser Ser Tyr Arg Gly Gly Tyr Leu Thr Ser Leu Gln Arg Glu Ser Gly
115 120 125

Asp Ser Pro Thr Leu Leu Ser Glu Lys Asp Tyr Gly Val Phe Asp Ile
130 135 140

His Ile Asp Arg Glu Arg Ser Gln Pro Val Leu Ser Ala Val Lys Lys
145 150 155 160

Leu Gln Trp Gln Pro Tyr Arg Ile Asn Lys Leu Val Tyr Asp Phe Ile
165 170 175

Gln Lys His Trp Ser Val Leu Val Ser Val Gly Leu Leu Arg Pro Lys
180 185 190

Asn Leu Ala Leu Phe Lys Arg Lys Glu Ala Leu Arg Leu Leu Ser Ser
195 200 205

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Leu Leu Phe Lys His Glu Glu Leu Ser Thr Ile Tyr Arg Tyr Ser Glu
210 215 220

Leu Lys Ser Val Leu Leu Lys Asn Ile His Ala Ser Thr Phe Glu Leu
225 230 235 240

Tyr Thr Met Lys Ile Ala Glu Ala Tyr Leu Asp
245 250

<210> 1931

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1931

Ser Asn Thr Leu Gln Asn Val Leu Arg Lys Ala Glu Glu Tyr Leu Ile
1 5 10 15

Met Leu Pro Pro Glu Thr Pro Phe Phe Glu Phe Glu His Lys Phe Gln
20 25 30

Glu Ile Gly Leu Glu Lys Gly Trp Gly Asp Thr Ala Glu Arg Val Leu
35 40 45

Glu Met Val Cys Met Leu Leu Asp Leu Leu Glu Ala Pro Asp Ser Cys
50 55 60

Thr Leu Glu Lys Phe Leu Gly Arg Ile Pro Met Val
65 70 75

<210> 1932

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 1932

Gln Tyr Leu Ser Asn Leu Lys Lys Ser Gln Lys Lys Trp Phe Glu Pro
1 5 10 15

Leu Ile Leu Ile Ser Arg Thr Glu Arg Ser Met Asn Arg Asp Pro Asp
20 25 30

Ala Tyr Arg Tyr Lys Trp Ser Asn Gly Ser Lys Ser Phe Gln Glu His
35 40 45

Leu Glu Gln Ser Val Ser Lys Gln Lys Ser Arg Phe Gln Val Val Phe
50 55 60

Asp Arg Leu Arg Ile Asn Gln Tyr Ser Ile Asp Trp Ser Glu Val Ile
65 70 75 80

Asp Lys Lys Asp Leu Ser Lys Ser Leu Arg Phe Phe Leu Ser Lys Ser
85 90 95

Leu Leu Phe Leu Ser Lys Leu Leu Leu Phe Leu Ser Asn Ser Leu Pro
100 105 110

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Phe Phe Cys Val Ser Phe Gly Asn Ile Pro Ile His Arg Ser Glu Ile
115 120 125

Tyr Ile Tyr Glu Glu Leu Lys Gly Pro Asn Asp Gln Leu Cys Asn Gln
130 135 140

Leu Leu Glu Ser Ile Gly Leu Gln Ile Val His Leu Lys Lys Leu Lys
145 150 155 160

Pro Phe Leu Leu Asp Asp His Asp Thr Ser Gln Lys Ser Lys Phe Leu
165 170 175

<210> 1933

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1933

Phe Asp Met Gly Leu Ala Lys Ile Phe Asn Ala Met Met Lys Lys Asp
1 5 10 15

Gln Phe Met Val Ala Glu Lys Ile Ala Gln Ser Lys Gln Ala Leu Leu
20 25 30

Val Pro Leu Ala Ala Ala Gly Met Asp Ser Tyr Met Arg Ala Tyr Pro
35 40 45

Tyr Ile Val Lys Leu His Met Leu Arg Glu Leu Glu Asp Phe Asn Ser
50 55 60

Leu Leu Gly Asp Glu Ser Phe Leu Glu Lys Pro Phe Ala Ala Asp Asp
65 70 75 80

Pro Lys Phe Leu Lys Leu Thr Lys Asp Trp Glu Asn Arg Leu Arg Cys
85 90 95

Thr Gln Pro Ser Leu
100

<210> 1934

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1934

Pro Arg Arg His Leu Leu Thr Thr Gly Trp Ser Ser Phe Val Asn Lys
1 5 10 15

Lys Lys Leu Val Ser Gly Asp Ala Val Leu Phe Leu Arg Gly Asp Asp
20 25 30

Gly Glu Leu Arg Leu Gly Val Arg Arg Ala Thr Gln Leu Lys Asn Glu
35 40 45

Ala Ile Phe Lys Ala Phe Ser Ser Glu Ser Ser Lys Met Arg Thr Leu
50 55 60

Ser Ala Val Ala Asp Ser Leu Lys His Gly Ser Val
65 70 75

<210> 1935
<211> 101
<212> PRT
<213> Zea mays

<400> 1935
Phe Asp Asp Glu Gln Ile Leu Met His Arg Gly Lys Glu Trp Lys Ser
1 5 10 15

Arg Tyr Ser Lys Pro Leu Thr Leu Ile Pro Lys Val Pro Lys Asn Asn
20 25 30

Leu Ala Met Thr Ser Val Met Asn Ser Ser Asp Glu Val Ser Asp Ala
35 40 45

Asn Thr Gln Val Ala Ile Arg Glu Val Leu Arg Pro Lys Met Phe Lys
50 55 60

Leu Trp Lys Ser Ala Val Asp Ser Ser Leu Ala Leu Leu Leu Asp Asp
65 70 75 80

Ala Glu Ala Asn Asn Leu Thr Pro Asp Ser Leu Leu Thr Leu Val Glu
85 90 95

Glu Phe Ser Val Thr
100

<210> 1936
<211> 276
<212> PRT
<213> Oryza sativa

<400> 1936
Ala Gln Gln Ser Asn Pro Pro Lys Lys Ala Ser Leu Lys Pro Leu His
1 5 10 15

Trp Val Lys Val Thr Arg Ala Met Gln Gly Ser Leu Trp Glu Asp Ala
20 25 30

Gln Lys Gln Gly Asn Gln Ala Arg Ala Pro Asp Ile Asp Leu Ser Glu
35 40 45

Leu Glu Ser Leu Phe Ser Thr Ala Val Ala Thr Asn Ala Ser Glu Lys
50 55 60

Gly Gly Thr Lys Arg Gly Ser Ala Ile Ser Lys Pro Glu Ile Val His
65 70 75 80

Leu Val Asp Met Arg Arg Ala Asn Asn Cys Glu Ile Met Leu Thr Lys
85 90 95

Ile Lys Met Pro Leu Pro Asp Met Ile Asn Ala Ile Leu Ala Leu Asp
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100

105

110

Thr Ser Val Leu Asp Asn Asp Gln Val Glu Asn Leu Ile Lys Phe Cys
 115 120 125

Pro Thr Lys Glu Glu Ile Glu Met Leu Lys Asn Tyr Asn Gly Asn Lys
 130 135 140

Glu Met Leu Gly Lys Cys Glu Gln Phe Phe Leu Glu Leu Met Lys Val
 145 150 155 160

Pro Arg Val Glu Ser Lys Leu Arg Val Phe Ala Phe Arg Ile Thr Phe
 165 170 175

Ser Thr Gln Val Glu Glu Leu Arg Thr Asn Leu Thr Thr Ile Asn Asp
 180 185 190

Ala Thr Lys Glu Val Lys Glu Ser Leu Lys Leu Arg Gln Ile Met Gln
 195 200 205

Thr Ile Leu Thr Leu Gly Asn Ala Leu Asn Gln Gly Thr Ala Arg Gly
 210 215 220

Ser Ala Val Gly Phe Arg Leu Asp Ser Leu Leu Lys Leu Ser Asp Thr
 225 230 235 240

Arg Ala Arg Asn Asn Lys Met Thr Leu Met His Tyr Leu Cys Lys Leu
 245 250 255

Leu Ser Glu Lys Leu Pro Glu Leu Leu Asp Phe Asp Lys Asp Leu Ile
 260 265 270

His Leu Glu Ala
 275

<210> 1937

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1937

Met Ala Ala Leu His His Gln Ala Ala Ala Ala Pro Val Thr Thr Thr
 1 5 10 15

Thr Asp Gly Gly Glu Leu Arg Ala Met Asp Leu Tyr Glu Lys Leu Glu
 20 25 30

Lys Val Gly Glu Gly Thr Tyr Gly Lys Val Tyr Lys Ala Arg Glu Lys
 35 40 45

Ala Thr Gly Arg Ile Val Ala Leu Lys Lys Thr Arg Leu Pro Glu Asp
 50 55 60

Asp Glu Gly Val Pro Pro Thr Ala Leu Arg Glu Val Ser Leu Leu Arg
 65 70 75 80

Met Leu Ser Gln Asp Ser His Val Val Arg Leu Leu Asp Leu Lys Gln
85 90 95

Gly Gln Asn Lys Glu Gly Gln Thr Ile Leu Tyr Leu Val Phe Glu Tyr
100 105 110

Met Asp Thr Asp Leu Lys Lys Phe Ile Arg Ala His Arg Gln Asn Leu
115 120 125

Gln Lys Ile Pro Val Pro Thr Val Lys Ile Leu Met Tyr Gln Leu Cys
130 135 140

Lys Gly Val Ala Phe Cys His Gly Arg Gly Val Leu His Arg Asp Leu
145 150 155 160

Lys Pro His Asn Leu Leu Met Asp Arg Lys Thr Met Ala Leu Lys Ile
165 170 175

Ala Asp Leu Gly Leu Ser Arg Ser Phe Thr Val Pro Leu Lys Lys Tyr
180 185 190

Thr His Glu Ile Leu Thr Leu Trp Tyr
195 200

<210> 1938

<211> 251

<212> PRT

<213> Oryza sativa

<400> 1938

Leu Pro Ala Pro Pro Gly Gly Arg Gly Val Val Gly His Gly Leu Thr
1 5 10 15

Arg Ser Leu Gly Leu Asn Ser Ala Ala Thr Ala Arg Arg Ser Thr Leu
20 25 30

Lys Pro Leu His Trp Val Lys Val Thr Arg Ala Met His Gly Ser Leu
35 40 45

Trp Ala Glu Ile Gln Lys Gln Ala Asp Ala Asn Ser His Ser Glu Phe
50 55 60

Asp Val Lys Glu Leu Glu Ser Leu Phe Ala Ile Ala Pro Lys Thr Lys
65 70 75 80

Gly Gly Ser Lys Ser Asp Gly Ala Ser Lys Ser Leu Gly Ser Lys Pro
85 90 95

Asp Lys Val His Leu Ile Asp Leu Arg Arg Ala Asn Asn Thr Glu Ile
100 105 110

Met Leu Thr Lys Ile Lys Met Pro Leu Pro Asp Met Met Ser Ala Ala
115 120 125

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Leu Ala Leu Asp Asp Ser Val Leu Asp Ala Asp Gln Leu Glu Asn Leu
130 135 140

Ile Lys Phe Cys Pro Thr Lys Glu Glu Met Glu Leu Leu Lys Asn Tyr
145 150 155 160

Thr Gly Asp Lys Glu Thr Leu Gly Lys Cys Glu Gln Phe Phe Leu Glu
165 170 175

Leu Met Lys Val Pro Arg Val Glu Ser Lys Phe Arg Ile Phe Ala Phe
180 185 190

Lys Ile Gln Phe Gln Ser Gln Ile Arg Asp Val Arg Lys Asn Leu Leu
195 200 205

Thr Val Ser Ser Ala Cys Glu Glu Leu Arg Gly Ser Glu Lys Leu Lys
210 215 220

Val Ile Met Glu Lys Ile Leu Phe Leu Gly Asn Lys Leu Asn Gln Gly
225 230 235 240

Thr Pro Arg Gly Gln Ala Leu Gly Phe Arg Leu
245 250

<210> 1939

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1939

Leu Arg Glu Thr Thr Thr Met Ile Asp Gly Ile Arg Thr Ala Leu
1 5 10 15

Arg Ser Ile Gly Glu Gly Glu Ile Ser Ile Ser Ala Tyr Asp Thr Ser
20 25 30

Leu Val Ala Leu Leu Lys Arg Leu Asp Gly Gly Asp Gly Pro Gln Phe
35 40 45

Pro Ser Thr Ile Asp Trp Ile Val Gln Asn Gln Leu Pro Asp Gly Ser
50 55 60

Trp Gly Asp Ala Ser Phe Phe Met Met Gly Asp Arg Ile Met Ser Thr
65 70 75 80

Leu Ala Cys Val Val Ala Leu Lys Ser Trp Asn Ile His Thr Asp Lys
85 90 95

Cys Glu Arg Gly Leu Leu Phe Ile Gln Glu Asn Met Trp Arg Leu Ala
100 105 110

His Glu Glu Glu Asp Trp Met Leu Val Gly Phe Glu Ile Ala Leu Pro
115 120 125

1005_005_PCT_SL17083606

Ser Leu Leu Asp Met Ala Lys Asp Leu Asp Leu Asp Ile Pro Tyr Asp
130 135 140

Glu Pro Ala Leu Lys Ala Ile Tyr Ala Glu Arg Glu Arg Lys Leu Ala
145 150 155 160

Lys Ile Pro Arg Asp Val Leu His Ser Met Pro Thr Thr Leu Leu His
165 170 175

Ser Leu Glu Gly Met Val Asp Leu Asp Trp Glu Lys Leu Leu Lys Leu
180 185 190

Arg Cys Leu Asp Gly Ser Phe His Cys
195 200

<210> 1940

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1940

Met Leu Ile Ala Ala Lys Tyr Glu Glu Ile Ser Pro Pro His Val Glu
1 5 10 15

Asp Phe Cys Tyr Ile Thr Asp Asn Thr Tyr Thr Arg Gln Glu Val Val
20 25 30

Lys Met Glu Ser Asp Ile Leu Lys Leu Leu Glu Phe Glu Met Gly Asn
35 40 45

Pro Thr Ile Lys Thr Phe Leu Arg Arg Phe Thr Arg Ser Cys Gln Glu
50 55 60

Asp Lys Lys Arg Ser Ser Leu Leu Leu Glu Phe Met Gly Ser Tyr Leu
65 70 75 80

Ala Glu Leu Ser Leu Leu Asp Tyr Gly Cys Leu Arg Phe Leu Pro Ser
85 90 95

Val Val Ala Ala Ser Val Val Phe Val Ala Lys Leu Asn Ile Asp Pro
100 105 110

Tyr Thr Asn Pro Trp Ser Lys Lys Met Gln Lys Leu Thr Gly Tyr Lys
115 120 125

Val Ser Glu Leu Lys Asp Cys Ile Leu Ala Ile His Asp Leu Gln Leu
130 135 140

Arg Lys Lys Cys Ser Asn Leu
145 150

<210> 1941

<211> 176

<212> PRT

<213> Solanum lycopersicum

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<400> 1941

Asn Val Asn Ala Leu Val Val Glu Glu Leu Ser Val Pro Glu Tyr Leu
1 5 10 15

Gln Phe Lys Glu Glu Leu Val Asp Gly Ala Ser Asn Gly Asn Phe Val
20 25 30

Leu Glu Leu Asp Phe Glu Pro Phe Thr Ala Ser Phe Pro Lys Pro Thr
35 40 45

Leu Thr Lys Ser Ile Gly Asn Gly Val Glu Phe Leu Asn Arg His Leu
50 55 60

Ser Ala Lys Met Phe His Asp Lys Glu Ser Met Ala Pro Leu Leu Glu
65 70 75 80

Phe Leu Arg Ala His His Tyr Lys Gly Lys Thr Met Met Leu Asn Asp
85 90 95

Arg Ile His Asn Ser Asn Thr Leu Gln Asn Val Leu Arg Lys Ala Glu
100 105 110

Glu Tyr Leu Ile Met Leu Pro Pro Glu Thr Pro Phe Phe Glu Phe Glu
115 120 125

His Lys Phe Gln Glu Ile Gly Leu Glu Lys Gly Trp Gly Asp Thr Ala
130 135 140

Glu Arg Val Leu Glu Met Val Cys Met Leu Leu Asp Leu Leu Glu Ala
145 150 155 160

Pro Asp Ser Cys Thr Leu Glu Lys Phe Leu Gly Arg Ile Pro Met Val
165 170 175

<210> 1942

<211> 276

<212> PRT

<213> *Oryza sativa*

<400> 1942

Arg Leu Asn Thr Ile Asn Glu Gly Thr Tyr Gly Val Val Phe Arg Val
1 5 10 15

Arg Asp Lys Arg Thr Gly Glu Ile Val Ala Leu Lys Lys Val Lys Met
20 25 30

Glu Lys Glu Arg Glu Gly Phe Pro Leu Thr Ser Leu Arg Glu Met Asn
35 40 45

Ile Leu Leu Ser Phe His His Pro Ser Ile Val Glu Val Lys Glu Val
50 55 60

Val Val Gly Ser Asn Asp Arg Asp Ile Phe Met Val Met Glu Tyr Met
65 70 75 80

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Glu His Asp Leu Lys Gly Val Met Glu Thr Met Lys Gln Pro Tyr Ser
85 90 95

Gln Ser Glu Val Lys Cys Leu Met Leu Gln Leu Leu Glu Gly Val Lys
100 105 110

Tyr Leu His Asp Asn Trp Val Leu His Arg Asp Leu Lys Thr Ser Asn
115 120 125

Leu Leu Leu Asn Asn Arg Gly Glu Leu Lys Ile Cys Asp Phe Gly Leu
130 135 140

Ser Arg Gln Tyr Gly Ser Pro Leu Lys Pro Tyr Thr Gln Leu Val Val
145 150 155 160

Thr Leu Trp Tyr Arg Ala Pro Glu Leu Leu Leu Gly Ala Lys Asp Tyr
165 170 175

Ser Thr Ala Ile Asp Met Trp Ser Leu Gly Cys Ile Met Gly Glu Leu
180 185 190

Leu Ser Lys Gly Pro Leu Phe Asn Gly Lys Ser Glu Ile Asp Gln Leu
195 200 205

Asp Lys Ile Phe Arg Thr Leu Gly Thr Pro Asp Glu Asn Ile Trp Pro
210 215 220

Gly Tyr Ser Lys Leu Pro Gly Ala Thr Val Lys Phe Gly Lys Gln Thr
225 230 235 240

His Asn Arg Leu Arg Asp Lys Phe Arg Ala Val Ser Phe Thr Gly Gly
245 250 255

Pro Met Leu Ser Glu Ala Gly Phe Asp Leu Leu Asn Arg Leu Leu Thr
260 265 270

Tyr Asp Pro Glu
275

<210> 1943

<211> 126

<212> PRT

<213> Oryza sativa

<400> 1943

Ala Trp Cys Val Gly Trp Ile Val Lys Thr Asn Ala Gly Phe Arg Phe
1 5 10 15

Ser Leu Lys Thr Ala Tyr Val Ala Val Thr Tyr Leu Asp Arg Phe Leu
20 25 30

Ala Arg Arg Cys Val Asp Arg Asp Lys Glu Trp Ala Leu Gln Leu Leu
35 40 45

Ser Val Ala Cys Leu Ser Leu Ala Ala Lys Val Glu Glu Arg Arg Pro

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50 55 60

Pro Arg Leu Pro Glu Phe Lys Leu Asp Met Tyr Asp Cys Ala Ser Leu
65 70 75 80

Met Arg Met Glu Leu Leu Val Leu Thr Thr Leu Lys Trp Gln Met Ile
85 90 95

Thr Glu Thr Pro Phe Ser Tyr Leu Asn Cys Phe Thr Ala Lys Phe Arg
100 105 110

His Asp Glu Arg Lys Ala Ile Val Leu Arg Ala Ile Glu Cys
115 120 125

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Lys Val Met Asp Lys Ala Ser Leu Ala Ser Arg Lys Lys Leu Leu Arg
50 55 60

Ala Gln Thr Glu Lys Glu Ile Leu Gln Cys Leu Asp His Pro Phe Leu
65 70 75 80

Pro Thr Leu Tyr Thr His Phe Glu Thr Asp Lys Phe Ser Cys Leu Val
85 90 95

Met Glu Phe Cys Pro Gly Gly Asp Leu His Thr Leu Arg Gln Arg Gln
100 105 110

Arg Gly Lys Tyr Phe Pro Glu Gln Ala Val Lys Phe Tyr Val Ala Glu
115 120 125

Ile Leu Leu Ala Met Glu Tyr Leu His Met Leu Gly Ile Ile Tyr Arg
130 135 140

Asp Leu Lys Pro Glu Asn Val Leu Val Arg Glu Asp Gly His Ile Met
145 150 155 160

Leu Ser Asp Phe Asp Leu Ser Leu Arg Cys Ala Val Ser Pro Thr Leu
165 170 175

<210> 1946

<211> 101

<212> PRT

<213> Oryza sativa

<400> 1946

Asn Ala Met Ile Ser Gly Leu Phe Gln Leu Gly Asn Ala Tyr Glu Trp
1 5 10 15

Val Val Thr Lys Lys Ser Gly Arg Ser Ser Glu Gly Asp Leu Ile Ser
20 25 30

Leu Ala Pro Lys Glu Leu Lys His Gln Lys Thr Glu Ser Ala Pro Asn
35 40 45

Leu Asp Ala Ile Ala Lys Glu Gln Ser Ala Pro Arg Lys Asp Val Lys
50 55 60

Lys Lys His Asn Arg Ile Tyr Lys Lys Glu Leu Ala Leu Ser Leu Leu
65 70 75 80

Leu Leu Thr Ala Ala Ala Arg Ser Leu Leu Ser Lys Gln Gly Ile His
85 90 95

Phe Tyr Phe Leu Leu
100

<210> 1947

<211> 176

<212> PRT

<213> Oryza sativa

1005_005_PCT_SL17083606

<400> 1947

His Ser Asn Leu Thr Thr Ile Cys Ile Lys Glu Leu Asp Ser Leu Lys
1 5 10 15

Leu Gln Ser Glu Arg Met Leu Arg Ala Ser Leu Cys Asp Phe Lys Asp
20 25 30

Ser Gln Lys Lys Leu Lys Ser Leu Trp Arg Leu His Glu Asn Ile Ile
35 40 45

Phe Cys Leu Gln Glu Leu Gly Ser Phe Gly Ala Leu Gln Ala Ala Arg
50 55 60

Thr Phe Leu Ser Phe Asp Gly Asp Lys Leu Asp Arg Arg Glu Val Asp
65 70 75 80

Leu Asn Gly Ser Thr Ser Ser Phe Ala His His Tyr Leu Asn Gly Ala
85 90 95

Thr Ser Ile Leu Ser Arg Asn Lys Thr Asp Gly Ser His Ala Gly Ser
100 105 110

Phe Asp Leu Glu Lys Leu Glu Glu Pro Phe Phe Ser Asn Lys Phe Ser
115 120 125

Val Leu Ile Asn Val Leu Ser Arg Tyr Gly Leu Gln Glu Asn Met Lys
130 135 140

Cys Ile Val Phe Val Lys Arg Ile Thr Val Ala Arg Ala Ile Ser Asn
145 150 155 160

Ile Leu Gln Asn Leu Lys Cys Leu Glu Phe Trp Lys Cys Glu Phe Leu
165 170 175

<210> 1948

<211> 276

<212> PRT

<213> Oryza sativa

<400> 1948

Pro Pro Pro Pro Pro Leu Pro Leu Gln Ile Gln Val Gly Lys Asp Gly
1 5 10 15

Ser Pro Leu Pro Arg Leu Lys Pro Leu His Trp Asp Lys Val Arg Ala
20 25 30

Ala Pro Asn Arg Ser Met Val Trp Asn Asp Ile Arg Ser Ser Ser Phe
35 40 45

Glu Phe Glu Phe Asp Glu Gln Met Ile Lys Ser Leu Phe Ala Tyr Asn
50 55 60

Leu Gln Gly Ser Met Lys Asp Glu Glu Ala Met Asn Lys Thr Ala Ser
65 70 75 80

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Thr Thr Lys His Val Ile Glu His His Arg Leu Gln Asn Thr Thr Ile
85 90 95

Leu Leu Lys Thr Leu Asn Ala Asn Thr Ser Gln Val Cys Asn Ser Val
100 105 110

Ile Gln Gly Asn Gly Leu Ser Val Gln Gln Leu Glu Ala Leu Val Lys
115 120 125

Met Lys Pro Thr Lys Glu Glu Glu Glu Lys Leu Leu Asn Tyr Asp Gly
130 135 140

Asp Ile Asn Met Leu Asp Pro Ala Glu Asn Phe Val Lys Val Leu Leu
145 150 155 160

Thr Ile Pro Met Ala Phe Pro Arg Met Glu Val Met Leu Tyr Lys Glu
165 170 175

Asn Phe Asp Asp Glu Val Ala His Ile Lys Met Ser Phe Ala Met Ile
180 185 190

Glu Gly Ala Cys Thr Glu Leu Lys Ser Ser Lys Leu Phe Leu Arg Leu
195 200 205

Leu Glu Ala Val Leu Lys Thr Gly Asn Arg Met Asn Val Gly Thr Leu
210 215 220

Arg Gly Gly Ala Ser Ala Phe Lys Leu Asp Ala Leu Leu Lys Leu Ala
225 230 235 240

Asp Ile Arg Gly Thr Asp Gly Lys Thr Thr Leu Leu His Phe Val Val
245 250 255

Lys Glu Met Ala Arg Ser Lys Gly Leu Lys Ala Leu Glu Lys Leu Asn
260 265 270

Glu Thr Pro Ser
275

<210> 1949

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1949

Met Gln Pro Pro Asn Gln Glu Leu Ile Val Arg Asp Leu His Asp Asn
1 5 10 15

Met Trp Thr Phe Arg His Ile Tyr Arg Gly Gln Pro Lys Arg His Leu
20 25 30

Leu Thr Thr Gly Trp Ser Leu Phe Val Gly Ala Lys Arg Leu Lys Ala
35 40 45

Gly Asp Ser Val Leu Phe Ile Arg Asp Glu Lys Ser Gln Leu Leu Leu

50

55

60

Gly Val Arg Arg Ala Thr Arg Gln Gln Thr Met Leu
65 70 75

<210> 1950
<211> 101
<212> PRT
<213> Zea mays

<400> 1950
Thr Ser Leu Leu Ser Asn Glu Arg Phe His Arg Cys Met Ile Ala Cys
1 5 10 15

Ser Ala Glu Leu Val Leu Ala Thr His Lys Thr Val Thr Met Met Phe
20 25 30

Pro Ala Val Leu Glu Lys Thr Gly Ile Thr Ala Phe Asp Leu Ser Lys
35 40 45

Val Ile Glu Gly Phe Val Arg His Glu Asp Thr Leu Pro Arg Glu Leu
50 55 60

Lys Arg His Leu Asn Ser Leu Glu Glu Arg Leu Leu Glu Ser Met Ala
65 70 75 80

Trp Glu Lys Gly Ser Ser Met Tyr Asn Ser Leu Ile Val Ala Arg Pro
85 90 95

Ala Leu Ser Val Glu
100

<210> 1951
<211> 76
<212> PRT
<213> Zea mays

<400> 1951
Ser Glu Val Leu Ala Ala Tyr Thr Asn Asp Val Val Ser Arg Ser Val
1 5 10 15

Leu Gly Ser Thr His Arg Lys Lys Gly Arg Asn Thr Leu Phe Arg Glu
20 25 30

Met Thr Met Thr Asn Val Asp Leu Leu Val Gly Phe Asn Leu Glu Tyr
35 40 45

Tyr Ile Pro Arg Trp Pro Leu Thr Asp Leu Leu Phe Arg Leu Val Cys
50 55 60

Trp Lys Val Thr Arg His Leu Lys Arg Trp Asp Ala
65 70 75

<210> 1952
<211> 151
<212> PRT
<213> Oryza sativa

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<400> 1952

Ile Cys Lys Leu Leu Ser Leu Thr Leu His Ala Asp Ser Glu Thr Asp
1 5 10 15

Glu Val Tyr Ala Gln Met Thr Leu Gln Pro Val Asn Lys Tyr Asp Arg
20 25 30

Asp Ala Met Leu Ala Ser Glu Leu Gly Leu Lys Gln Asn Lys Gln Pro
35 40 45

Ala Glu Phe Phe Cys Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His
50 55 60

Gly Gly Phe Ser Val Pro Arg Arg Ala Ala Glu Lys Ile Phe Pro Pro
65 70 75 80

Leu Asp Phe Thr Met Gln Pro Pro Ala Gln Glu Leu Ile Ala Lys Asp
85 90 95

Leu His Asp Ile Ser Trp Lys Phe Arg His Ile Tyr Arg Gly Gln Pro
100 105 110

Lys Arg His Leu Leu Thr Thr Gly Trp Ser Val Phe Val Ser Thr Lys
115 120 125

Arg Leu Leu Ala Gly Asp Ser Val Leu Phe Ile Arg Asp Glu Lys Ser
130 135 140

Gln Leu Leu Leu Gly Ile Arg
145 150

<210> 1953

<211> 76

<212> PRT

<213> Zea mays

<400> 1953

Pro Arg Glu Pro Glu Ser Met Lys Glu Leu Arg Glu Val Thr Ala Lys
1 5 10 15

His Pro Trp Asn Leu Met Thr Thr Ser Ala Asp Glu Gly Gln Phe Leu
20 25 30

Asn Met Leu Ile Lys Leu Ile Gly Ala Lys Lys Thr Met Glu Ile Gly
35 40 45

Val Tyr Thr Gly Tyr Ser Leu Leu Ala Thr Ala Leu Ala Leu Pro Glu
50 55 60

Asp Gly Thr Ile Leu Ala Met Asp Ile Asn Arg Glu
65 70 75

<210> 1954

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1954

Ala Arg Lys Met Ser Ser Phe Gly Leu Val Ser Thr Gln Thr Gln Tyr
 1 5 10 15

Phe Leu Ala Ala Met Leu Ser Asp Glu Lys Phe Val Asp Asn Phe Leu
 20 25 30

Arg Glu Ser Ala Met Arg Leu Gly Lys Arg His Lys His Phe Thr Asn
 35 40 45

Gly Leu Glu Val Val Gly Ile Lys Cys Leu Lys Asn Asn Ala Gly Leu
 50 55 60

Phe Cys Trp Met Asp Leu Arg Pro Leu Leu Arg Glu
 65 70 75

<210> 1955

<211> 76

<212> PRT

<213> Zea mays

<400> 1955

Ser Phe Leu Gly Pro Pro Met Gly Lys Val Gly Ser Ala Ser Pro Thr
 1 5 10 15

Asp Pro Lys Asn Leu Ala Trp Asp Pro Asp Val Leu Gly Met Lys Lys
 20 25 30

His Lys Leu Leu Lys Glu Asp Ile Leu Pro Ser Met Ala Ser Asn Arg
 35 40 45

Lys Val Gln Arg Leu Leu Asn Glu Phe Met Asp Leu Leu Leu Glu Tyr
 50 55 60

Glu Thr Asp Val Thr Leu Ile Pro Gln Pro Gly Thr
 65 70 75

<210> 1956

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1956

Thr Ala Asp Asp Leu Lys His Lys Lys Val Asn Leu Leu Val Gly Glu
 1 5 10 15

Pro Phe Tyr Leu Gly Ser Glu Gly Met Leu Pro Trp Gln Asn Leu Arg
 20 25 30

Phe Trp Ser Val Arg Thr Leu Leu Asp Ser Met Leu Ser Glu Asp Ala
 35 40 45

Phe Ile Met Pro Cys Lys Gly Ile Leu Lys Leu Cys Ala Met Ser Leu
 50 55 60

Pro Asp Leu Trp Arg Ser Arg Ser Ser Leu Lys Asp
65 70 75

<210> 1957

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1957

Ala Val Trp Lys Asp Leu Trp Pro Ile Glu Arg Arg Arg Gln Arg Glu
1 5 10 15

Phe Phe Cys Phe Gly Met Asp Ile Leu Leu Lys Leu Asp Leu Pro Ala
20 25 30

Thr Arg Arg Phe Phe Asp Ala Phe Phe Asp Leu Glu Pro Arg Tyr Trp
35 40 45

His Gly Phe Leu Ser Ser Arg Leu Phe Leu Pro Glu Leu Ile Val Phe
50 55 60

Gly Leu Ser Leu Phe Ser His Ala Ser Asn Thr Ser
65 70 75

<210> 1958

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1958

Val Thr Leu Arg Ala Asp Gly Glu Arg Glu Phe Met Phe Tyr Arg Asn
1 5 10 15

Pro Ser Ala Asp Met Leu Leu Thr Pro Ala Glu Leu Asn Leu Asp Leu
20 25 30

Ile Arg Ser Ala Lys Val Phe His Tyr Gly Ser Ile Ser Leu Ile Val
35 40 45

Glu Pro Cys Arg Ala Ala His Met Lys Ala Met Glu Val Ala Lys Glu
50 55 60

Ala Gly Ala Leu Leu Ser Tyr Asp Pro Asn Leu Arg Leu Pro Leu Trp
65 70 75 80

Pro Ser Ala Glu Glu Ala Lys Lys Gln Ile Lys Ser Ile Trp Asp Ser
85 90 95

Ala Asp Val Ile Lys Val Ser Asp Val Glu Leu Glu Phe Leu Thr Gly
100 105 110

Ser Asn Lys Ile Asp Asp Glu Ser Ala Met Ser Leu Trp His Pro Asn
115 120 125

Leu Lys Leu Leu Leu Val Thr Leu Gly Glu Lys Gly Cys Asn Tyr Tyr
130 135 140

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Thr Lys Lys Phe His Gly Thr Val Gly Gly Phe His Val Lys Thr Val
145 150 155 160

Asp Thr Thr Gly Ala Gly Asp Ser Phe Val Gly Ala Leu Leu Thr Lys
165 170 175

Ile Val Asp Asp Gln Thr Ile Leu Glu Asp Glu Ala Arg Leu Lys Glu
180 185 190

Val Leu Arg Phe Ser Cys Ala Cys Gly Ala Ile Thr Thr Thr Lys Lys
195 200 205

Gly Ala Ile Pro Ala Leu Pro Thr Ala Ser Glu Ala Leu Thr Leu Leu
210 215 220

Lys Gly
225

<210> 1959
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1959
Glu Lys Gln Leu Lys Ile Met Gln Gln Ile Asp Glu Asp His Thr Leu
1 5 10 15

Thr Gln Leu Ala Asn Ala Trp Leu Asp Ile Ala Val Gly Gly Ser Lys
20 25 30

Ile Arg Glu Ala Tyr Leu Ile Phe Gln Asp Phe Ala Glu Lys Tyr Pro
35 40 45

Met Thr Gly Met Val Leu Asn Gly Lys Ala Val Cys Cys Met His Met
50 55 60

Gly Ser Phe Asp Glu Ala Glu Thr Leu Leu Leu Glu Ala Leu Asn Lys
65 70 75 80

Asp Ala Lys Asp Pro Glu Thr Leu Ala Asn Leu Ile Val Cys Asn Leu
85 90 95

His Leu Gly Lys Pro
100

<210> 1960
<211> 201
<212> PRT
<213> Zea mays

<400> 1960
Met Ser Ser Leu Asp Pro Ser Pro Ala Thr Ser Thr Gln Gln Gln Lys
1 5 10 15

Gln Leu Glu Ser Leu Val Asn Leu Leu Thr Gln Gly Ser Arg Phe Tyr
20 25 30

Arg Lys Ala Tyr Asn Glu Leu Phe Ser Gly Val Thr Thr Glu Gln Asp
35 40 45

Pro Asp Ser Ser Thr Asn Ile Pro Glu Tyr Met Leu Phe Gly Trp His
50 55 60

Leu Phe Leu Met Leu His Leu Arg Ser Pro Glu Leu Phe Lys Asp Leu
65 70 75 80

Val Ser Cys Ile His Gly Leu Val Ala Val Leu Ala Ile Leu Leu Ile
85 90 95

His Val Pro Ala Lys Phe Arg Ser Phe Thr Ile Glu Gly Ser Ser His
100 105 110

Leu Ile Lys Gln Thr Glu Lys Gly Val Asp Leu Ile Ala Ser Leu Cys
115 120 125

His Asn Tyr His Thr Ser Glu Glu Arg Leu Lys Glu Met Leu His Lys
130 135 140

Ser His Asn Ala Ile Glu Asp Ile Phe His Met Lys Ala Leu Ser Ala
145 150 155 160

Ser Glu Cys Lys Pro Glu Asn Leu Asp Lys Ile Asp Thr Asp Asp Leu
165 170 175

Met Tyr Phe Lys Gly Leu Ile Asp Met Glu Cys Phe Gln Ser Asn Leu
180 185 190

Glu Lys Met Glu Lys Leu Cys Asn Ser
195 200

<210> 1961

<211> 126

<212> PRT

<213> Zea mays

<400> 1961

Phe Met Pro Val Arg Asn Val Asn Tyr Ser Ile Phe Ser Cys Gly Asn
1 5 10 15

Gly Asn Glu Lys His Glu Ile Leu Phe Leu Glu Ile Trp Thr Asn Gly
20 25 30

Ser Leu Thr Pro Lys Glu Ala Leu Tyr Glu Ala Ser Arg Asn Leu Ile
35 40 45

Asp Leu Phe Leu Pro Phe Leu His Thr Glu Glu Glu Gly Thr Ser Phe
50 55 60

Glu Glu Asn Lys Asn Arg Leu Thr Pro Pro Leu Leu Thr Phe Gln Lys
65 70 75 80

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Arg Phe Thr Asn Leu Lys Lys Asn Lys Lys Gly Ile Pro Leu Asn Cys
85 90 95

Ile Phe Ile Asp Gln Leu Glu Leu Pro Ser Arg Thr Tyr Asn Cys Leu
100 105 110

Lys Arg Ala Asn Ile His Thr Leu Leu Asp Leu Leu Ser Lys
115 120 125

<210> 1962

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1962

Leu Pro Ala Pro Pro Gly Gly Arg Gly Val Val Gly His Gly Leu Thr
1 5 10 15

Arg Ser Leu Gly Leu Asn Ser Ala Ala Thr Ala Arg Arg Ser Thr Leu
20 25 30

Lys Pro Leu His Trp Val Lys Val Thr Arg Ala Met His Gly Ser Leu
35 40 45

Trp Ala Glu Ile Gln Lys Gln Ala Asp Ala Asn Ser His Ser Glu Phe
50 55 60

Asp Val Lys Glu Leu Glu Ser Leu Phe Ala Ile Ala Pro Lys Thr Lys
65 70 75 80

Gly Gly Ser Lys Ser Asp Gly Ala Ser Lys Ser Leu Gly Ser Lys Pro
85 90 95

Asp Lys Val His Leu Ile Asp Leu Arg Arg Ala Asn Asn Thr Glu Ile
100 105 110

Met Leu Thr Lys Ile Lys Met Pro Leu Pro Asp Met Met Ser Ala Ala
115 120 125

Leu Ala Leu Asp Asp Ser Val Leu Asp Ala Asp Gln Leu Glu Asn Leu
130 135 140

Ile Lys Phe Cys Pro Thr Lys
145 150

<210> 1963

<211> 201

<212> PRT

<213> Oryza sativa

<400> 1963

Ile Phe Gly Arg Asp Asn Val Gly Ser Leu His Gly Phe Met Tyr Lys
1 5 10 15

Tyr Leu Lys Thr Leu Val Leu Arg Leu Tyr Gly Gln Glu Asn Leu Lys
20 25 30

Ser Val Leu Leu Ala Glu Thr Asp Ala Ala Cys Arg Gly Ser Leu Ala
35 40 45

Ser Trp Ala Ser Gln Pro Ser Val Glu Leu Lys Glu Gly Ile Ser Thr
50 55 60

Met Ile Phe Asp Leu Thr Ala Lys Lys Leu Ile Gly Tyr Asp Pro Ser
65 70 75 80

Lys Pro Ser Gln Val Asn Leu Arg Lys Asn Phe Gly Ala Phe Ile Cys
85 90 95

Gly Leu Ile Ser Phe Pro Leu Asn Ile Pro Gly Thr Ala Tyr His Glu
100 105 110

Cys Met Glu Gly Arg Lys Asn Ala Met Lys Val Leu Arg Gly Met Met
115 120 125

Lys Glu Arg Met Ala Glu Pro Glu Arg Pro Cys Glu Asp Phe Phe Asp
130 135 140

His Val Ile Gln Glu Leu Arg Arg Glu Lys Pro Leu Leu Thr Glu Thr
145 150 155 160

Ile Ala Leu Asp Leu Met Phe Val Leu Leu Phe Ala Ser Phe Glu Thr
165 170 175

Thr Ala Leu Ala Leu Thr Ile Gly Val Lys Leu Leu Thr Glu Asn Pro
180 185 190

Lys Val Val Asp Ala Leu Arg Glu Glu
195 200

<210> 1964
<211> 226
<212> PRT
<213> Oryza sativa

<400> 1964
Tyr Val Pro Ser Ile Met Phe Arg Ile Gln Cys Met Leu Leu Ser Val
1 5 10 15

Lys Leu Lys Val Gln Leu Gly Pro Thr Val Gln Gln Phe Asp Val Pro
20 25 30

Val Leu Lys Ile Leu Glu Ala Leu Thr Thr Lys Lys Cys Gln Glu Glu
35 40 45

Phe Ser Gln Glu Ser Leu Glu Thr Leu Gly Asp Ser Phe Leu Lys Tyr
50 55 60

Val Thr Thr Arg His Leu Phe Ser Glu Tyr Arg Leu Gln His Glu Gly
65 70 75 80

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Ile Leu Thr Lys Met Lys Lys Asn Leu Ile Ser Asn Ala Ala Leu Cys
85 90 95

Gln Leu Ala Cys Ser Ser Asn Leu Val Gly Tyr Ile His Ala Glu Glu
100 105 110

Phe Asn Pro Arg Asp Trp Ile Ile Pro Cys Leu Asp Tyr Asp Glu Arg
115 120 125

Gly Asn Lys Lys Ile Ser Phe Leu Ala Pro Asn Gly Met Tyr Ser Gln
130 135 140

Arg Lys Met Ser Ile Lys Ser Lys Arg Ile Ala Asp Ser Val Glu Ala
145 150 155 160

Leu Ile Gly Ala Tyr Leu Ser Thr Ala Gly Glu Lys Ala Ala Phe Leu
165 170 175

Leu Met Lys Ser Leu Gly Met Asn Ile Glu Phe His Thr Glu Ile Pro
180 185 190

Val Glu Arg Lys Ile Ser Met Lys Ala Glu Glu Phe Ile Asp Val Arg
195 200 205

Ser Leu Glu Gly Met Leu Gly Tyr Lys Phe Asn Asp Ser Leu Leu Leu
210 215 220

Leu Glu
225

<210> 1965
<211> 126
<212> PRT
<213> Oryza sativa

<400> 1965
Lys Pro Ser Phe Glu Val Thr Ile Glu Asp Gly Leu Phe Lys Cys Thr
1 5 10 15

Leu Thr Leu Pro Arg Asn Ala Ala Phe Gln Ser Ile Val Gly Pro Leu
20 25 30

Ser Ser Ser Ser Asn Leu Ser Lys Gln Leu Val Ser Leu Glu Ala Cys
35 40 45

Lys Lys Leu His Gln Leu Gly Glu Leu Asn Asp His Leu Val Pro Leu
50 55 60

Thr Glu Glu Pro Met Asp Thr Asp Phe Thr Thr Ala Asp Glu Lys Cys
65 70 75 80

Ile Ser Gly Pro Gly Thr Thr Lys Arg Lys Glu Leu His Gly Thr Thr
85 90 95

1005_005_PCT_SL17083606

Cys Val Leu Ala Leu Ser Gly Thr Trp Ile His Asp Ser Glu Asn Ile
 100 105 110

Thr Leu Asn Thr Tyr Arg Ile Asp Phe Leu Cys Asp Gln Glu
 115 120 125

<210> 1966

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1966

Leu Lys Lys Leu Leu Lys Lys Cys Arg Ser Asp Leu Gln Ser His Glu
 1 5 10 15

Asn Asp Gly Ser Ser Ala Gly Arg Cys Pro Gly His Cys Ser Val Cys
 20 25 30

Asp Gly Ser Phe Phe Pro Ser Leu Leu Asn Glu Met Ser Ala Val Ile
 35 40 45

Gly Cys Phe Asn Glu Lys Ala Lys Lys Leu Leu Glu Leu His Leu Ala
 50 55 60

Ser Gly Phe Lys Lys Tyr Thr Met Trp Phe Thr Ser
 65 70 75

<210> 1967

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1967

Phe Gly Leu Val Ser Ser Gln Thr Gln Tyr Leu Leu Ser Cys Met Leu
 1 5 10 15

Ser Asp Lys Lys Phe Thr Lys Lys Tyr Ile Ser Glu Asn Gln Lys Arg
 20 25 30

Leu Lys Lys Arg His Ala Met Leu Val Lys Gly Leu Lys Ser Ala Gly
 35 40 45

Ile Asn Cys Leu Glu Ser Asn Ala Gly Leu Phe Cys Trp Val Asp Met
 50 55 60

Arg His Leu Leu Ser Ser Asn Asn Phe Asp Ala Glu
 65 70 75

<210> 1968

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1968

Glu Lys Leu Asp Leu Asn Leu Pro Leu Asn Leu His Leu Val Asn Leu
 1 5 10 15

Val Lys Cys Lys Arg Asp Ser Thr Ile Lys Arg Asn Val Glu Tyr Met

20

25

30

Gly Glu Gly Val Gly Glu Leu Cys Asp Trp Lys Glu Met Ile Lys Leu
 35 40 45

His Gln Arg Gln Asn Gly Ser Leu Phe Asp Ser Pro Ala Thr Thr Ala
 50 55 60

Ala Ala Leu Ile Tyr His Gln His Asp Gln Lys Cys Tyr Gln Tyr Leu
 65 70 75 80

Asn Ser Ile Phe Gln Gln His Lys Asn Trp Val Pro Thr Met Tyr Pro
 85 90 95

Thr Lys Val His Ser Leu Leu Cys Leu Val Asp Thr Leu Gln Asn Leu
 100 105 110

Gly Val His Arg His Phe Lys Ser Glu Ile Lys Lys Ala Leu
 115 120 125

<210> 1969

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1969

Ala Ser Gly Gly Lys Asp Gly Thr Thr Leu Leu Trp Asp Leu Thr Glu
 1 5 10 15

Gly Lys Met Leu Tyr Lys Leu Asp Ala Gly Ala Ile Ile His Ser Leu
 20 25 30

Cys Phe Ser Pro Asn Arg Tyr Trp Leu Cys Ala Ala Thr Glu Asp Ser
 35 40 45

Val Lys Ile Trp Asp Leu Glu Ser Lys Leu Val Met Gln Asp Leu Lys
 50 55 60

Pro Glu Val Gln Ala Phe Lys Ser Gln Met Leu Tyr
 65 70 75

<210> 1970

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 1970

Met Asp Val Arg Arg Arg Ser Glu Glu Pro Val Tyr Pro Ser Lys Val
 1 5 10 15

Phe Ala Ala Asp Glu Lys Pro Leu Lys Pro His Lys Lys Gln Gln Gln
 20 25 30

Gln Gln Glu Asp Lys Asn Thr Leu Leu Ile Asp Ala Ser Asp Ala Leu
 35 40 45

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Pro Leu Pro Leu Tyr Leu Thr Thr Asn Gly Leu Phe Phe Thr Met Phe
50 55 60

Phe Ser Val Met Tyr Phe Leu Leu Ser Arg Trp Arg Glu Lys Ile Arg
65 70 75 80

Asn Ser Thr Pro Leu His Val Val Thr Leu Ser Glu Leu Gly Ala Ile
85 90 95

Val Ser Leu Ile Ala
100

<210> 1971

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1971

Phe Gly Gly Gly Ala Val Phe Pro Ile Asp Ser Asp Glu Phe Val Ala
1 5 10 15

Leu Leu Val Glu Lys Glu Met Asp His Gln Pro Gln Arg Gly Tyr Leu
20 25 30

Glu Lys Leu Glu Leu Gly Gly Leu Glu Cys Ser Trp Arg Lys Asp Ala
35 40 45

Ile Asp Trp Ile Cys Lys Val His Ser Tyr Tyr Asn Phe Gly Pro Leu
50 55 60

Ser Leu Tyr Leu Ala Val Asn Tyr Leu Asp Arg Phe Leu Ser Ser Phe
65 70 75 80

Asn Leu Pro His Asp Glu Ser Trp Met Gln Gln Leu Leu Ser Val Ser
85 90 95

Cys Leu Ser Leu Ala Thr Lys Met Glu Glu Thr Val Val Pro Leu Pro
100 105 110

Met Asp Leu Gln Val Phe Asp Ala Glu Tyr Val Phe Glu Ala Arg His
115 120 125

Ile Lys Arg Met Glu Leu Ile Val Met Lys Thr Leu Lys Trp Arg Leu
130 135 140

Gln Ala Val Thr Pro Phe Ser
145 150

<210> 1972

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1972

Cys His Val Asn Asn Val Leu His Arg Asp Ile Lys Gly Ala Asn Leu
1 5 10 15

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Leu Ile Ser Gly Gly Gly Lys Leu Leu Lys Leu Ala Asp Phe Gly Leu
20 25 30

Ala Arg Pro Phe Thr Arg Asp Gly Ser Phe Thr Asn His Val Ile Thr
35 40 45

Leu Trp Tyr Arg Pro Pro Glu Leu Leu Leu Gly Ala Thr Asn Tyr Ala
50 55 60

Glu Ala Val Asp Ile Trp Ser Val Gly Cys Ile Phe Ala Glu Phe Leu
65 70 75 80

Leu Arg Lys Pro Leu Phe Pro Gly Arg Thr Glu Gln Glu Gln Leu Ser
85 90 95

Lys Ile Phe Glu Leu Cys Gly Phe Pro Asn Glu Glu Asn Trp Pro Gly
100 105 110

Val Ser Lys Leu Pro Leu Tyr Lys Thr Ile Arg Pro Thr Thr Pro Thr
115 120 125

Lys Arg Arg Leu Arg Asp Ile Phe His Asn Phe Asp Ser His Ala Val
130 135 140

Asp Leu Ile Asp Arg Met Leu
145 150

<210> 1973

<211> 151

<212> PRT

<213> Zea mays

<400> 1973

Tyr Gly Arg Met Asn Ile Gly Ser Arg Pro Ala Lys Arg Arg Pro Gly
1 5 10 15

Gly Gly Ile Thr Thr Leu Arg Ala Ile Pro Trp Ile Phe Ser Trp Thr
20 25 30

Gln Thr Arg Phe His Leu Pro Val Trp Leu Gly Val Gly Ala Ala Phe
35 40 45

Lys Phe Ala Ile Asp Lys Asp Val Arg Asn Phe Gln Val Leu Lys Glu
50 55 60

Met Tyr Asn Glu Trp Pro Phe Phe Arg Val Thr Leu Asp Leu Leu Glu
65 70 75 80

Met Val Phe Ala Lys Gly Asp Pro Gly Ile Ala Gly Leu Tyr Asp Glu
85 90 95

Leu Leu Val Ala Glu Glu Leu Lys Pro Phe Gly Lys Gln Leu Arg Asp
100 105 110

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Lys Tyr Val Glu Thr Gln Gln Leu Leu Gln Ile Ala Gly His Lys
 115 120 125

Asp Ile Leu Glu Gly Asp Pro Phe Leu Lys Gln Gly Leu Val Leu Arg
 130 135 140

Asn Pro Tyr Ile Thr Thr Leu
 145 150

<210> 1974

<211> 226

<212> PRT

<213> Oryza sativa

<400> 1974

Gly Thr Thr Gly Ala Lys Val Thr Ala Asp Ser Ser Ile Ser Ile Val
 1 5 10 15

Tyr Arg Tyr Cys Glu Lys Leu Pro Gln Asp Lys Cys Tyr Ser Pro Lys
 20 25 30

Pro Thr Phe Glu Phe Thr His His Asp Asp Gly Tyr Val Cys Thr Leu
 35 40 45

Ala Leu Pro Pro Ser Ala Val Leu Gln Ile Leu Val Gly Pro Lys Ala
 50 55 60

Arg Asn Met His Lys Ala Lys Gln Leu Val Cys Leu Asp Ala Cys Lys
 65 70 75 80

Lys Leu His Glu Leu Gly Ala Leu Asp Asp His Leu Cys Leu Ser Val
 85 90 95

Glu Asp Pro Val Pro Glu Ile Val Ser Lys Asn Lys Gly Thr Gly Ile
 100 105 110

Gly Thr Thr Lys Arg Lys Glu Leu His Gly Thr Thr Arg Ile His Ala
 115 120 125

Trp Ser Gly Asn Trp Val Ser Lys Lys Thr Ala Leu Lys Leu Gln Ser
 130 135 140

Tyr Lys Met Asn Phe Val Cys Asp Gln Ala Gly Gln Ile Tyr Ser Glu
 145 150 155 160

Phe Val Leu Leu Ile Asp Ala Thr Leu Pro Asp Glu Val Ala Thr Leu
 165 170 175

Glu Ile Asp Leu Tyr Leu His Asp Lys Met Val Lys Thr Ser Val Ser
 180 185 190

Ser Cys Gly Leu Leu Glu Leu Asp Ala Gln Gln Met Glu Gln Ala Lys
 195 200 205

Leu Phe Gln Gly Leu Leu Phe Asn Gly Leu Phe Gly Lys Leu Phe Thr

210 1005_005_PCT_SL17083606 215 220
 Arg Ser
 225

 <210> 1975
 <211> 126
 <212> PRT
 <213> Zea mays

 <400> 1975
 Asn Ile Gly Ser Arg Pro Ser Lys Arg Lys Pro Ser Gly Gly Ile Asp
 1 5 10 15

 Ser Leu Arg Ala Ile Pro Trp Ile Phe Ala Trp Thr Gln Thr Arg Phe
 20 25 30

 His Leu Pro Val Trp Leu Gly Phe Gly Ala Ala Phe Lys Asn Val Leu
 35 40 45

 Gln Lys Asp Ile Arg Asn Leu His Met Leu Gln Glu Met Tyr Asn Glu
 50 55 60

 Trp Pro Phe Phe Arg Val Thr Ile Asp Leu Val Glu Met Val Phe Ala
 65 70 75 80

 Lys Gly Asn Pro Gly Ile Ala Ala Leu Tyr Asp Lys Leu Leu Val Ser
 85 90 95

 Glu Glu Leu His Pro Leu Gly Glu Lys Leu Arg Ala Asn Tyr Glu Glu
 100 105 110

 Thr Gln Lys Leu Leu Leu Gln Val Ala Gly His Arg Asp Leu
 115 120 125

 <210> 1976
 <211> 151
 <212> PRT
 <213> Solanum lycopersicum

 <400> 1976
 Leu Cys Pro Lys Leu Leu Arg Gly Ser Ala Ser Ala Trp Glu Arg Trp
 1 5 10 15

 Val Phe His Phe Ala His Leu Arg Gln Leu Pro Val Leu Val Pro Tyr
 20 25 30

 Ile Pro Thr Glu Asn Pro Arg Leu Arg Asp Thr Ala Tyr Glu Val Ala
 35 40 45

 Leu Val Ala Leu Ala Thr Asn Pro Ser Phe His Lys Asp Leu Leu Ser
 50 55 60

 Thr Val Lys Ser Trp Pro Pro Arg Ile Tyr Ser Thr Thr Pro Val Phe
 65 70 75 80

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Ser Ala Ile Glu Pro Gln Ile Asn Thr Ser Ser Met Thr Asp Pro Leu
85 90 95

Lys Glu Ala Leu Ala Glu Leu Tyr Val Ile Asp Gly Gln His Asp Lys
100 105 110

Ala Phe Ala Leu Tyr Ala Asp Leu Met Lys Pro Asp Leu Phe Asp Phe
115 120 125

Ile Glu Lys His Asn Leu His Asp Ala Val Arg Glu Lys Val Leu Gln
130 135 140

Leu Met Met Ile Asp Cys Lys
145 150

<210> 1977

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1977

Arg Val Leu Glu Ser Tyr Asp Phe Val Gly Phe Asn His Tyr Val Ala
1 5 10 15

Ile Phe Val Arg Ala Asp Leu Ser Lys Leu Asp Gln Ser Leu Arg Asp
20 25 30

Tyr Met Gly Asp Ala Ala Val Lys Tyr Asp Leu Pro Phe Leu Lys Ser
35 40 45

Asn Asn Glu Phe Pro Leu Gly Leu Thr Ser Asp Phe Met Thr Ser Thr
50 55 60

Pro Trp Ala Leu Lys Lys Met Leu Asn His Leu Gln
65 70 75

<210> 1978

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 1978

Lys Val Ser Asp Val Glu Leu Glu Phe Leu Thr Gly Ser Asn Lys Ile
1 5 10 15

Asp Asp Glu Ser Ala Met Ser Leu Trp His Pro Asn Leu Lys Leu Leu
20 25 30

Leu Val Thr Leu Gly Glu Lys Gly Cys Asn Tyr Tyr Thr Lys Lys Phe
35 40 45

His Gly Thr Val Gly Gly Phe His Val Lys Thr Val Asp Thr Thr Gly
50 55 60

Ala Gly Asp Ser Phe Val Gly Ala Leu Leu Thr Lys
65 70 75

<210> 1979

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 1979

Met Val Pro Ser Arg His Ser Leu Asn Glu Pro Cys Phe Pro Gln Cys
 1 5 10 15

Leu Asp Trp Ile Ile Glu Asn Gln Arg Glu Asp Gly Ser Trp Gly Leu
 20 25 30

Asn Pro Thr His Pro Leu Leu Leu Lys Asp Ser Leu Ser Ser Thr Leu
 35 40 45

Ala Cys Leu Leu Ala Leu Thr Lys Trp Arg Val Gly Asp Glu Gln Ile
 50 55 60

Lys Arg Gly Leu Gly Phe Ile Glu Thr Tyr Gly Trp Ala Val Asp Asn
 65 70 75 80

Lys Asp Gln Ile Ser Pro Leu Gly Phe Glu Val Ile Phe Ser Ser Met
 85 90 95

Ile Lys Ser Ala Glu Lys Leu Asp Leu Asn Leu Pro Leu Asn Leu His
 100 105 110

Leu Val Asn Leu Val Lys Cys Lys Arg Asp Ser Thr Ile Lys Arg Asn
 115 120 125

Val Glu Tyr Met Gly Glu Gly Val Gly Glu Leu Cys Asp Trp Lys Glu
 130 135 140

Met Ile Lys Leu His Gln Arg Gln Asn Gly Ser Leu Phe Asp Ser Pro
 145 150 155 160

Ala Thr Thr Ala Ala Ala Leu Ile Tyr His Gln His Asp Gln Lys Cys
 165 170 175

Tyr Gln Tyr Leu Asn Ser Ile Phe Gln Gln His Lys Asn Trp Val Pro
 180 185 190

Thr Met Tyr Pro Thr Lys Val His Ser Leu Leu Cys Leu Val Asp Thr
 195 200 205

Leu Gln Asn Leu Gly Val His Arg His Phe Lys Ser Glu Ile Lys Lys
 210 215 220

Ala Leu
 225

<210> 1980

<211> 176

<212> PRT

<213> Zea mays

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<400> 1980

Leu Leu Asn Gln Leu Lys Asp Gln Ala Ala Val Leu Lys Glu Asn Met
1 5 10 15

Asn Ile Asp Leu Arg Val Met Gly Ile Ala Gly Ser Arg Thr Met Leu
20 25 30

Leu Ser Asp Ile Gly Val Asp Leu Thr Gln Trp Lys Glu Lys Leu Gln
35 40 45

Thr Glu Ala Glu Pro Ala Asn Leu Asp Lys Phe Val His His Leu Ser
50 55 60

Glu Asn His Phe Phe Pro Asn Arg Val Leu Val Asp Cys Thr Ala Asp
65 70 75 80

Thr Ser Val Ala Ser His Tyr Tyr Asp Trp Leu Lys Lys Gly Ile His
85 90 95

Val Ile Thr Pro Asn Lys Lys Ala Asn Ser Gly Pro Leu Asp Arg Tyr
100 105 110

Leu Lys Leu Arg Thr Leu Gln Arg Ala Ser Tyr Thr His Tyr Phe Tyr
115 120 125

Glu Ala Thr Val Gly Ala Gly Leu Pro Ile Ile Ser Thr Leu Arg Gly
130 135 140

Leu Leu Glu Thr Gly Asp Lys Ile Leu Arg Ile Glu Gly Ile Phe Ser
145 150 155 160

Gly Thr Leu Ser Tyr Ile Phe Asn Asn Phe Glu Gly Ala Arg Thr Phe
165 170 175

<210> 1981

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1981

Glu Gly Lys Ser Thr Lys Gln Cys Ser Thr His Leu His Gln Leu His
1 5 10 15

Ile Cys Leu Pro Ser Ser Arg Asn Lys Thr Arg Leu Leu Tyr Arg Met
20 25 30

Ser Leu Asp Phe Ala Pro Trp Ile Lys His Val Pro Phe Met His Ile
35 40 45

Leu Trp Ser His Phe Ala Glu Lys Val Leu Asn Glu Asp Leu Arg Leu
50 55 60

Val Leu Gly Gln Gln Glu Arg Met Ile Asn Gly Ala
65 70 75

<210> 1982

<211> 76

<212> PRT

<213> *Oryza sativa*

<400> 1982

Phe Gly Asp Ile His Lys Ser Ile Tyr Phe Leu Ser Trp Lys Glu Gln
 1 5 10 15

Gly Ser Gln Leu Ser Leu Leu Ala Lys Asp Phe Gly Ser Leu Asp Cys
 20 25 30

Phe Ala Thr Glu Phe Leu Ile Asp Gly Ser Thr Leu Ser Leu Val Ala
 35 40 45

Ser Asp Ser Asp Lys Asn Val Gln Ile Phe Tyr Tyr Ala Pro Lys Met
 50 55 60

Val Glu Ser Trp Lys Gly Gln Lys Leu Leu Ser Arg
 65 70 75

<210> 1983

<211> 76

<212> PRT

<213> *Solanum lycopersicum*

<400> 1983

Gly Leu Thr Met Asp His Pro Ile Met Lys Thr Thr Glu Phe Trp Thr
 1 5 10 15

Ser His Glu Cys Leu Leu Leu Pro Tyr Glu Gln Ser Leu Thr Arg Arg
 20 25 30

Asp Ser Thr Ser Gly Leu His Tyr Asp Cys Ser Ala His Phe Leu Trp
 35 40 45

Val Gly Glu Arg Thr Arg Gln Leu Asp Gly Ala His Val Glu Phe Leu
 50 55 60

Arg Gly Ile Ala Asn Pro Leu Gly Ile Lys Val Ser
 65 70 75

<210> 1984

<211> 126

<212> PRT

<213> *Oryza sativa*

<400> 1984

Pro Glu Ile Val Ser Lys Asn Lys Gly Thr Gly Ile Gly Thr Thr Lys
 1 5 10 15

Arg Lys Glu Leu His Gly Thr Thr Arg Ile His Ala Trp Ser Gly Asn
 20 25 30

Trp Val Ser Lys Lys Thr Ala Leu Lys Leu Gln Ser Tyr Lys Met Asn
 35 40 45

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Phe Val Cys Asp Gln Ala Gly Gln Ile Tyr Ser Glu Phe Val Leu Leu
50 55 60

Ile Asp Ala Thr Leu Pro Asp Glu Val Ala Thr Leu Glu Ile Asp Leu
65 70 75 80

Tyr Leu His Asp Lys Met Val Lys Thr Ser Val Ser Ser Cys Gly Leu
85 90 95

Leu Glu Leu Asp Ala Gln Gln Met Glu Gln Ala Lys Leu Phe Gln Gly
100 105 110

Leu Leu Phe Asn Gly Leu Phe Gly Lys Leu Phe Thr Arg Ser
115 120 125

<210> 1985

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1985

Lys Ala Asn Leu Pro Gly Pro Pro Glu Phe Leu Leu Cys Val Leu Pro
1 5 10 15

Glu Arg Lys Asn Cys Asp Leu Tyr Gly Pro Trp Lys Lys Lys Asn Leu
20 25 30

His Glu Met Gly Ile Ile Thr Gln Cys Ile Val Pro Ser Val Lys Met
35 40 45

Asn Asp Gln Tyr Tyr Thr Asn Val Leu Leu Lys Ile Asn Ala Lys Leu
50 55 60

Gly Gly Met Asn Ser Lys Leu Ser Leu Glu His Arg
65 70 75

<210> 1986

<211> 76

<212> PRT

<213> Zea mays

<400> 1986

Asp Ser Tyr Ile Ala Val Leu Asp Glu Val Phe Asp Lys His Met Thr
1 5 10 15

Thr Ala Lys Asp Leu Leu Ala Gly Glu Asp Leu Ala Arg Phe Leu Ser
20 25 30

Gln Leu His Ala Asp Ile Ser Asn Leu Lys Ala Met Leu Arg Ala Ile
35 40 45

Tyr Ile Ala Gly His Ala Thr Glu Ser Phe Ser Asp Phe Val Val Gly
50 55 60

His Gly Glu Leu Trp Ser Ala Gln Met Leu Ser Tyr
65 70 75

<210> 1987

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1987

Leu Lys Gly Ile Tyr Ala Asn Arg Glu Leu Lys Leu Lys Arg Ile Pro
 1 5 10 15

Lys Asp Met Met His Ile Val Pro Thr Ser Ile Leu His Ser Leu Glu
 20 25 30

Gly Met Pro Gly Leu Asp Trp Gln Arg Leu Leu Lys Leu Gln Cys Ser
 35 40 45

Asp Gly Ser Phe Leu Phe Ser Pro Ser Ala Thr Ala Tyr Ala Leu Met
 50 55 60

Gln Thr Gly Asp Lys Lys Cys Phe Ala Tyr Ile Asp
 65 70 75

<210> 1988

<211> 76

<212> PRT

<213> Zea mays

<400> 1988

Leu Asp Thr Ser Val Tyr Pro Arg Glu Pro Glu Ser Met Lys Glu Leu
 1 5 10 15

Arg Glu Ile Thr Ala Lys His Pro Trp Asn Leu Met Thr Thr Ser Ala
 20 25 30

Asp Glu Gly Gln Phe Leu Asn Met Leu Ile Lys Leu Ile Gly Ala Lys
 35 40 45

Lys Thr Met Glu Ile Gly Val Tyr Thr Gly Tyr Ser Leu Leu Ala Thr
 50 55 60

Ala Leu Ala Leu Pro Glu Asp Gly Thr Ile Leu Ala
 65 70 75

<210> 1989

<211> 176

<212> PRT

<213> Oryza sativa

<400> 1989

Ala Tyr Trp Arg Met Leu Arg Lys Leu Cys Thr Val Glu Leu Leu Ser
 1 5 10 15

Thr Lys Met Val Arg Gln Leu Ala Pro Ile Arg Asp Gly Glu Thr Leu
 20 25 30

Ala Leu Val Arg Asn Ile Glu Ala Ala Ala Gly Gly Lys Lys Pro Phe
 35 40 45

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Thr Leu Ala Thr Leu Leu Ile Ser Cys Thr Asn Thr Phe Thr Ala Lys
50 55 60

Ala Ala Phe Gly Gln Ala Cys Gly Gly Glu Leu Gln Glu Gln Phe Leu
65 70 75 80

Thr Ala Leu Asp Glu Ala Leu Lys Phe Ser Asn Gly Phe Cys Phe Gly
85 90 95

Asp Leu Phe Pro Ser Leu Arg Phe Ile Asp Ala Met Thr Gly Leu Arg
100 105 110

Ser Arg Leu Glu Arg Leu Arg Leu Gln Leu Asp Thr Val Phe Asp Lys
115 120 125

Ile Val Ala Gln Cys Glu Ser Asn Pro Gly Asp Ser Leu Val Asn Val
130 135 140

Leu Leu Arg Ile Lys Asp Gln Gly Glu Leu Asp Phe Pro Phe Ser Ser
145 150 155 160

Thr His Val Lys Ala Ile Ile Leu Asp Met Phe Thr Gly Gly Thr Glu
165 170 175

<210> 1990

<211> 151

<212> PRT

<213> Oryza sativa

<400> 1990

Asp Ala Ile Asn Arg Ala Leu Ser Leu Pro His Gly His Gly His Gly
1 5 10 15

Pro Lys Met Glu Arg Arg Leu Ser Leu Val Lys Gln Asn Gly Gly Ala
20 25 30

Pro Gly Glu Phe Asp His Asn Arg Trp Leu Phe Glu Thr Lys Gly Thr
35 40 45

Tyr Gly Tyr Gly Asn Ala Ile Trp Pro Glu Asp Asp Gly Val Ala Gly
50 55 60

His Pro Lys Glu Leu Met Ser Lys Pro Trp Arg Pro Leu Thr Arg Lys
65 70 75 80

Leu Arg Ile Gln Ala Ala Val Ile Ser Pro Tyr Arg Leu Leu Val Leu
85 90 95

Ile Arg Leu Val Ala Leu Gly Leu Phe Leu Met Trp Arg Ile Lys His
100 105 110

Gln Asn Glu Asp Ala Ile Trp Leu Trp Gly Met Ser Ile Val Cys Glu
115 120 125

Leu Trp Phe Ala Leu Ser Trp Val Leu Asp Gln Leu Pro Lys Leu Cys

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130 135 140

Pro Ile Asn Arg Ala Thr Asp
145 150

<210> 1991
<211> 101
<212> PRT
<213> Oryza sativa

<400> 1991
Val Gly Cys Ile Phe Ala Glu Leu Leu Thr Leu Lys Pro Leu Phe Gln
1 5 10 15

Gly Val Glu Ala Lys Ala Thr Pro Asn Pro Phe Gln Leu Asp Gln Leu
20 25 30

Asp Lys Ile Phe Lys Val Leu Gly His Pro Thr Val Glu Lys Trp Pro
35 40 45

Thr Leu Ala Asn Leu Pro Cys Trp Gln Asn Asp Gln Gln His Ile Gln
50 55 60

Gly His Lys Tyr Glu Asn Thr Gly Leu His Asn Ile Val His Leu Pro
65 70 75 80

Gln Lys Ser Pro Ala Phe Asp Leu Leu Ser Lys Met Leu Glu Tyr Asp
85 90 95

Pro Arg Lys Arg Ile
100

<210> 1992
<211> 76
<212> PRT
<213> Zea mays

<400> 1992
Ala Ile Ala Leu Ala Glu Val Phe Glu Lys His Met Thr Ala Ala Lys
1 5 10 15

Asp Leu Leu Asp Gly Glu Asp Leu Ala Arg Phe Leu Ser Gln Leu His
20 25 30

Ser Asp Val Ser Asn Leu Arg Ala Met Leu Arg Ala Ile Tyr Ile Ala
35 40 45

Gly His Ala Thr Glu Ser Phe Ser Asp Phe Val Val Gly His Gly Glu
50 55 60

Leu Trp Ser Ala Gln Met Leu Ser Tyr Ala Ile Lys
65 70 75

<210> 1993
<211> 201
<212> PRT
<213> Solanum lycopersicum

<400> 1993

Met Gly His Lys Leu Lys Ile Arg Thr Pro His Ala Thr Thr Arg Arg
1 5 10 15

Leu Val Lys Asp Leu Gly Pro Leu Lys Val Val Cys Ile Asp Tyr Pro
20 25 30

Arg Pro Glu Leu Asp Asn Thr Val Asn Tyr Leu Glu Ala Ala Phe Leu
35 40 45

Ser Ser Thr Phe Arg Ala Ser Pro Arg Pro Thr Lys Pro Leu Glu Ile
50 55 60

Val Ile Ala Gly Ala Gly Leu Gly Gly Leu Ser Thr Ala Lys Tyr Leu
65 70 75 80

Ala Asp Ala Gly His Lys Pro Ile Leu Leu Glu Ala Arg Asp Val Leu
85 90 95

Gly Gly Lys Val Ala Ala Trp Lys Asp Asp Asp Gly Asp Trp Tyr Glu
100 105 110

Thr Gly Leu His Ile Phe Phe Gly Ala Tyr Pro Asn Ile Gln Asn Leu
115 120 125

Phe Gly Glu Leu Gly Ile Asn Asp Arg Leu Gln Trp Lys Glu His Ser
130 135 140

Met Ile Phe Ala Met Pro Ser Lys Pro Gly Glu Phe Ser Arg Phe Asp
145 150 155 160

Phe Ser Glu Ala Leu Pro Ala Pro Leu Asn Gly Ile Leu Ala Ile Leu
165 170 175

Lys Asn Asn Glu Met Leu Thr Trp Pro Glu Lys Val Lys Phe Ala Ile
180 185 190

Gly Leu Leu Pro Ala Met Leu Gly Gly
195 200

<210> 1994

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1994

Phe Leu Leu Asp Leu Thr Lys Glu Lys Pro Ala Trp Lys Glu Ile Pro
1 5 10 15

Thr Ser Trp Ser Pro Pro Ser Arg Leu Gly His Thr Leu Ser Val Phe
20 25 30

Gly Lys Thr Lys Leu Phe Met Phe Gly Gly Leu Ala Lys Ser Gly Ser
35 40 45

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Leu Arg Leu Arg Ser Cys Asp Ala Tyr Thr Met Asp Ala Gly Glu Asp
50 55 60

Ser Pro Gln Trp Arg Gln Leu Ala Thr Thr Gly Phe
65 70 75

<210> 1995
<211> 151
<212> PRT
<213> Zea mays

<400> 1995
Leu Asn Leu Val Ala Lys Asp Gly Leu Ala Val Ile Ala Gly Thr Ile
1 5 10 15

Glu Lys Ile Lys Ala Ile Val Leu Ala Val Lys Ser Ser Pro Leu Gln
20 25 30

Trp Glu Glu Leu Met Lys Cys Ala Ser Glu Cys Asp Leu Asp Lys Ser
35 40 45

Lys Gly Ile Ser Tyr Asp Val Ser Thr Arg Trp Asn Ser Thr Tyr Leu
50 55 60

Met Leu Arg Asp Ala Leu Tyr Tyr Lys Pro Ala Leu Ile Arg Leu Lys
65 70 75 80

Thr Ser Asp Pro Arg Arg Tyr Val Cys Leu Asn Cys Cys Thr Cys His
85 90 95

His Tyr Lys Phe Ser Ile Asn Gln Met Ser Ile Ile Val Gly Thr Met
100 105 110

Gln Phe Val Leu Lys Pro Arg Ser Gly Arg Trp His Leu Thr Leu Phe
115 120 125

Lys Cys Leu Lys Lys Phe Phe Asp Leu Thr Glu Leu Leu Ser Gly Thr
130 135 140

Gln Tyr Ser Thr Ala Asn Leu
145 150

<210> 1996
<211> 251
<212> PRT
<213> Oryza sativa

<400> 1996
Trp Arg Ile Lys Ala Leu Glu Asp Ser Gly Gly Trp Met Glu Arg Thr
1 5 10 15

Thr Val Glu Asp Met Asp Ile Ala Val Arg Ala His Leu Asn Gly Trp
20 25 30

Lys Phe Val Phe Leu Asn Asp Val Glu Cys Gln Cys Glu Leu Pro Glu
35 40 45

Ser Tyr Glu Ala Tyr Arg Lys Gln Gln His Arg Trp His Ser Gly Pro
50 55 60

Met Gln Leu Phe Arg Leu Cys Leu Pro Asp Ile Ile Arg Cys Lys Ile
65 70 75 80

Ala Phe Trp Lys Lys Ala Asn Leu Ile Phe Leu Phe Phe Leu Leu Arg
85 90 95

Lys Leu Ile Leu Pro Phe Tyr Ser Phe Thr Leu Phe Cys Ile Ile Leu
100 105 110

Pro Met Thr Met Phe Ile Pro Glu Ala Glu Leu Pro Asp Trp Val Val
115 120 125

Cys Tyr Ile Pro Ala Leu Met Ser Phe Leu Asn Ile Leu Pro Ala Pro
130 135 140

Lys Ser Phe Pro Phe Ile Ile Pro Tyr Leu Leu Phe Glu Asn Thr Met
145 150 155 160

Ser Val Thr Lys Phe Asn Ala Met Ile Ser Gly Leu Phe Gln Leu Gly
165 170 175

Ser Ala Tyr Glu Trp Val Val Thr Lys Lys Ser Gly Arg Ser Ser Glu
180 185 190

Gly Asp Leu Ile Ala Leu Ala Pro Lys Glu Leu Lys Gln Gln Lys Ile
195 200 205

Leu Asp Leu Thr Ala Ile Lys Glu Gln Ser Met Leu Lys Gln Ser Ser
210 215 220

Pro Arg Asn Glu Ala Lys Lys Lys Tyr Asn Arg Ile Tyr Lys Lys Glu
225 230 235 240

Leu Ala Leu Ser Leu Leu Leu Leu Thr Ala Ala
245 250

<210> 1997

<211> 76

<212> PRT

<213> Oryza sativa

<400> 1997

Ser Thr Thr Trp Leu Val Leu Asp Val Ala Ser Thr Ile Pro Ser Glu
1 5 10 15

Phe Ala Arg Arg Ile Leu Pro Ser Lys Leu Arg Ser Tyr Gly Phe Phe
20 25 30

Asn Met Leu Arg Leu Trp Arg Leu Arg Arg Val Ser Ser Leu Phe Ser
35 40 45

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Arg Leu Glu Lys Asp Arg His Phe Asn Tyr Phe Trp Val Arg Cys Ala
50 55 60

Lys Leu Ile Cys Val Thr Leu Phe Ala Val His Cys
65 70 75

<210> 1998

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 1998

Arg Thr Tyr Cys Gln Pro Leu Ser Asp Met Asn Leu Ser Asp Ser Glu
1 5 10 15

Gly Lys Asn Leu His Gln Tyr Leu Asn Phe Asn Ser Asn Met Gly Leu
20 25 30

Ile His Thr Pro Cys Ser Glu Lys Asp Leu Ser Ser Glu Lys Arg Lys
35 40 45

Lys Trp Ser Leu Cys Leu Lys Lys Cys Val Glu Lys Gly Gln Thr Tyr
50 55 60

Arg Thr Phe Gln Arg Asp Ser Ala Phe Ser Thr Leu Ser Lys Trp Asn
65 70 75 80

Leu Phe Gln Thr Tyr Met Pro Trp Phe Leu Thr Ser Thr Gly Tyr Lys
85 90 95

Tyr Leu Asn Leu Ile Phe Leu Asp Thr Phe Ser Asp Leu Leu Pro Ile
100 105 110

Leu Ser Ser Ser Gln Lys Phe Val Ser Ile Phe Pro Asp Ile
115 120 125

<210> 1999

<211> 251

<212> PRT

<213> Oryza sativa

<400> 1999

Cys Thr Arg Met His Glu Leu Thr Lys Asn Asp His Leu Arg Lys Met
1 5 10 15

Val Cys Gln Asn Ala Trp Gly Arg Asp Val Thr Val Arg Leu Glu Met
20 25 30

Ser Thr Lys Met Leu Gly Trp Gly Arg Leu Ala Arg Glu Leu Thr Thr
35 40 45

Leu Glu Ala Ala Ser Trp Arg Lys Phe Thr Val Gly Gly Arg Val Glu
50 55 60

Pro Ser Arg Cys Asn Phe Ser Ala Cys Ala Val Gly Asn Arg Leu Val
65 70 75 80

Leu Phe Gly Gly Glu Gly Val Asn Met Gln Pro Met Asp Asp Thr Phe
 85 90 95
 Val Leu Asn Leu Glu Ser Ala Lys Pro Glu Trp Arg Arg Val Lys Val
 100 105 110
 Ser Ala Ser Pro Pro Gly Arg Trp Gly His Thr Leu Ser Trp Leu Asn
 115 120 125
 Gly Ser Trp Leu Val Val Phe Gly Gly Cys Gly Gln Gln Gly Leu Leu
 130 135 140
 Asn Asp Val Phe Val Leu Asp Leu Asp Ala Lys Gln Pro Thr Trp Arg
 145 150 155 160
 Glu Val Ala Ser Glu Gly Pro Pro Leu Pro Arg Ser Trp His Ser Ser
 165 170 175
 Cys Thr Leu Asp Gly Ser Lys Leu Val Val Ser Gly Gly Cys Thr Glu
 180 185 190
 Ser Gly Val Leu Leu Ser Asp Thr Phe Leu Leu Asp Leu Thr Lys Glu
 195 200 205
 Lys Pro Ala Trp Lys Glu Ile Pro Thr Ser Trp Ser Pro Pro Ser Arg
 210 215 220
 Leu Gly His Thr Leu Ser Val Phe Gly Lys Thr Lys Leu Phe Met Phe
 225 230 235 240
 Gly Gly Leu Ala Lys Ser Gly Ser Leu Arg Leu
 245 250

 <210> 2000
 <211> 76
 <212> PRT
 <213> Oryza sativa

 <400> 2000
 Lys Leu Glu Arg Arg Thr Val Ala Tyr His Glu Ser Gly His Ala Val
 1 5 10 15

 Ala Gly Trp Phe Leu Glu His Ala Glu Pro Leu Leu Lys Val Thr Ile
 20 25 30

 Val Pro Arg Gly Thr Ala Ala Leu Gly Phe Ala Gln Tyr Val Pro Asn
 35 40 45

 Asp Asn Leu Leu Met Thr Lys Glu Gln Leu Phe Asp Met Thr Cys Met
 50 55 60

 Thr Leu Gly Gly Arg Ala Ala Glu Glu Val Leu Ile
 65 70 75

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<210> 2001

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2001

Met Ala Leu Phe Arg Lys Phe Phe Phe Lys Lys Pro Pro Asp Gly Leu
1 5 10 15

Leu Leu Ile Thr Asp Asn Ile Tyr Val Phe Asp His Cys Phe Ser Met
20 25 30

Lys Glu Met Glu Glu Asp His Phe Glu Ala His Ile Arg Gly Val Ala
35 40 45

Ala His Leu Leu Asp Asn Phe Gly Asp His Ser Phe Met Ile Ser Asn
50 55 60

Phe Gly Ile Arg Asp Glu Glu Ser Pro Ile Tyr His Ile Leu Ser Glu
65 70 75 80

Tyr Gly Met Thr Val Leu Asp Tyr Pro Gly His Tyr Glu Gly Cys Pro
85 90 95

Leu Leu Thr Met Glu Met Val His Cys Ile Leu Lys Ser Ser Glu Ser
100 105 110

Trp Leu Ser Leu Gly Gln Arg Asn Phe Leu Ile Met His Cys Glu Gln
115 120 125

Gly Cys Trp Pro Ile Leu Ala Phe Met Leu Ala Ala Leu Leu Ile Tyr
130 135 140

Leu Gly Gln Tyr Ser Asp Glu Gln Lys Thr Leu Asp Met Leu Tyr Lys
145 150 155 160

Gln Ser Pro Val Glu Leu Leu Glu Met Phe Ser Pro Leu Asn Pro Met
165 170 175

<210> 2002

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2002

Val Phe Ile Met Arg Tyr Leu Lys Ala Gly Ala Ser Ala Asp Asn Lys
1 5 10 15

Ser Asp Lys Glu Met Glu His Met Ala Phe Phe Phe Ala Glu Leu Ala
20 25 30

Leu Met Gln Tyr Gly Leu Val Ala Ser Leu Pro Ser Lys Val Ala Ala
35 40 45

Ser Ala Val Tyr Ala Ala Arg Leu Thr Leu Lys Lys Ser Pro Leu Trp
50 55 60

Thr Asp Thr Leu Lys His His Thr Gly Phe Thr Glu Ser Gln Leu Leu
65 70 75 80

Asp Ser Ala Lys Leu Leu Val Thr Ser His Ser Thr Ala Pro Glu Ser
85 90 95

Lys Leu Arg Val Val
100

<210> 2003

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 2003

Arg Thr Tyr Cys Gln Pro Leu Ser Asp Met Asn Leu Ser Asp Ser Glu
1 5 10 15

Gly Lys Asn Leu His Gln Tyr Leu Asn Phe Asn Ser Asn Met Gly Leu
20 25 30

Ile His Thr Pro Cys Ser Glu Lys Asp Leu Ser Ser Glu Lys Arg Lys
35 40 45

Lys Trp Ser Leu Cys Leu Lys Lys Cys Val Glu Lys Gly Gln Thr Tyr
50 55 60

Arg Thr Phe Gln Arg Asp Ser Ala Phe Ser Thr Leu Ser Lys Trp Asn
65 70 75 80

Leu Phe Gln Thr Tyr Met Pro Trp Phe Leu Thr Ser Thr Gly Tyr Lys
85 90 95

Tyr Leu Asn Leu Ile Phe Leu Asp Thr Phe Ser Asp Leu Leu Pro Ile
100 105 110

Leu Ser Ser Ser Gln Lys Phe Val Ser Ile Phe Pro Asp Ile Met His
115 120 125

Gly Ser Gly Ile Ser Trp Arg Ile Leu Gln Lys Lys Leu Cys Leu Pro
130 135 140

Gln Trp Asn Leu Ile Ser Glu Ile Ser Ser Lys Cys Leu His Asn Leu
145 150 155 160

Leu Leu Ser Glu Glu Met Ile His Arg Asn Asn Glu Ser Pro Leu Ile
165 170 175

Ser Thr His Leu Arg Ser Pro Asn Ala Arg Glu Phe Leu Tyr Ser Ile
180 185 190

Leu Phe Leu Leu Val Ala Gly Tyr Leu Val Arg Thr His Leu Leu
195 200 205

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Phe Val Ser Arg Ala Ser Ser Glu Leu Gln Thr Glu Phe Glu Arg Val
210 215 220

Lys Ser
225

<210> 2004
<211> 151
<212> PRT
<213> Zea mays

<400> 2004
Phe Ser Gly Leu Glu Tyr Glu Thr Asp Gly Trp Arg Gln Trp Asn Leu
1 5 10 15

Ala Gly Cys Leu Ser Ser Leu Lys Arg Ser Glu Pro Ser Phe Ser Val
20 25 30

Val Leu Leu Gly Glu Leu Ser Phe Ala Leu Thr Ala Gly Gly His Asp
35 40 45

Phe Gly Phe Val Ile Leu Gly Asp Ser Ser Leu Ala Glu Thr Phe His
50 55 60

Ser Phe Ser Ser Leu Ser Arg Pro His Thr Thr Leu Lys Tyr Thr Phe
65 70 75 80

Lys Lys Leu Leu Gly Leu Lys Asn Gln Lys Asp Gln His Phe Ser Asp
85 90 95

Leu Ile Val Glu Gln Lys Glu Glu Leu Lys Asn Arg Ala Asn Gln Leu
100 105 110

Ile Gln Thr Leu Glu Ser Cys Gly Trp Glu Ala Ala Ile Gly Cys Gly
115 120 125

Gly Ile Ser Met Leu Ala Lys Pro Thr Ala Tyr Met Gly Lys Ala Phe
130 135 140

Lys Ala Ala Gly Phe Asp Gly
145 150

<210> 2005
<211> 76
<212> PRT
<213> Zea mays

<400> 2005
Leu Leu Ser Ser Arg Glu Ser Ile His Pro Leu Ser Val Tyr Gly Glu
1 5 10 15

Leu Ser Leu Glu His Arg Leu Arg Phe Val Leu Asn Gly Lys Met Glu
20 25 30

His Leu Thr Thr His Leu His Arg Pro Arg Thr Thr Arg Ser Pro Leu
35 40 45

Ser Phe Trp Gly Asp Gly Gly Ile Val Pro Phe Glu Pro Phe Phe His
50 55 60

Ala Phe Pro Gly Gly Leu Glu Lys Ala Val Ile Asn
65 70 75

<210> 2006

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 2006

Trp Ser Lys Thr Ala Glu Asn Phe Ala Asn Phe Thr Gly Glu Gln Gly
1 5 10 15

Tyr Pro Gly Gly Lys Phe Phe Asp Pro Leu Ala Leu Ala Gly Thr Leu
20 25 30

Asn Asn Gly Val Tyr Val Pro Asp Thr Glu Lys Leu Glu Arg Leu Lys
35 40 45

Leu Ala Glu Ile Lys His Ser Arg Leu Ala Met Leu Ala Met Leu Ile
50 55 60

Phe Tyr Phe Glu Ala Gly Gln Gly Lys Thr Pro Leu
65 70 75

<210> 2007

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 2007

Gly Asn His Ile Glu Met Gly Leu His Val Phe Phe Gly Cys Tyr Asn
1 5 10 15

Asn Leu Phe Arg Leu Leu Lys Lys Val Gly Ala Glu Lys Asn Leu Leu
20 25 30

Val Lys Glu His Thr His Thr Phe Val Asn Lys Gly Gly Glu Ile Gly
35 40 45

Glu Leu Asp Phe Arg Phe Pro Val Gly Ala Pro Leu His Gly Ile Asn
50 55 60

Ala Phe Leu Ser Thr Asn Gln Leu Lys Ile Tyr Asp Lys Ala Arg Asn
65 70 75 80

Ala Val Ala Leu Ala Leu Ser Pro Val Val Arg Ala Leu Val Asp Pro
85 90 95

Asp Gly Ala Leu Gln Gln Ile Arg Asp Leu Asp Asn Val Ser Phe Ser
100 105 110

Glu Trp Phe Leu Ser Lys Gly Gly Thr Arg Ala Ser Ile Gln Arg Met
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115

120

125

Trp Asp Pro Val Ala Tyr Ala Leu Gly Phe Ile Asp Cys Asp Asn Met
 130 135 140

Ser Ala Arg Cys Met Leu Thr Ile Phe Ala Leu Phe Ala Thr Lys Thr
 145 150 155 160

Glu Ala Ser Leu Leu Arg Met Leu Lys Gly Ser Pro Asp Val Tyr Leu
 165 170 175

<210> 2008

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2008

Gly Phe Met Ser Ala Ala Gly Leu Thr Val Asp His Pro Leu Met Thr
 1 5 10 15

Ser Thr Asp Phe Trp Thr Ser His Glu Cys Leu Leu Leu Pro Tyr Glu
 20 25 30

Gln Ser Leu Thr Arg Gln Asp Ser Thr Thr Gly His Phe Tyr Asp Cys
 35 40 45

Ser Ala His Met Leu Trp Val Gly Glu Arg Thr Arg Gln Leu Asp Gly
 50 55 60

Ala His Val Glu Phe Leu Arg Gly Val Ala Asn Pro Leu Gly Ile Lys
 65 70 75 80

Val Ser Asp Lys Met Asn Pro Thr Glu Leu Val Lys Leu Ile Glu Ile
 85 90 95

Leu Asn Pro Ser Asn
 100

<210> 2009

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2009

Gly Leu Gly Ala Ala Val Glu Phe Asn Lys Leu Asn Met Arg Tyr Met
 1 5 10 15

Leu Asp Phe Thr Cys Ala Ala Leu Phe Gly Gly Glu Pro Pro Ser Lys
 20 25 30

Val Val Gly Asp Gly Ala Val Thr Lys Ala Met Ala Trp Leu Ala Phe
 35 40 45

Gln Leu His Pro Ile Ala Ser Lys Val Val Lys Pro Trp Pro Leu Glu
 50 55 60

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Glu Leu Leu Leu His Thr Phe Ser Leu Pro Pro Phe Leu Val Arg Arg
65 70 75 80

Gly Tyr Ala Asp Leu Lys Ala Tyr Phe Ala Asp Ala Ala Ala Val
85 90 95

Leu Asp Asp Ala Glu Lys Ser His Thr Gly Ile Pro Arg Asp Glu Leu
100 105 110

Leu Asp Asn Leu Val Phe Val Ala Ile Phe Asn Ala Phe Gly Gly Phe
115 120 125

Lys Ile Phe Leu Pro His Ile Val Lys Trp Leu Ala Arg Ala Gly Pro
130 135 140

Glu Leu His Ala Lys Leu Ala Thr Glu Val Arg Ala Thr Val Pro Thr
145 150 155 160

Gly Glu Asp Asp Gly Ile Thr Leu Ala Ala Val Glu Arg Met Pro Leu
165 170 175

<210> 2010

<211> 201

<212> PRT

<213> Oryza sativa

<400> 2010

Phe Val Ala Ile Phe Asp Ala Asp Phe Gln Pro Thr Pro Asp Phe Leu
1 5 10 15

Lys Lys Thr Ile Pro His Phe Glu Gly Asn Pro Glu Leu Gly Leu Val
20 25 30

Gln Ala Arg Trp Ser Phe Val Asn Lys Asp Glu Asn Leu Leu Thr Arg
35 40 45

Leu Gln Asn Ile Asn Leu Cys Phe His Phe Glu Val Glu Gln Gln Val
50 55 60

Asn Gly Val Phe Leu Asn Phe Phe Gly Phe Asn Gly Thr Ala Gly Val
65 70 75 80

Trp Arg Ile Gln Ala Leu Glu Glu Ser Gly Gly Trp Leu Glu Arg Thr
85 90 95

Thr Val Glu Asp Met Asp Ile Ala Val Arg Ala His Leu Asn Gly Trp
100 105 110

Lys Phe Ile Phe Leu Asn Asp Val Lys Val Leu Cys Glu Leu Pro Glu
115 120 125

Ser Tyr Glu Ala Tyr Arg Lys Gln Gln His Arg Trp His Ser Gly Pro
130 135 140

Met His Leu Phe Arg Leu Cys Leu Pro Asp Ile Leu Thr Ala Lys Ile

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145 150 155 160

Ser Ser Trp Lys Lys Ala Asn Leu Ile Leu Leu Phe Phe Leu Leu Arg
165 170 175

Lys Leu Ile Leu Pro Phe Tyr Ser Phe Thr Leu Phe Cys Val Ile Leu
180 185 190

Pro Leu Thr Met Phe Val Pro Glu Ala
195 200

<210> 2011

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 2011

Ala Val Lys Gln Asn Tyr Gly Glu Lys Val Leu Ile Gln Phe Glu Asp
1 5 10 15

Phe Ala Asn His Asn Ala Phe Asn Leu Leu Ala Lys Tyr Gly Thr Ser
20 25 30

His Leu Val Phe Asn Asp Asp Ile Gln Gly Thr Ala Ser Val Val Leu
35 40 45

Ala Gly Leu Met Ala Ala Leu Asn Leu Val Gly Gly Ser Leu Ser Glu
50 55 60

His Thr Phe Leu Phe Leu Gly Ala Gly Glu Ala Gly Thr Gly Ile Ala
65 70 75 80

Glu Leu Ile Ala Leu Glu Met Ser Lys Gln Thr Gly Ile Pro Leu Glu
85 90 95

Glu Thr Arg Lys Lys Ile Trp Met Val Asp Ser Lys Gly Leu Ile Val
100 105 110

Lys Ser Arg Met Glu Met Leu Gln His Phe Lys Arg Pro Trp
115 120 125

<210> 2012

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2012

Ser Leu Thr Thr Ala Thr Glu Glu Lys Pro Trp Trp Asp Met Leu Pro
1 5 10 15

Val Val Leu Ile Gln Tyr Ala Arg Gly Leu His Arg Gly His Lys Asn
20 25 30

Leu Phe Gln Ala Leu Pro Arg Leu Leu Thr Leu Trp Phe Glu Phe Gly
35 40 45

Ser Ile Tyr Ile Gln Asp Gly Ser Ser Phe Asn Lys Pro Met Lys Glu
50 55 60

Val His Ile Arg Leu Leu Gly Ile Met Arg Gly Cys
65 70 75

<210> 2013

<211> 276

<212> PRT

<213> Zea mays

<400> 2013

Glu Tyr Ile Tyr Ala Phe Ala His Asp Tyr Gly Leu Asn Gly Ser Glu
1 5 10 15

Pro Val Glu Ile Phe Gly Cys Asn Asn Lys Lys Phe Ser Ser Leu Leu
20 25 30

Val Asn Arg Leu Ile Ile Arg Met Tyr Gln Gln Asn Phe Leu Ile Asn
35 40 45

Ser Val Asn Tyr Pro Asn Gln Asp Arg Leu Leu Asp His Arg Asn Tyr
50 55 60

Phe Tyr Ser Glu Phe Tyr Ser Gln Ile Leu Ser Glu Gly Phe Ala Ile
65 70 75 80

Val Val Glu Ile Pro Leu Ser Leu Gly Gln Leu Ser Cys Pro Glu Glu
85 90 95

Lys Glu Ile Pro Asn Phe Gln Asn Leu Gln Ser Ile His Ser Ile Phe
100 105 110

Pro Phe Leu Glu Asp Lys Phe Leu His Leu His Tyr Leu Ser His Ile
115 120 125

Lys Ile Pro Tyr Pro Ile His Leu Glu Ile Leu Val Gln Leu Leu Glu
130 135 140

Tyr Arg Ser Gln Asp Val Pro Ser Leu His Leu Leu Arg Phe Phe Leu
145 150 155 160

Tyr Tyr Tyr Ser Asn Trp Asn Ser Phe Ile Thr Ser Met Lys Ser Ile
165 170 175

Phe Leu Leu Lys Lys Glu Asn Lys Arg Leu Phe Arg Phe Leu Tyr Asn
180 185 190

Ser Tyr Val Ser Glu Tyr Glu Phe Phe Leu Leu Phe Leu His Lys Gln
195 200 205

Ser Ser Cys Leu Arg Leu Thr Ser Ser Gly Thr Phe Leu Glu Arg Ile
210 215 220

Ile Phe Ser Gly Lys Met Glu His Phe Gly Val Met Tyr Pro Gly Phe

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225 230 235 240

Phe Arg Lys Thr Ile Trp Phe Phe Met Asp Pro Leu Met His Tyr Val
245 250 255

Arg Tyr Gln Gly Lys Ala Ile Leu Ala Ser Lys Gly Thr Leu Leu Leu
260 265 270

Lys Lys Lys Trp
275

<210> 2014
<211> 151
<212> PRT
<213> Oryza sativa

<400> 2014
Phe Asp Cys Cys Phe Ser Thr Glu Thr Met Glu Gln Phe Glu Tyr Lys
1 5 10 15

Asn Tyr Leu Asp Asn Ile Val Leu Gln Leu Arg Glu Gln Phe Val Asp
20 25 30

Ser Ser Leu Met Val Phe Asn Phe Arg Asp Glu Gly Lys Ser Leu Val
35 40 45

Ser Gly Leu Phe Ser Leu Tyr Gly Ile Thr Val Lys Asp Tyr Pro Cys
50 55 60

Gln Tyr Leu Gly Cys Pro Leu Leu Pro Leu Glu Met Val Leu His Phe
65 70 75 80

Leu Arg Leu Ser Glu Arg Trp Leu Met Leu Glu Gly Gln Gln Asn Phe
85 90 95

Leu Leu Met His Cys Glu Lys Gly Gly Trp Pro Val Leu Ala Phe Met
100 105 110

Leu Ala Gly Leu Leu Leu Tyr Met Lys Gln Tyr Asn Gly Glu Glu Arg
115 120 125

Thr Leu Val Met Val Tyr Lys Gln Ala Pro Lys Glu Leu Leu Gln Met
130 135 140

Leu Thr Thr Leu Asn Pro Gln
145 150

<210> 2015
<211> 151
<212> PRT
<213> Oryza sativa

<400> 2015
Glu Ser Ala Lys Pro Glu Trp Arg Arg Val Lys Val Ser Ala Ser Pro
1 5 10 15

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Pro Gly Arg Trp Gly His Thr Leu Ser Trp Leu Asn Gly Ser Trp Leu
20 25 30

Val Val Phe Gly Gly Cys Gly Gln Gln Gly Leu Leu Asn Asp Val Phe
35 40 45

Val Leu Asp Leu Asp Ala Lys Gln Pro Thr Trp Arg Glu Val Ala Ser
50 55 60

Glu Gly Pro Pro Leu Pro Arg Ser Trp His Ser Ser Cys Thr Leu Asp
65 70 75 80

Gly Ser Lys Leu Val Val Ser Gly Gly Cys Thr Glu Ser Gly Val Leu
85 90 95

Leu Ser Asp Thr Phe Leu Leu Asp Leu Thr Lys Glu Lys Pro Ala Trp
100 105 110

Lys Glu Ile Pro Thr Ser Trp Ser Pro Pro Ser Arg Leu Gly His Thr
115 120 125

Leu Ser Val Phe Gly Lys Thr Lys Leu Phe Met Phe Gly Gly Leu Ala
130 135 140

Lys Ser Gly Ser Leu Arg Leu
145 150

<210> 2016

<211> 226

<212> PRT

<213> Oryza sativa

<400> 2016

Val Met Glu Tyr Tyr Lys Ala Lys Gln Arg Cys Tyr Ala Leu Gln Ile
1 5 10 15

Arg Asp Tyr Cys Cys Tyr Leu Gln Cys His His Leu Leu Leu Gln Gln
20 25 30

Gln Gln His Gly Val Ala Ala Ala Arg Leu Lys Ala Ala Met Gly Arg
35 40 45

Leu Gly Leu Glu Ala Ala Thr Ala Phe Asn Ala Ala Asn Tyr Leu Asp
50 55 60

Arg Phe Leu Ser Ile Asn Cys His Leu Lys Trp Glu Glu Trp Met Val
65 70 75 80

Glu Val Val Ser Val Gly Cys Leu Ser Leu Ala Cys Lys Leu Asp Glu
85 90 95

Val Thr Ile Pro Ser Leu His Asp Leu Gln Met Glu Glu Ala Met Gly
100 105 110

His Ser Phe Arg Ala Ser Thr Ile Arg Asp Met Glu Leu Thr Leu Leu

115
 120
 125
 Lys Ala Leu Arg Trp Arg Leu Ala Cys Val Thr Pro Phe Ser Phe Leu
 130 135 140
 Pro Val Thr Thr Thr Thr Thr Thr Thr Arg Ala Leu Leu Leu Arg Ser
 145 150 155 160
 Leu Leu Asp Pro Ser Phe Leu Arg Phe Asp Ala Ser Leu Leu Ala Ala
 165 170 175
 Ser Ala Leu Thr Leu Ser Ser Thr Thr Pro Gln His Pro Asn His Leu
 180 185 190
 Leu Leu Asn Arg Leu Ile His Pro Phe Ser Gln Thr Asp His Glu Val
 195 200 205
 Lys Glu Cys Phe Asn Met Met Lys Ala Leu His Leu Asp Met Ser Lys
 210 215 220
 Asn Pro
 225
 <210> 2017
 <211> 251
 <212> PRT
 <213> Oryza sativa
 <400> 2017
 Ala Val Arg Ala His Leu Lys Gly Trp Lys Phe Val Phe Leu Asn Asp
 1 5 10 15
 Val Glu Cys Gln Cys Glu Leu Pro Glu Ser Tyr Glu Ala Tyr Arg Lys
 20 25 30
 Gln Gln His Arg Trp His Ser Gly Pro Met Gln Leu Phe Arg Leu Cys
 35 40 45
 Phe Val Asp Ile Ile Lys Ser Lys Ile Gly Phe Trp Lys Lys Phe Asn
 50 55 60
 Leu Ile Phe Leu Phe Phe Leu Leu Arg Lys Leu Ile Leu Pro Phe Tyr
 65 70 75 80
 Ser Phe Thr Leu Phe Cys Val Ile Leu Pro Met Thr Met Phe Val Pro
 85 90 95
 Glu Ala Glu Leu Pro Ala Trp Val Val Cys Tyr Ile Pro Ala Thr Met
 100 105 110
 Ser Ile Leu Asn Ile Leu Pro Ala Pro Lys Ser Phe Pro Phe Ile Val
 115 120 125
 Pro Tyr Leu Leu Phe Glu Asn Thr Met Ser Val Thr Lys Phe Asn Ala
 130 135 140

Met Ile Ser Gly Leu Phe Gln Leu Gly Ser Ala Tyr Glu Trp Val Val
145 150 155 160

Thr Lys Lys Ser Gly Arg Ser Ser Glu Gly Asp Leu Val Gly Leu Val
165 170 175

Glu Lys His Ser Lys Gln Gln Arg Val Gly Ser Ala Pro Asn Leu Asp
180 185 190

Ala Leu Thr Lys Glu Glu Ser Asn Pro Lys Lys Asp Ser Lys Lys Lys
195 200 205

Lys His Asn Arg Ile Tyr Arg Lys Glu Leu Ala Leu Ser Phe Leu Leu
210 215 220

Leu Thr Ala Ala Ala Arg Ser Leu Leu Ser Ala Gln Gly Ile His Phe
225 230 235 240

Tyr Phe Leu Leu Phe Gln Gly Val Ser Phe Leu
245 250

<210> 2018

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2018

Asn Met Pro Pro Gly Pro Phe Leu Ala Gly Asp Pro Arg Val Val Ala
1 5 10 15

Leu Leu Asp Ala Arg Ser Phe Arg Val Leu Leu Asp Asp Ser Met Val
20 25 30

Asp Lys Ala Asp Thr Leu Asp Gly Thr Phe Met Pro Ser Leu Ala Leu
35 40 45

Phe Gly Gly His Arg Pro Leu Ala Phe Leu Asp Ala Ala Asp Pro Arg
50 55 60

His Ala Lys Ile Lys Arg Val Val Met Ser Leu Ala Ala Ala Arg Met
65 70 75 80

His His Val Ala Pro Ala Phe Arg Ala Ala Phe Ala Ala Met Phe Asp
85 90 95

Glu Val Asp Ala Gly Leu Val Ala Gly Gly Pro Val Glu Phe Asn Lys
100 105 110

Leu Asn Met Arg Tyr Met Leu Asp Phe Thr Cys Ala Ala Leu Phe Gly
115 120 125

Gly Ala Pro Pro Ser Lys Ala Met Gly Asp Ala Ala Val Thr Lys Ala
130 135 140

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Val Lys Trp Leu Ile Phe Gln Leu His Pro Leu Ala Ser Lys Val Val
145 150 155 160

Lys Pro Trp Pro Leu Glu Asp Leu Leu Leu His Thr Phe Arg Leu Pro
165 170 175

<210> 2019
<211> 176
<212> PRT
<213> Zea mays

<400> 2019
Asn Phe Gln Asn Leu Gln Ser Ile His Ser Ile Phe Pro Phe Leu Glu
1 5 10 15

Asp Lys Phe Leu His Leu His Tyr Leu Ser His Ile Lys Ile Pro Tyr
20 25 30

Pro Ile His Leu Glu Ile Leu Val Gln Leu Leu Glu Tyr Arg Ser Gln
35 40 45

Asp Val Pro Ser Leu His Leu Leu Arg Phe Phe Leu Tyr Tyr Tyr Ser
50 55 60

Asn Trp Asn Ser Phe Ile Thr Ser Met Lys Ser Ile Phe Leu Leu Lys
65 70 75 80

Lys Glu Asn Lys Arg Leu Phe Arg Phe Leu Tyr Asn Ser Tyr Val Ser
85 90 95

Glu Tyr Glu Phe Phe Leu Leu Phe Leu His Lys Gln Ser Ser Cys Leu
100 105 110

Arg Leu Thr Ser Ser Gly Thr Phe Leu Glu Arg Ile Ile Phe Ser Gly
115 120 125

Lys Met Glu His Phe Gly Val Met Tyr Pro Gly Phe Phe Arg Lys Thr
130 135 140

Ile Trp Phe Phe Met Asp Pro Leu Met His Tyr Val Arg Tyr Gln Gly
145 150 155 160

Lys Ala Ile Leu Ala Ser Lys Gly Thr Leu Leu Leu Lys Lys Lys Trp
165 170 175

<210> 2020
<211> 176
<212> PRT
<213> Oryza sativa

<400> 2020
Leu Ser Pro Tyr Arg Leu Leu Val Leu Val Arg Phe Val Ala Leu Phe
1 5 10 15

Leu Phe Leu Val Trp Arg Val Thr Asn Pro Asn Met Asp Ala Leu Trp
20 25 30

Leu Trp Gly Ile Ser Ile Val Cys Glu Phe Trp Phe Ala Phe Ser Trp
 35 40 45
 Leu Leu Asp Gln Met Pro Lys Leu Asn Pro Ile Asn Arg Ala Ala Asp
 50 55 60
 Leu Ala Ala Leu Lys Glu Lys Phe Glu Ser Pro Ser Pro Thr Asn Pro
 65 70 75 80
 Thr Gly Arg Ser Asp Leu Pro Gly Leu Asp Val Phe Ile Ser Thr Ala
 85 90 95
 Asp Pro Tyr Lys Glu Pro Thr Leu Val Thr Ala Asn Thr Leu Leu Ser
 100 105 110
 Ile Leu Ala Thr Glu Tyr Pro Val Glu Lys Leu Phe Val Tyr Ile Ser
 115 120 125
 Asp Asp Gly Gly Ala Leu Leu Thr Phe Glu Ser Met Ala Glu Ala Cys
 130 135 140
 Ala Phe Ala Lys Val Trp Val Pro Phe Cys Arg Lys His Ser Ile Glu
 145 150 155 160
 Pro Arg Asn Pro Asp Ser Tyr Phe Thr Gln Lys Gly Asp Pro Thr Lys
 165 170 175
 <210> 2021
 <211> 176
 <212> PRT
 <213> Oryza sativa
 <400> 2021
 Phe Lys Gly Asn Pro Glu Leu Gly Leu Val Gln Ala Arg Trp Ser Phe
 1 5 10 15
 Val Asn Lys Asp Glu Asn Leu Leu Thr Arg Leu Gln Asn Ile Asn Leu
 20 25 30
 Cys Phe His Phe Glu Val Glu Gln Gln Val Asn Gly Val Tyr Leu Ser
 35 40 45
 Phe Phe Gly Phe Asn Gly Thr Ala Gly Val Trp Arg Ile Lys Ala Leu
 50 55 60
 Glu Asp Ser Gly Gly Trp Met Glu Arg Thr Thr Val Glu Asp Met Asp
 65 70 75 80
 Ile Ala Val Arg Ala His Leu Asn Gly Trp Lys Phe Ile Phe Leu Asn
 85 90 95
 Asp Val Lys Val Leu Cys Glu Leu Pro Glu Ser Tyr Gln Ala Tyr Arg
 100 105 110

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Lys Gln Gln His Arg Trp His Ser Gly Pro Met Gln Leu Phe Arg Leu
115 120 125

Cys Leu Pro Ala Val Phe Lys Ser Lys Ile Ser Thr Trp Lys Lys Ala
130 135 140

Asn Leu Val Met Leu Phe Phe Leu Leu Arg Lys Leu Ile Leu Pro Phe
145 150 155 160

Tyr Ser Phe Thr Leu Phe Cys Val Ile Leu Pro Leu Thr Met Phe Val
165 170 175

<210> 2022

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 2022

Gln Asn Leu Phe Gly Glu Leu Gly Ile Asn Asp Arg Leu Gln Trp Lys
1 5 10 15

Glu His Ser Met Ile Phe Ala Met Pro Ser Lys Pro Gly Glu Phe Ser
20 25 30

Arg Phe Asp Phe Ser Glu Ala Leu Pro Ala Pro Leu Asn Gly Ile Leu
35 40 45

Ala Ile Leu Lys Asn Asn Glu Met Leu Thr Trp Pro Glu Lys Val Lys
50 55 60

Phe Ala Ile Gly Leu Leu Pro Ala Met Leu Gly Gly
65 70 75

<210> 2023

<211> 76

<212> PRT

<213> Zea mays

<400> 2023

Phe Leu Leu Phe Leu His Lys Gln Ser Ser Cys Leu Arg Leu Thr Ser
1 5 10 15

Ser Gly Thr Phe Leu Glu Arg Ile Ile Phe Ser Gly Lys Met Glu His
20 25 30

Phe Gly Val Met Tyr Pro Gly Phe Phe Arg Lys Thr Ile Trp Phe Phe
35 40 45

Met Asp Pro Leu Met His Tyr Val Arg Tyr Gln Gly Lys Ala Ile Leu
50 55 60

Ala Ser Lys Gly Thr Leu Leu Leu Lys Lys Lys Trp
65 70 75

<210> 2024

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2024

Leu Phe Glu Thr Lys Gly Thr Tyr Gly Tyr Gly Asn Ala Ile Trp Pro
 1 5 10 15

Lys Glu Asn Glu Val Asp Asn Gly Gly Gly Gly Gly Gly Gly Gly Gly
 20 25 30

Leu Gly Gly Gly Asp Gly Gln Pro Ala Glu Phe Thr Ser Lys Pro Trp
 35 40 45

Arg Pro Leu Thr Arg Lys Leu Lys Ile Pro Ala Gly Val Leu Ser Pro
 50 55 60

Tyr Arg Leu Leu Ile Leu Ile Arg Met Ala Val Leu Gly Leu Phe Leu
 65 70 75 80

Ala Trp Arg Ile Lys His Lys Asn Glu Asp Ala Met Trp Leu Trp Gly
 85 90 95

Met Ser Val Val Cys Glu Leu Trp Phe Gly Leu Ser Trp Leu Leu Asp
 100 105 110

Gln Leu Pro Lys Leu Cys Pro Val Asn Arg Ala Thr Asp Leu
 115 120 125

<210> 2025

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2025

Pro Ala Trp Val Val Cys Tyr Ile Pro Ala Thr Met Ser Ile Leu Asn
 1 5 10 15

Ile Leu Pro Ala Pro Lys Ser Phe Pro Phe Ile Val Pro Tyr Leu Leu
 20 25 30

Phe Glu Asn Thr Met Ser Val Thr Lys Phe Asn Ala Met Ile Ser Gly
 35 40 45

Leu Phe Gln Leu Gly Ser Ala Tyr Glu Trp Val Val Thr Lys Lys Ser
 50 55 60

Gly Arg Ser Ser Glu Gly Asp Leu Val Gly Leu Val Glu Lys His Ser
 65 70 75 80

Lys Gln Gln Arg Val Gly Ser Ala Pro Asn Leu Asp Ala Leu Thr Lys
 85 90 95

Glu Glu Ser Asn Pro Lys Lys Asp Ser Lys Lys Lys Lys His Asn Arg
 100 105 110

Ile Tyr Arg Lys Glu Leu Ala Leu Ser Phe Leu Leu Leu Thr Ala Ala

115

120

125

Ala Arg Ser Leu Leu Ser Ala Gln Gly Ile His Phe Tyr Phe Leu Leu
 130 135 140

Phe Gln Gly Val Ser Phe Leu
 145 150

<210> 2026

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2026

Asp Ile Leu Ser Glu Tyr Asp Met Thr Val Met Asp Tyr Pro Gln Gln
 1 5 10 15

Tyr Glu Gly Cys Pro Leu Leu Gln Leu Glu Met Ile His His Phe Leu
 20 25 30

Lys Ser Cys Glu Asn Trp Leu Ser Val Glu Gly Gln His Asn Met Leu
 35 40 45

Leu Met His Cys Glu Arg Gly Gly Trp Pro Val Leu Ala Phe Met Leu
 50 55 60

Ala Gly Leu Leu Leu Tyr Arg Lys Thr Tyr Thr Gly
 65 70 75

<210> 2027

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2027

Tyr Trp Arg Met Leu Arg Lys Leu Cys Thr Val Glu Leu Leu Ser Thr
 1 5 10 15

Lys Val Val Arg Gln Leu Ala Pro Val Arg Asn Asp Glu Thr Leu Thr
 20 25 30

Leu Val Arg Asn Ile Lys Ala Ala Ser Ser Gly His Gly Gly Gly Gly
 35 40 45

Gly Lys Lys Pro Val Thr Leu Ala Arg Leu Leu Thr Thr Cys Thr Asn
 50 55 60

Thr Ile Thr Ala Lys Ala Ala Phe Gly Gln Ala Cys
 65 70 75

<210> 2028

<211> 251

<212> PRT

<213> Solanum lycopersicum

<400> 2028

Met Ala Phe Phe Leu Ile Phe Leu Ser Ser Phe Phe Gly Leu Cys Ile
 1 5 10 15

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Phe Cys Thr Ala Leu Leu Arg Trp Asn Gln Val Lys Tyr Asn Gln Lys
20 25 30

Asn Leu Pro Pro Gly Thr Met Gly Trp Pro Leu Phe Gly Glu Thr Thr
35 40 45

Glu Phe Leu Lys Leu Gly Pro Ser Phe Met Lys Asn Gln Arg Ala Arg
50 55 60

Tyr Gly Ser Phe Phe Lys Ser His Ile Leu Gly Cys Pro Thr Ile Val
65 70 75 80

Ser Met Asp Ser Glu Leu Asn Arg Tyr Ile Leu Val Asn Glu Ala Lys
85 90 95

Gly Leu Val Pro Gly Tyr Pro Gln Ser Met Ile Asp Ile Leu Gly Lys
100 105 110

Cys Asn Ile Ala Ala Val Asn Gly Ser Ala His Lys Tyr Met Arg Gly
115 120 125

Ala Leu Leu Ser Leu Ile Ser Pro Thr Met Ile Arg Asp Gln Leu Leu
130 135 140

Pro Lys Ile Asp Glu Phe Met Arg Ser His Leu Thr Asn Trp Asp Asn
145 150 155 160

Lys Val Ile Asp Ile Gln Glu Lys Thr Asn Lys Met Ala Phe Leu Ser
165 170 175

Ser Leu Lys Gln Ile Ala Gly Ile Glu Ser Thr Ser Leu Ala Gln Glu
180 185 190

Phe Met Ser Glu Phe Phe Asn Leu Val Leu Gly Thr Leu Ser Leu Pro
195 200 205

Ile Asn Leu Pro Asn Thr Asn Tyr His Arg Gly Phe Gln Ala Arg Lys
210 215 220

Ile Ile Val Asn Leu Leu Arg Thr Leu Ile Glu Glu Arg Arg Ala Ser
225 230 235 240

Lys Glu Ile Gln His Asp Met Leu Gly Tyr Leu
245 250

<210> 2029

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2029

Val Ile Arg Met Phe Val Leu Leu Phe Tyr Leu Thr Trp Arg Ile Arg
1 5 10 15

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Asn Pro Asn Met Glu Ala Leu Trp Leu Trp Gly Met Ser Ile Val Cys
20 25 30

Glu Leu Trp Phe Ala Phe Ser Trp Leu Leu Asp Met Leu Pro Lys Val
35 40 45

Asn Pro Val Asn Arg Ser Thr Asp Leu Ala Val Leu Lys Glu Lys Phe
50 55 60

Glu Thr Pro Ser Pro Ser Asn Pro His Gly Arg Ser
65 70 75

<210> 2030

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2030

Phe Leu Leu Asp Leu Thr Lys Glu Lys Pro Ala Trp Lys Glu Ile Pro
1 5 10 15

Thr Ser Trp Ser Pro Pro Ser Arg Leu Gly His Thr Leu Ser Val Phe
20 25 30

Gly Lys Thr Lys Leu Phe Met Phe Gly Gly Leu Ala Lys Ser Gly Ser
35 40 45

Leu Arg Leu Arg Ser Cys Asp Ala Tyr Thr Met Asp Ala Gly Glu Asp
50 55 60

Ser Pro Gln Trp Arg Gln Leu Ala Thr Thr Gly Phe Pro Ser Ile Gly
65 70 75 80

Pro Pro Pro Arg Leu Asp His Val Ala Val Ser Leu Pro Cys Gly Arg
85 90 95

Ile Ile Ile Phe Gly Gly Ser Ile Ala Gly Leu His Ser Pro Ser Gln
100 105 110

Leu Phe Leu Leu Asp Pro Ala Glu Glu Lys Pro Thr Trp Arg Ile Leu
115 120 125

Asn Val Pro Gly Gln Pro Pro Lys Phe Ala Trp Gly His Ser Thr Cys
130 135 140

Val Val Gly Gly Thr Arg Val Leu Val Leu Gly Gly His Thr Gly Glu
145 150 155 160

Glu Trp Ile Leu Asn Glu Leu His Glu Leu Cys Leu Ala Ser Arg Pro
165 170 175

<210> 2031

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2031

Leu Lys Pro Glu Asn Leu Leu Leu Asp Ser His Gly Ala Leu Lys Val
1 5 10 15

Ser Asp Phe Gly Leu Ser Ala Phe Ala Pro Gln Thr Lys Glu Asp Gly
20 25 30

Leu Leu His Thr Ala Cys Gly Thr Pro Asn Tyr Val Ala Pro Glu Val
35 40 45

Leu Ala Asp Lys Gly Tyr Asp Gly Met Ala Ala Asp Val Trp Ser Cys
50 55 60

Gly Ile Ile Leu Phe Val Leu Met Ala Gly Tyr Leu Pro Phe Asp Asp
65 70 75 80

Pro Asn Leu Met Thr Leu Tyr Lys Leu Ile Cys Lys Ala Lys Val Ser
85 90 95

Cys Pro His Trp Phe
100

<210> 2032

<211> 276

<212> PRT

<213> Zea mays

<400> 2032

Asn Phe Gln Asn Leu Gln Ser Ile His Ser Ile Phe Pro Phe Leu Glu
1 5 10 15

Asp Lys Phe Leu His Leu His Tyr Leu Ser His Ile Lys Ile Pro Tyr
20 25 30

Pro Ile His Leu Glu Ile Leu Val Gln Leu Leu Glu Tyr Arg Ser Gln
35 40 45

Asp Val Pro Ser Leu His Leu Leu Arg Phe Phe Leu Tyr Tyr Tyr Ser
50 55 60

Asn Trp Asn Ser Phe Ile Thr Ser Met Lys Ser Ile Phe Leu Leu Lys
65 70 75 80

Lys Glu Asn Lys Arg Leu Phe Arg Phe Leu Tyr Asn Ser Tyr Val Ser
85 90 95

Glu Tyr Glu Phe Phe Leu Leu Phe Leu His Lys Gln Ser Ser Cys Leu
100 105 110

Arg Leu Thr Ser Ser Gly Thr Phe Leu Glu Arg Ile Ile Phe Ser Gly
115 120 125

Lys Met Glu His Phe Gly Val Met Tyr Pro Gly Phe Phe Arg Lys Thr
130 135 140

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Ile Trp Phe Phe Met Asp Pro Leu Met His Tyr Val Arg Tyr Gln Gly
145 150 155 160

Lys Ala Ile Leu Ala Ser Lys Gly Thr Leu Leu Lys Lys Lys Trp
165 170 175

Lys Ser Tyr Leu Val Asn Phe Ser Gln Tyr Phe Phe Ser Phe Trp Thr
180 185 190

Gln Pro Gln Arg Ile Arg Leu Asn Gln Leu Thr Asn Ser Cys Phe Asp
195 200 205

Phe Leu Gly Tyr Leu Ser Ser Val Pro Ile Asn Thr Leu Leu Val Arg
210 215 220

Asn Gln Met Leu Glu Asn Ser Phe Leu Ile Asp Thr Arg Met Lys Lys
225 230 235 240

Phe Asp Thr Thr Val Leu Ala Thr Pro Leu Val Gly Ser Leu Ser Lys
245 250 255

Ala Gln Phe Cys Thr Gly Ser Gly His Pro Ile Ser Lys Pro Val Trp
260 265 270

Thr Asp Leu Ser
275

<210> 2033

<211> 176

<212> PRT

<213> Zea mays

<400> 2033

Met Glu Leu Ser Pro Asn Asn Ser Thr Asp Gln Ser Leu Leu Asp Ala
1 5 10 15

Gln Leu Glu Leu Trp His Thr Thr Phe Ala Phe Met Lys Ser Met Ala
20 25 30

Leu Lys Ser Ala Ile His Leu Arg Ile Ala Asp Ala Ile His Leu His
35 40 45

Gly Gly Ala Ala Ser Leu Ser Gln Ile Leu Ser Lys Val His Leu His
50 55 60

Pro Ser Arg Val Ser Ser Leu Arg Arg Leu Met Arg Val Leu Thr Thr
65 70 75 80

Thr Asn Val Phe Gly Thr Gln Pro Leu Gly Gly Gly Ser Asp Asp Asp
85 90 95

Ser Glu Pro Val Tyr Thr Leu Thr Pro Val Ser Arg Leu Leu Ile Gly
100 105 110

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Ser Gln Ser Ser Gln Leu Ala Gln Thr Pro Leu Ala Ala Met Val Leu
115 120 125

Asp Pro Thr Ile Val Ser Pro Phe Ser Glu Leu Gly Ala Trp Phe Gln
130 135 140

His Glu Leu Pro Asp Pro Cys Ile Phe Lys His Thr His Gly Arg Gly
145 150 155 160

Ile Trp Glu Leu Thr Lys Asp Asp Ala Thr Phe Asp Ala Leu Val Asn
165 170 175

<210> 2034

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 2034

Ala Met Pro Phe Asp Leu Leu Lys Lys Lys Leu Met Leu Arg Leu Asn
1 5 10 15

Thr Leu Gly Val Arg Ile Lys Glu Ile Tyr Glu Glu Glu Trp Ser Tyr
20 25 30

Ile Pro Val Gly Gly Ser Leu Pro Asn Thr Glu Gln Lys Thr Leu Ala
35 40 45

Phe Gly Ala Ala Ala Ser Met Val His Pro Ala Thr Gly Tyr Ser Val
50 55 60

Val Arg Ser Leu Ser Glu Ala Pro Lys Cys Ala Ser Val Leu Ala Asn
65 70 75 80

Ile Leu Arg Gln His Tyr Ser Lys Asn Met Leu Thr Ser Ser Ser Ile
85 90 95

Pro Ser Ile Ser Thr Gln Ala Trp Asn Thr Leu Trp Pro Gln Glu Arg
100 105 110

Lys Arg Gln Arg Ser Phe Phe Leu Phe Gly Leu Ala Leu Ile Leu Gln
115 120 125

Leu Asp Ile Glu Gly Ile Arg Ser Phe Phe Arg Ala Phe Phe Arg Val
130 135 140

Pro Lys Trp Met Trp Gln Gly Phe Leu Gly Ser Ser Leu Ser Ser Ala
145 150 155 160

Asp Leu Met Leu Phe Ala Phe Tyr Met Phe Ile Ile Ala Pro Asn Asp
165 170 175

Met Arg Lys Gly Leu Ile Arg His Leu Leu Ser Asp Pro Thr Gly Ala
180 185 190

Thr Leu Ile Arg Thr Tyr Leu Thr Phe

195

200

<210> 2035

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 2035

Met Leu Gly Gln Leu Val Gly Gly Leu Ile Gly Gly His His Asp Ser
1 5 10 15Lys Lys Val Lys Gly Thr Val Val Met Met Lys Lys Asn Ala Leu Asp
20 25 30Phe Thr Asp Leu Ala Gly Ser Leu Thr Asp Lys Ile Phe Glu Ala Leu
35 40 45Gly Gln Lys Val Ser Phe Gln Leu Ile Ser Ser Val Gln Ser Asp Pro
50 55 60Ala Asn Gly Leu Gln Gly Lys His Ser Asn Pro Ala Tyr Leu Glu Asn
65 70 75 80Phe Leu Leu Thr Leu Thr Pro Leu Ala Ala Gly Glu Thr Ala Phe Gly
85 90 95Val Thr Phe Asp Trp
100

<210> 2036

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 2036

Met Ala Leu Ser Asn Thr Leu Ser Leu Ser Ser Ser Lys Ser Leu Val
1 5 10 15Gln Ser His Leu Leu His Asn Pro Thr Pro Gln Pro Arg Phe Ser Leu
20 25 30Phe Pro Thr Thr Gln His Gly Arg Arg His Pro Ile Ser Ala Val His
35 40 45Ala Ala Glu Pro Ser Lys Thr Ala Val Lys Gln Gly Lys Trp Ser Leu
50 55 60Asp Ser Trp Lys Thr Lys Lys Ala Leu Gln Leu Pro
65 70 75

<210> 2037

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 2037

Thr Gln Ala Trp Asn Thr Leu Trp Pro Gln Glu Arg Lys Arg Gln Arg
1 5 10 15

Ser Phe Phe Leu Phe Gly Leu Ala Leu Ile Leu Gln Leu Asp Ile Glu
20 25 30

Gly Ile Arg Ser Phe Phe Arg Ala Phe Phe Arg Val Pro Lys Trp Met
35 40 45

Trp Gln Gly Phe Leu Gly Ser Ser Leu Ser Ser Ala Asp Leu Met Leu
50 55 60

Phe Ala Phe Tyr Met Phe Ile Ile Ala Pro Asn Asp Met Arg Lys Gly
65 70 75 80

Leu Ile Arg His Leu Leu Ser Asp Pro Thr Gly Ala Thr Leu Ile Arg
85 90 95

Thr Tyr Leu Thr Phe
100

<210> 2038
<211> 76
<212> PRT
<213> Zea mays

<400> 2038
Lys Gly Ile Thr Ile Trp Ser Gly Asn Asp Asp Glu Cys His Asp Ser
1 5 10 15

Lys Trp Lys His Gly Ala Thr Gly Val Ile Ser Val Thr Ser Asn Leu
20 25 30

Val Pro Gly Leu Met His Ser Leu Met Tyr Lys Gly Glu Asn Ala Thr
35 40 45

Leu Asn Glu Lys Leu Ser Pro Leu Met Lys Trp Leu Phe Cys Gln Pro
50 55 60

Asn Pro Ile Ala Leu Asn Thr Ala Leu Ala Gln Leu
65 70 75

<210> 2039
<211> 76
<212> PRT
<213> Oryza sativa

<400> 2039
Val Gln Ser Glu Leu Leu Phe Arg Lys Asp Arg Ser Thr Phe Thr Phe
1 5 10 15

Asp Lys Gly Trp Ala Phe Pro Arg Arg Ile Tyr Phe Asn Gly Glu Ser
20 25 30

Cys Val Met Pro Ser Pro Asp Leu Tyr Pro Trp Leu Pro Pro Ser Ser
35 40 45

Thr Pro Arg Phe Arg Thr Val Phe Leu Leu Met Ser Phe Leu Val Cys
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Ser Thr Lys Gln Cys Ser Thr His Leu His Gln Leu His Ile Cys Leu
130 135 140

Pro Ser Ser Arg Asn Lys Thr Arg Leu Leu Tyr Arg Met Ser Leu Asp
145 150 155 160

Phe Ala Pro Trp Ile Lys His Val Pro Phe Met His Ile Leu Trp Ser
165 170 175

<210> 2042

<211> 176

<212> PRT

<213> Zea mays

<400> 2042

Phe Leu Leu Phe Leu His Lys Gln Ser Ser Cys Leu Arg Leu Thr Ser
1 5 10 15

Ser Gly Thr Phe Leu Glu Arg Ile Ile Phe Ser Gly Lys Met Glu His
20 25 30

Phe Gly Val Met Tyr Pro Gly Phe Phe Arg Lys Thr Ile Trp Phe Phe
35 40 45

Met Asp Pro Leu Met His Tyr Val Arg Tyr Gln Gly Lys Ala Ile Leu
50 55 60

Ala Ser Lys Gly Thr Leu Leu Leu Lys Lys Lys Trp Lys Ser Tyr Leu
65 70 75 80

Val Asn Phe Ser Gln Tyr Phe Phe Ser Phe Trp Thr Gln Pro Gln Arg
85 90 95

Ile Arg Leu Asn Gln Leu Thr Asn Ser Cys Phe Asp Phe Leu Gly Tyr
100 105 110

Leu Ser Ser Val Pro Ile Asn Thr Leu Leu Val Arg Asn Gln Met Leu
115 120 125

Glu Asn Ser Phe Leu Ile Asp Thr Arg Met Lys Lys Phe Asp Thr Thr
130 135 140

Val Leu Ala Thr Pro Leu Val Gly Ser Leu Ser Lys Ala Gln Phe Cys
145 150 155 160

Thr Gly Ser Gly His Pro Ile Ser Lys Pro Val Trp Thr Asp Leu Ser
165 170 175

<210> 2043

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2043

Met Ala Ser Pro Ser Ser Leu Cys Leu Leu Thr Ala Leu Leu Ala Leu
1 5 10 15

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Val Ser Trp Gln Thr Ile Ala Ser Asp Pro Ser Pro Leu Gln Asp Phe
20 25 30

Cys Val Ala Asp Glu His Ser Pro Val Leu Val Asn Gly Phe Ala Cys
35 40 45

Leu Asp Pro Lys His Val Asn Ala Asp His Phe Phe Lys Ala Ala Met
50 55 60

Leu Asp Thr Pro Arg Lys Thr Asn Lys Val Gly Ser
65 70 75

<210> 2044

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 2044

Asp Gly Thr Ile Ser Phe Leu Ser Ile Thr Ala Ile Gln His Gly Phe
1 5 10 15

Lys Ile Ile Asn Met Leu Thr Thr Ser Ser Ile Phe Arg His Thr Thr
20 25 30

Ser Ile Ala Ala Tyr Val Arg Asn Lys Leu Leu Ala Leu Lys His Glu
35 40 45

Asn Gly Glu Phe Val Cys Thr Leu Tyr Gly Leu Leu Ser Ser Glu Met
50 55 60

Gly Pro Thr Val Ser Phe Asn Met Lys Arg Pro Asp Gly Thr Trp Tyr
65 70 75 80

Gly Tyr Arg Glu Val Glu Lys Leu Ala Thr Leu Ala Gly Ile Gln Leu
85 90 95

Arg Thr Gly Cys Phe Cys Asn Pro Gly Ala Cys Ala Lys Tyr Leu Gly
100 105 110

Leu Ser His Leu Asp Leu Leu Ser Asn Ile Glu Ala Gly His
115 120 125

<210> 2045

<211> 201

<212> PRT

<213> Oryza sativa

<400> 2045

Ala Met Val Glu Leu Phe Val Arg Phe Glu Ala Ser Gln Tyr Thr Arg
1 5 10 15

Pro Ala Arg Asp Asn Val Tyr Leu Ala Ala Leu Pro Met Phe His Val
20 25 30

Tyr Gly Leu Ser Leu Phe Ala Val Gly Leu Leu Ser Leu Gly Cys Thr
35 40 45

Val Val Val Met Arg Arg Phe Asn Val Asp Asp Ala Val Lys Ala Ile
50 55 60

Arg Lys Tyr Lys Val Thr His Leu Pro Leu Val Pro Pro Ile Met Ser
65 70 75 80

Ala Leu Leu Arg Ala Asn Pro Pro Leu Glu Leu Asp Ser Leu Leu Gln
85 90 95

Val Ser Ser Gly Ala Ala Pro Leu Asn His Thr Leu Ile His His Phe
100 105 110

Leu His Ala Phe Pro His Val Asp Phe Ile Gln Gly Tyr Gly Met Thr
115 120 125

Glu Ser Thr Ala Val Gly Thr Arg Gly Phe Asn Thr Cys Lys His Lys
130 135 140

Lys Tyr Ala Ser Val Gly Leu Leu Ala Pro Asn Met His Ala Lys Ile
145 150 155 160

Val His Leu Glu Ser Gly Ser Cys Leu Pro Pro Gly Ser Tyr Gly Glu
165 170 175

Leu Trp Leu His Gly Pro Ala Ile Met Lys Glu Phe Cys Phe Val Thr
180 185 190

Gly Tyr Leu Asn Asp Asp Asp Asp Ala
195 200

<210> 2046

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 2046

Ser Asp Ile Ser Ser Phe Gly Val Cys Ser Asn Leu Lys Ser Leu Asn
1 5 10 15

Leu Ser Lys Asn Phe Leu Asp Pro Pro Gly Lys Glu Met Leu Lys Ala
20 25 30

Ala Thr Phe Ser Leu Gln Val Leu Asp Leu Ser Tyr Asn Asn Ile Ser
35 40 45

Gly Phe Asn Leu Phe Pro Trp Val Ser Ser Met Gly Phe Val Glu Leu
50 55 60

Glu Phe Phe Ser Leu Lys Gly Asn Lys Leu Ala Gly Ser Ile Pro Glu
65 70 75 80

Leu Asp Phe Lys Asn Leu Ser Tyr Leu Asp Leu Ser Ala Asn Asn Phe
85 90 95

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Ser Thr Val Phe Pro Ser Phe Lys Asp Cys Ser Asn Leu Gln His Leu
100 105 110

Asp Leu Ser Ser Asn Lys Phe Tyr Gly Asp Ile Gly Ser Ser Leu Ser
115 120 125

Ser Cys Gly Lys Leu Ser Phe Leu Asn Leu Thr Asn Asn Gln Phe Val
130 135 140

Gly Leu Val Pro Lys Leu Pro
145 150

<210> 2047
<211> 76
<212> PRT
<213> Zea mays

<400> 2047
Met Thr Ile Ala Val Gly Arg Val Thr Lys Glu Glu Asn Asp Leu Phe
1 5 10 15

Pro Leu Ile Asp Asp Trp Leu Arg Arg Asp Arg Phe Val Phe Val Gly
20 25 30

Trp Ser Gly Leu Leu Leu Phe Pro Cys Ala Tyr Phe Ala Leu Gly Gly
35 40 45

Trp Phe Thr Gly Thr Thr Phe Val Thr Ser Trp Tyr Thr His Gly Leu
50 55 60

Ala Ser Ser Tyr Leu Glu Gly Cys Asn Phe Leu Thr
65 70 75

<210> 2048
<211> 101
<212> PRT
<213> Zea mays

<400> 2048
Trp Phe His Tyr His Lys Ala Ala Pro Lys Leu Ala Trp Phe Gln Asp
1 5 10 15

Val Glu Ser Met Leu Asn His His Leu Ala Gly Leu Leu Gly Leu Gly
20 25 30

Ser Leu Ser Trp Ala Gly His Gln Ile His Val Ser Leu Pro Ile Asn
35 40 45

Gln Phe Leu Asp Ala Gly Val Asp Pro Lys Glu Ile Pro Leu Pro His
50 55 60

Glu Phe Ile Leu Asn Arg Asp Leu Leu Ala Gln Leu Tyr Pro Ser Phe
65 70 75 80

Ala Glu Gly Ala Thr Pro Phe Phe Thr Leu Asn Trp Ser Lys Tyr Ala
85 90 95

Glu Phe Leu Ser Phe
100

<210> 2049

<211> 251

<212> PRT

<213> Oryza sativa

<400> 2049

Met Ala Ile Arg Gly Pro Glu Ala Ser Ser Phe Phe Pro Leu Thr Leu
1 5 10 15

Val Phe Ser Val Gly Phe Phe Cys Ala Arg Phe Phe Leu Asp Arg Leu
20 25 30

Val Tyr Lys Pro Leu Ala Ala Tyr Cys Phe Ser Ser Lys Ala Ser Lys
35 40 45

Leu Met Asn Asp Glu Val Arg Gln Ala Lys Ile Val Lys Phe Ser Glu
50 55 60

Ser Ile Trp Lys Leu Thr Tyr Tyr Gly Ser Val Gln Ala Trp Val Leu
65 70 75 80

Leu Ile Ile Lys Gln Glu Pro Trp Ser Leu Asp Thr Met Gln Tyr Phe
85 90 95

Glu Gly Trp Pro Asn Gln Tyr Met Thr Ser Ser Leu Met Leu Phe Tyr
100 105 110

Met Cys Gln Cys Gly Phe Tyr Ile Tyr Ser Ile Phe Ala Leu Val Ala
115 120 125

Trp Glu Thr Arg Arg Lys Asp Phe Ala Val Met Met Ser His His Val
130 135 140

Val Thr Ser Ile Leu Ile Gly Tyr Ala Tyr Leu Thr Gly Phe Phe Arg
145 150 155 160

Ile Gly Thr Ile Ile Leu Ala Leu His Asp Ala Ser Asp Val Phe Leu
165 170 175

Glu Thr Ala Lys Leu Cys Lys Tyr Thr Glu Lys Glu Leu Gly Ala Ser
180 185 190

Leu Phe Phe Gly Leu Phe Ala Leu Ser Trp Leu Leu Leu Arg Leu Ile
195 200 205

Tyr Phe Pro Phe Trp Ile Ile Lys Thr Ser Ser Tyr Gln Ser Ile Ile
210 215 220

Ser Leu Arg Lys Leu Glu Lys Phe Pro Thr Thr Leu Tyr Tyr Ile Phe
225 230 235 240

Asn Thr Met Leu Leu Thr Leu Leu Val Phe His
245 250

<210> 2050
<211> 101
<212> PRT
<213> Solanum lycopersicum

<400> 2050
Met Thr Ile Ala Ile Gly Lys Phe Thr Lys Asp Glu Asn Asp Leu Phe
1 5 10 15

Asp Ile Met Asp Asp Trp Leu Arg Arg Asp Arg Phe Val Phe Val Gly
20 25 30

Trp Ser Gly Leu Leu Leu Phe Pro Cys Ala Tyr Phe Ala Val Gly Gly
35 40 45

Trp Phe Thr Gly Thr Thr Phe Val Thr Ser Trp Tyr Thr His Gly Leu
50 55 60

Ala Ser Ser Tyr Leu Glu Gly Cys Asn Phe Leu Thr Ala Ala Val Ser
65 70 75 80

Thr Pro Ala Asn Ser Leu Ala His Ser Leu Leu Leu Leu Trp Gly Pro
85 90 95

Glu Ala Gln Gly Asp
100

<210> 2051
<211> 201
<212> PRT
<213> Solanum lycopersicum

<400> 2051
Gly Leu Leu Glu Gln Ile Asn Ile Thr Arg Asp Val Ser Asp Tyr Leu
1 5 10 15

Trp Tyr Met Thr Asp Ile Glu Ile Asp Pro Thr Glu Gly Phe Leu Asn
20 25 30

Ser Gly Asn Trp Pro Trp Leu Thr Val Phe Ser Ala Gly His Ala Leu
35 40 45

His Val Phe Val Asn Gly Gln Leu Ala Gly Thr Val Tyr Gly Ser Leu
50 55 60

Glu Asn Pro Lys Leu Thr Phe Ser Asn Gly Ile Asn Leu Arg Ala Gly
65 70 75 80

Val Asn Lys Ile Ser Leu Leu Ser Ile Ala Val Gly Leu Pro Asn Val
85 90 95

Gly Pro His Phe Glu Thr Trp Asn Ala Gly Val Leu Gly Pro Val Ser
100 105 110

Leu Asn Gly Leu Asn Glu Gly Thr Arg Asp Leu Thr Trp Gln Lys Trp
115 120 125

Phe Tyr Lys Val Gly Leu Lys Gly Glu Ala Leu Ser Leu His Ser Leu
130 135 140

Ser Gly Ser Pro Ser Val Glu Trp Val Glu Gly Ser Leu Val Ala Gln
145 150 155 160

Lys Gln Pro Leu Ser Trp Tyr Lys Thr Thr Phe Asn Ala Pro Asp Gly
165 170 175

Asn Glu Pro Leu Ala Leu Asp Met Asn Thr Met Gly Lys Gly Gln Val
180 185 190

Trp Ile Asn Gly Gln Ser Leu Gly Arg
195 200

<210> 2052

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2052

Gly Leu Gly Ala Ala Val Glu Phe Asn Lys Leu Asn Met Arg Tyr Met
1 5 10 15

Leu Asp Phe Thr Cys Ala Ala Leu Phe Gly Gly Glu Pro Pro Ser Lys
20 25 30

Val Val Gly Asp Gly Ala Val Thr Lys Ala Met Ala Trp Leu Ala Phe
35 40 45

Gln Leu His Pro Ile Ala Ser Lys Val Val Lys Pro Trp Pro Leu Glu
50 55 60

Glu Leu Leu Leu His Thr Phe Ser Leu Pro Pro Phe
65 70 75

<210> 2053

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2053

Gly Gly Pro Ala Cys Leu Thr Gln Phe Lys Arg Trp Ala Thr Gly Gln
1 5 10 15

Ser Glu Ile Ile Ile Ser Arg Asn Asn Pro Ile Leu Ala Thr Met Phe
20 25 30

Lys Arg Leu Lys Phe Arg Gln Cys Leu Ala Tyr Leu Ile Val Leu Gly
35 40 45

Trp Pro Leu Arg Ala Pro Phe Glu Leu Cys Tyr Gly Leu Leu Gly Pro
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50				55				60							
Tyr 65	Cys	Ile	Leu	Thr	Asn 70	Gln	Ser	Phe	Leu	Pro 75	Lys	Ala	Ser	Glu	Asp 80
Gly	Phe	Ser	Val	Pro 85	Leu	Ala	Leu	Phe	Ile 90	Ser	Tyr	Asn	Thr	Tyr 95	Asn
Phe	Met	Glu	Tyr 100	Met	Ala	Cys	Gly	Leu 105	Ser	Ala	Arg	Ala	Trp 110	Trp	Asn
Asn	His	Arg 115	Met	Gln	Arg	Ile	Ile 120	Ser	Val	Ser	Ala	Trp 125	Thr	Leu	Ala
Phe	Leu 130	Thr	Val	Leu	Leu	Lys 135	Ser	Leu	Gly	Leu	Ser 140	Glu	Thr	Val	Phe
Glu 145	Val	Thr	Gly	Lys	Asp 150	Lys									

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<210> 2055
<211> 101
<212> PRT
<213> Oryza sativa

<400> 2055
Met Gly Lys Gln Met Ala Ala Leu Cys Gly Phe Leu Leu Val Ala Leu
1          5          10          15

Leu Trp Leu Thr Pro Asp Val Ala His Ala Gln Thr Gln Ile Leu Phe
20          25          30

Gln Gly Phe Asn Trp Asp Ser Trp Lys Lys Gln Gly Gly Trp Tyr Asn
35          40          45

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Met Leu Lys Asp Gln Val Gly Asp Ile Ala Ser Ala Gly Val Thr His
50 55 60

Val Trp Leu Pro Pro Pro Thr His Ser Val Ser Pro Gln Gly Tyr Met
65 70 75 80

Pro Gly Arg Leu Tyr Asp Leu Asn Ala Ser Lys Tyr Gly Thr Lys Ala
85 90 95

Glu Leu Lys Ser Leu
100

<210> 2056

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2056

Ile Thr Thr Pro Ser Thr Ile Leu Thr Gln Gly Phe Ala Thr Ser Gly
1 5 10 15

Leu Leu Thr Glu Met His Gln Ser Thr Ile Leu Val Pro Ala Leu Gln
20 25 30

Ser Gln Trp Leu Met Met His Val Ser Met Met Leu Leu Ser Tyr Ala
35 40 45

Thr Leu Leu Cys Gly Ser Leu Leu Ser Ala Ala Leu Leu Met Ile Arg
50 55 60

Phe Arg Lys Asn Leu Asp Phe Phe Ser Lys Lys Lys Lys Asn Val Leu
65 70 75 80

Ser Lys Thr Phe Phe Phe Asn Glu Ile Glu Tyr Phe Tyr Ala Lys Arg
85 90 95

Ser Ala Leu Lys Ser Thr Phe Phe Pro Leu Phe Pro Asn Tyr Tyr Lys
100 105 110

Tyr Gln Leu Ile Glu Arg Leu Asp Ser Trp Ser Tyr Arg Val Ile Ser
115 120 125

Leu Gly Phe Thr Leu Leu Thr Ile Gly Ile Leu Cys Gly Ala Val Trp
130 135 140

Ala Asn Glu Ala Trp Gly Ser Tyr Trp Asn Trp Asp Pro Lys Glu Thr
145 150 155 160

Trp Ala Phe Ile Thr Trp Thr Ile Phe Ala Ile Tyr Leu His Ser Arg
165 170 175

<210> 2057

<211> 201

<212> PRT

<213> Solanum lycopersicum

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<400> 2057

Ala Asp Ala His Asp Phe Asp Ser His Thr Ser Asp Leu Glu Glu Ile
1 5 10 15

Ser Arg Lys Val Phe Ser Ala His Phe Gly Gln Leu Ser Ile Ile Phe
20 25 30

Leu Trp Leu Ser Gly Met Tyr Phe His Gly Ala Arg Phe Ser Asn Tyr
35 40 45

Glu Ala Trp Leu Ser Asp Pro Thr His Ile Gly Pro Ser Ala Gln Val
50 55 60

Val Trp Pro Ile Val Gly Gln Glu Ile Leu Asn Gly Asp Val Gly Gly
65 70 75 80

Gly Phe Arg Gly Ile Gln Ile Thr Ser Gly Phe Phe Gln Leu Trp Arg
85 90 95

Ala Ser Gly Ile Thr Ser Glu Leu Gln Leu Tyr Cys Thr Ala Ile Gly
100 105 110

Ala Leu Val Phe Ala Ala Leu Met Leu Phe Ala Gly Trp Phe His Tyr
115 120 125

His Lys Ala Ala Pro Lys Leu Ala Trp Phe Gln Asp Val Glu Ser Met
130 135 140

Leu Asn His His Leu Ala Gly Leu Leu Gly Leu Gly Ser Leu Ser Trp
145 150 155 160

Ala Gly His Gln Val His Val Ser Leu Pro Ile Asn Gln Phe Leu Asn
165 170 175

Ala Gly Val Asp Pro Lys Glu Ile Pro Leu Pro His Glu Phe Ile Leu
180 185 190

Asn Arg Asp Leu Leu Ala Gln Leu Tyr
195 200

<210> 2058

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2058

Thr Glu Lys Ser Ile Leu Asn Lys Leu Gln Trp Asn Leu Thr Val Pro
1 5 10 15

Thr Met Tyr Met Phe Ile Leu Arg Tyr Leu Lys Ala Ala Leu Gly Asp
20 25 30

Glu Glu Leu Glu His Met Thr Phe Phe Tyr Ala Glu Leu Ala Leu Val
35 40 45

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Gln Tyr Ser Met Leu Phe Phe Ala Pro Ser Val Ile Ala Ala Ala Ala
 50 55 60

Val Tyr Ala Ala Arg Cys Thr Leu Gly Leu Ser Pro
 65 70 75

<210> 2059
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 2059
 Val Ala Gln Ser Leu Gly Lys Ile Arg His Leu Val Ser Pro Arg Phe
 1 5 10 15

Thr Phe Arg Thr Met Ser Ser Tyr Tyr Cys Ser Leu Phe Leu Asp Gln
 20 25 30

Val Leu Ala Tyr Leu Leu Met Ser Ala Ser Ser Ala Ala Ala Ser Arg
 35 40 45

Asn Asp Leu Trp Val Ser Arg Phe Gly Thr Asp Ala Phe Val Arg Lys
 50 55 60

Ile Thr Gly Ala Leu Trp Leu Ser Phe Val Ala Phe
 65 70 75

<210> 2060
 <211> 201
 <212> PRT
 <213> Oryza sativa

<400> 2060
 Val Ser Ser Cys Asn Tyr Glu Ser Gly Thr His Trp Gly Leu Glu Val
 1 5 10 15

Gly Trp Ala Tyr Gly Ser Met Thr Glu Asp Ile Leu Thr Gly Gln Arg
 20 25 30

Ile His Ala Ala Gly Trp Arg Ser Ala Lys Leu Glu Thr Glu Pro Pro
 35 40 45

Ala Phe Leu Gly Cys Ala Pro Thr Gly Gly Pro Ala Cys Leu Thr Gln
 50 55 60

Phe Lys Arg Trp Ala Thr Gly Leu Phe Glu Ile Leu Ile Ser Gln Asn
 65 70 75 80

Asn Pro Leu Leu Leu Ser Ile Phe Lys His Leu Gln Phe Arg Gln Cys
 85 90 95

Leu Ala Tyr Leu Thr Leu Tyr Val Trp Ala Val Arg Gly Phe Val Glu
 100 105 110

Leu Cys Tyr Glu Leu Leu Val Pro Tyr Cys Leu Leu Thr Asn Gln Ser
 115 120 125

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Phe Leu Ser Lys Ala Ser Glu Asn Cys Phe Asn Ile Thr Leu Ala Leu
130 135 140

Phe Leu Thr Tyr Asn Thr Tyr Asn Phe Val Glu Tyr Met Glu Cys Gly
145 150 155 160

Leu Ser Val Arg Ala Trp Trp Asn Asn His Arg Met Gln Arg Ile Ile
165 170 175

Ser Ala Ser Ala Trp Leu Leu Ala Phe Phe Thr Val Leu Leu Lys Thr
180 185 190

Ile Gly Leu Ser Glu Thr Val Phe Glu
195 200

<210> 2061

<211> 176

<212> PRT

<213> Zea mays

<400> 2061

Ile Thr Thr Pro Ser Thr Ile Leu Thr Gln Gly Phe Ala Thr Ser Gly
1 5 10 15

Leu Leu Thr Glu Met His Gln Ser Thr Ile Leu Val Pro Ala Leu Gln
20 25 30

Ser Gln Trp Leu Met Met His Val Ser Met Met Leu Leu Ser Tyr Ala
35 40 45

Thr Leu Leu Cys Gly Ser Leu Leu Ser Ala Ala Leu Leu Ile Ile Arg
50 55 60

Phe Arg Lys Asn Phe Asp Phe Phe Ser Leu Lys Lys Asn Val Phe Leu
65 70 75 80

Lys Thr Phe Phe Phe Ser Glu Ile Glu Tyr Leu Tyr Ala Lys Arg Ser
85 90 95

Ala Leu Lys Asn Thr Ser Phe Pro Val Phe Pro Asn Tyr Tyr Lys Tyr
100 105 110

Gln Leu Thr Glu Arg Leu Asp Ser Trp Ser Tyr Arg Val Ile Ser Leu
115 120 125

Gly Phe Thr Leu Leu Thr Val Gly Ile Leu Cys Gly Ala Val Trp Ala
130 135 140

Asn Glu Ala Trp Gly Ser Tyr Trp Asn Trp Asp Pro Lys Glu Thr Trp
145 150 155 160

Ala Phe Ile Thr Trp Thr Ile Phe Ala Ile Tyr Leu His Ser Arg Lys
165 170 175

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<210> 2062

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2062

Pro Ala Leu Thr Gln Asp Phe Leu Val Gln Arg Ala Val Phe Pro Ala
1 5 10 15

Thr Ala His Tyr Gly Ser Asp Gly Thr Leu Glu Thr Pro Arg Thr Glu
20 25 30

Pro Phe Tyr Ala Glu Ala Ala Leu Val Leu Phe Glu Phe Glu Phe Ala
35 40 45

Ala Ile Thr Leu Val Leu Leu Ala Gly Ser Leu Leu Gly Arg Met Asn
50 55 60

Ile Lys Ala Trp Met Ala Phe Thr Pro Leu Trp Leu
65 70 75

<210> 2063

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2063

Thr Glu Asp Ile Leu Thr Gly Phe Lys Met His Cys Arg Gly Trp Arg
1 5 10 15

Ser Val Tyr Cys Met Pro Lys Arg Ala Ala Phe Lys Gly Ser Ala Pro
20 25 30

Ile Asn Leu Ser Asp Arg Leu Asn Gln Val Leu Arg Trp Ala Leu Gly
35 40 45

Ser Val Glu Ile Phe Phe Ser Arg His Ser Pro Leu Leu Tyr Gly Tyr
50 55 60

Lys Asn Gly Asn Leu Lys Trp Leu Glu Arg Phe Ser Tyr Ile Asn Thr
65 70 75 80

Thr Ile Tyr Pro Phe Thr Ser Leu Pro Leu Leu Ala Tyr Cys Thr Leu
85 90 95

Pro Ala Val Cys Leu Leu Thr Gly Lys Phe Ile Met Pro Pro Ile Ser
100 105 110

Thr Phe Ala Ser Leu Phe Phe Ile Ala Leu Phe Ile Ser Ile
115 120 125

<210> 2064

<211> 201

<212> PRT

<213> Zea mays

<400> 2064

Trp Phe His Tyr His Lys Ala Ala Pro Lys Leu Ala Trp Phe Gln Asp

1					5					10					15				
Val	Glu	Ser	Met 20	Leu	Asn	His	His	Leu 25	Ala	Gly	Leu	Leu	Gly 30	Leu	Gly				
Ser	Leu	Ser 35	Trp	Ala	Gly	His	Gln 40	Ile	His	Val	Ser	Leu 45	Pro	Ile	Asn				
Gln	Phe 50	Leu	Asp	Ala	Gly	Val 55	Asp	Pro	Lys	Glu	Ile 60	Pro	Leu	Pro	His				
Glu 65	Phe	Ile	Leu	Asn	Arg 70	Asp	Leu	Leu	Ala	Gln 75	Leu	Tyr	Pro	Ser	Phe 80				
Ala	Glu	Gly	Ala	Thr 85	Pro	Phe	Phe	Thr	Leu 90	Asn	Trp	Ser	Lys	Tyr 95	Ala				
Glu	Phe	Leu	Ser 100	Phe	Arg	Gly	Gly	Leu 105	Asp	Pro	Ile	Thr	Gly 110	Gly	Leu				
Trp	Leu	Ser 115	Asp	Ile	Ala	His	His 120	His	Leu	Ala	Ile	Ala 125	Ile	Leu	Phe				
Leu	Ile 130	Ala	Gly	His	Met	Tyr 135	Arg	Thr	Asn	Trp	Gly 140	Ile	Gly	His	Gly				
Leu 145	Lys	Asp	Ile	Leu	Glu 150	Ala	His	Lys	Gly	Pro 155	Phe	Thr	Gly	Gln	Gly 160				
His	Lys	Gly	Leu	Tyr 165	Glu	Ile	Leu	Thr	Thr 170	Ser	Trp	His	Ala	Gln 175	Leu				
Ser	Leu	Asn	Leu 180	Ala	Met	Leu	Gly	Ser 185	Thr	Thr	Ile	Val	Val 190	Ala	His				
His	Met	Tyr 195	Ser	Met	Pro	Pro	Tyr 200	Pro											

Met Ala Phe Thr Pro Leu Trp Leu Leu Phe Ser Tyr
65 70 75

<210> 2066
<211> 76
<212> PRT
<213> Solanum lycopersicum

<400> 2066
Met Lys Thr Leu Tyr Ser Leu Arg Arg Phe Tyr His Val Glu Thr Leu
1 5 10 15

Phe Asn Gly Thr Leu Ala Leu Ala Gly Arg Asp Gln Glu Thr Thr Gly
20 25 30

Phe Ala Trp Trp Ala Gly Asn Ala Arg Leu Ile Asn Leu Ser Gly Lys
35 40 45

Leu Leu Gly Ala His Val Ala His Ala Gly Leu Ile Val Phe Trp Ala
50 55 60

Gly Ala Met Asn Leu Phe Glu Val Ala His Phe Val
65 70 75

<210> 2067
<211> 76
<212> PRT
<213> Zea mays

<400> 2067
Met Lys Ile Leu Tyr Ser Leu Arg Arg Phe Tyr His Val Glu Thr Leu
1 5 10 15

Phe Asn Gly Thr Phe Val Leu Ala Gly Arg Asp Gln Glu Thr Thr Gly
20 25 30

Phe Pro Trp Trp Ala Gly Asn Ala Arg Leu Ile Asn Leu Ser Gly Lys
35 40 45

Leu Leu Gly Ala His Val Ala His Ala Gly Leu Ile Val Phe Trp Ala
50 55 60

Gly Ala Met Asn Leu Phe Glu Val Ala His Phe Val
65 70 75

<210> 2068
<211> 76
<212> PRT
<213> Oryza sativa

<400> 2068
Met Met His Met Thr Phe Tyr Trp Gly Lys Asp Val Thr Ile Leu Phe
1 5 10 15

Asp Gly Trp Arg Thr Ala Thr Trp Thr Gly Tyr Leu Leu Ser Leu Val
20 25 30

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Ala Leu Leu Leu Ala Ser Ala Phe Tyr Gln Tyr Leu Glu Ala Phe Arg
35 40 45

Ile Arg Val Lys Leu Leu Ala Gly Ala Lys Pro Ala Ser Ile Pro Pro
50 55 60

Pro Ala Ser Ser Asp Ala Ala Arg Ala Pro Leu Leu
65 70 75

<210> 2069

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 2069

Tyr Pro Ser Phe Ala Glu Gly Ala Thr Pro Phe Phe Thr Leu Asn Trp
1 5 10 15

Ser Lys Tyr Ala Asp Phe Leu Thr Phe Arg Gly Gly Leu Asp Pro Val
20 25 30

Thr Gly Gly Leu Trp Leu Thr Asp Ile Ala His His His Leu Ala Ile
35 40 45

Ala Ile Leu Phe Leu Ile Ala Gly His Met Tyr Arg Thr Asn Trp Gly
50 55 60

Ile Gly His Gly Leu Lys Asp Ile Leu Glu Ala His Lys Gly Pro Phe
65 70 75 80

Thr Gly Gln Gly His Lys Gly Leu Tyr Glu Ile Leu Thr Thr Ser Trp
85 90 95

His Ala Gln Leu Ser Leu Asn Leu Ala Met Leu Gly Ser Leu Thr Ile
100 105 110

Val Val Ala His His Met Tyr Ser Met Pro Pro Tyr Pro Tyr Leu Ala
115 120 125

Thr Asp Tyr Gly Thr Gln Leu Ser Leu Phe Thr His His Met Trp Ile
130 135 140

Gly Gly Phe Leu Ile Val Gly Ala Ala Ala His Ala Ala Ile Phe Met
145 150 155 160

Val Arg Asp Tyr Asp Pro Thr Thr Arg Tyr Asn Asp Leu Leu Asp Arg
165 170 175

<210> 2070

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2070

Met Ala Ser Ser Ser Phe Leu Leu Leu Ala Thr Leu Leu Ala Met Ala
1 5 10 15

Ser Trp Gln Gly Met Ala Ser Asp Pro Ser Pro Leu Gln Asp Phe Cys
20 25 30

Val Ala Asp Met His Ser Pro Val Leu Val Asn Gly Phe Ala Cys Leu
35 40 45

Asn Pro Lys Asp Val Asn Ala Asp His Phe Phe Lys Ala Ala Met Leu
50 55 60

Asp Thr Pro Arg Lys Thr Asn Lys Val Gly Ser Asn Val Thr Leu Ile
65 70 75 80

Asn Val Met Gln Ile Pro Gly Leu Asn Thr Leu Gly Ile Ser Ile Ala
85 90 95

Arg Ile Asp Tyr Ala Pro Leu Gly Gln Asn Pro Pro His Thr His Pro
100 105 110

Arg Ala Thr Glu Ile Leu Thr Val Leu Glu Gly Thr Leu Tyr
115 120 125

<210> 2071

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2071

Met Ala Lys His Ser Thr Thr Met Ser Cys Leu Leu Phe Phe Val Leu
1 5 10 15

Leu Cys Leu Gly Ser His Leu Ala Gln Ala Gln Val Leu Phe Gln Gly
20 25 30

Phe Asn Trp Glu Ser Trp Lys Lys Gln Gly Gly Trp Tyr Asn Phe Leu
35 40 45

His Ser His Val Asp Asp Ile Ala Ala Thr Gly Val Thr His Val Trp
50 55 60

Leu Pro Pro Pro Ser His Ser Val Ala Pro Gln Gly Tyr Met Pro Gly
65 70 75 80

Arg Leu Tyr Asp Leu Asp Ala Ser Lys Tyr Gly Thr Gly Ala Glu Leu
85 90 95

Arg Ser Leu Ile Ala
100

<210> 2072

<211> 76

<212> PRT

<213> Zea mays

<400> 2072

Met Ile Glu Ser Gln Arg His Ser Tyr His Leu Val Asp Pro Ser Pro

1 5 10 15
 Trp Pro Ile Ser Gly Ser Leu Gly Ala Leu Ala Thr Thr Val Gly Gly
 20 25 30
 Val Met Tyr Met His Ser Phe Gln Gly Gly Ala Thr Leu Leu Ser Leu
 35 40 45
 Gly Leu Ile Phe Leu Leu Tyr Thr Met Phe Val Trp Trp Arg Asp Val
 50 55 60
 Leu Arg Glu Ser Thr Leu Glu Gly His His Thr Lys
 65 70 75
 <210> 2073
 <211> 276
 <212> PRT
 <213> Solanum lycopersicum
 <400> 2073
 Thr Ser Glu Leu Gln Leu Tyr Cys Thr Ala Ile Gly Ala Leu Val Phe
 1 5 10 15
 Ala Ala Leu Met Leu Phe Ala Gly Trp Phe His Tyr His Lys Ala Ala
 20 25 30
 Pro Lys Leu Ala Trp Phe Gln Asp Val Glu Ser Met Leu Asn His His
 35 40 45
 Leu Ala Gly Leu Leu Gly Leu Gly Ser Leu Ser Trp Ala Gly His Gln
 50 55 60
 Val His Val Ser Leu Pro Ile Asn Gln Phe Leu Asn Ala Gly Val Asp
 65 70 75 80
 Pro Lys Glu Ile Pro Leu Pro His Glu Phe Ile Leu Asn Arg Asp Leu
 85 90 95
 Leu Ala Gln Leu Tyr Pro Ser Phe Ala Glu Gly Ala Thr Pro Phe Phe
 100 105 110
 Thr Leu Asn Trp Ser Lys Tyr Ala Asp Phe Leu Thr Phe Arg Gly Gly
 115 120 125
 Leu Asp Pro Val Thr Gly Gly Leu Trp Leu Thr Asp Ile Ala His His
 130 135 140
 His Leu Ala Ile Ala Ile Leu Phe Leu Ile Ala Gly His Met Tyr Arg
 145 150 155 160
 Thr Asn Trp Gly Ile Gly His Gly Leu Lys Asp Ile Leu Glu Ala His
 165 170 175
 Lys Gly Pro Phe Thr Gly Gln Gly His Lys Gly Leu Tyr Glu Ile Leu
 180 185 190

Thr Thr Ser Trp His Ala Gln Leu Ser Leu Asn Leu Ala Met Leu Gly
195 200 205

Ser Leu Thr Ile Val Val Ala His His Met Tyr Ser Met Pro Pro Tyr
210 215 220

Pro Tyr Leu Ala Thr Asp Tyr Gly Thr Gln Leu Ser Leu Phe Thr His
225 230 235 240

His Met Trp Ile Gly Gly Phe Leu Ile Val Gly Ala Ala Ala His Ala
245 250 255

Ala Ile Phe Met Val Arg Asp Tyr Asp Pro Thr Thr Arg Tyr Asn Asp
260 265 270

Leu Leu Asp Arg
275

<210> 2074

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2074

Thr Val Glu Ser Gln Leu Ala Ser Gly Gly Gly Lys Ser Asp Phe Thr
1 5 10 15

Ala Leu Asn Asp Ala Thr Ser Phe Glu Phe Ile Gly Glu Ala Tyr Phe
20 25 30

Gly Val Arg Pro Ser Ala Ser Ser Ser Leu Gly Thr Gly Gly Pro Thr
35 40 45

Lys Ala Ala Leu Trp Leu Leu Trp Gln Leu Ala Pro Leu Thr Thr Leu
50 55 60

Gly Leu Pro Met Ile Ile Glu Asp Pro Leu Leu His
65 70 75

<210> 2075

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2075

Met Gly His Pro His Pro His Pro Tyr Ala Pro Ala Glu Leu His Leu
1 5 10 15

Pro Gly Phe Val Pro Leu Gln Leu Ser Gln Ala Gln Ile Leu Val Pro
20 25 30

Tyr Leu Ala Thr Ser Leu Phe Leu Leu Leu Ala Val Trp Leu Ile Ser
35 40 45

Gly Arg Cys Ser Arg Arg Leu Ser Asp Thr Asp Arg Trp Leu Met Cys

50 55 60
 Trp Trp Ala Phe Thr Gly Leu Thr His Ile Ile Ile Glu Gly Thr Phe
 65 70 75 80
 Val Phe Ala Pro Asn Phe Phe Ser Asn Gln Asn Pro Ser Tyr Phe Asp
 85 90 95
 Glu Val Trp Lys Glu
 100
 <210> 2076
 <211> 226
 <212> PRT
 <213> Solanum lycopersicum
 <400> 2076
 Thr Val Leu Leu Gly Ala Thr Leu Ala Leu Ala Gln Lys Asp Ile Lys
 1 5 10 15
 Arg Gly Leu Ala Tyr Ser Thr Met Ser Gln Leu Gly Tyr Met Met Leu
 20 25 30
 Ala Leu Gly Met Gly Ser Tyr Arg Ser Ala Leu Phe His Leu Ile Thr
 35 40 45
 His Ala Tyr Ser Lys Ala Leu Leu Phe Leu Gly Ser Gly Ser Ile Ile
 50 55 60
 His Ser Met Glu Thr Ile Val Gly Tyr Ser Pro Ala Lys Ser Gln Asn
 65 70 75 80
 Met Gly Leu Met Gly Gly Leu Arg Lys His Val Pro Ile Thr Lys Ile
 85 90 95
 Thr Phe Leu Leu Gly Thr Leu Ser Leu Cys Gly Ile Pro Pro Leu Ala
 100 105 110
 Cys Phe Trp Ser Lys Asp Glu Ile Leu Asn Asp Ser Trp Leu Tyr Ser
 115 120 125
 Pro Ile Phe Ala Ile Ile Ala Trp Ala Thr Ala Gly Leu Thr Ala Phe
 130 135 140
 Tyr Met Phe Arg Ile Tyr Leu Leu Thr Phe Glu Gly His Leu Asn Ala
 145 150 155 160
 His Phe Gln Asn Tyr Gly Gly Lys Gln Lys Ile Pro Phe Tyr Ser Ile
 165 170 175
 Ser Leu Trp Gly Lys Asn Gly Val Lys Lys Asn Ser Cys Leu Leu Thr
 180 185 190
 Met Asn Asn Asn Glu Ser Thr Tyr Phe Leu Ser Lys Thr Lys Tyr Pro
 195 200 205

Ile Ala Lys Asn Gly Arg Lys Met Thr Arg Pro Phe Met Thr Ile Ala
 210 215 220

His Phe
 225

<210> 2077
 <211> 101
 <212> PRT
 <213> Solanum lycopersicum

<400> 2077
 Leu Trp Gln Gly Asn Val Ser Gln Phe Asn Glu Ser Ser Thr Tyr Leu
 1 5 10 15

Met Gly Trp Leu Arg Asp Tyr Leu Trp Leu Asn Ser Ser Gln Leu Ile
 20 25 30

Asn Gly Tyr Asn Pro Phe Gly Met Asn Ser Leu Ser Val Trp Ala Trp
 35 40 45

Met Phe Leu Phe Gly His Leu Val Trp Ala Thr Gly Phe Met Phe Leu
 50 55 60

Ile Ser Trp Arg Gly Tyr Trp Gln Glu Leu Ile Glu Thr Leu Ala Trp
 65 70 75 80

Ala His Glu Arg Thr Pro Leu Ala Asn Leu Ile Arg Trp Arg Asp Lys
 85 90 95

Pro Val Ala Leu Ser
 100

<210> 2078
 <211> 101
 <212> PRT
 <213> Zea mays

<400> 2078
 Thr Leu Trp Gln Gly Asn Val Ser Gln Phe Asn Glu Ser Ser Thr Tyr
 1 5 10 15

Leu Met Gly Trp Leu Arg Asp Tyr Leu Trp Leu Asn Ser Ser Gln Leu
 20 25 30

Ile Asn Gly Tyr Asn Pro Phe Gly Met Asn Ser Leu Ser Val Trp Ala
 35 40 45

Trp Met Phe Leu Phe Gly His Leu Val Trp Ala Thr Gly Phe Met Phe
 50 55 60

Leu Ile Ser Trp Arg Gly Tyr Trp Gln Glu Leu Ile Glu Thr Leu Ala
 65 70 75 80

Trp Ala His Glu Arg Thr Pro Leu Ala Asn Leu Ile Arg Trp Arg Asp
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Lys Pro Val Ala Leu
100

<210> 2079
<211> 201
<212> PRT
<213> Solanum lycopersicum

<400> 2079
Gly Thr Ala Ile Leu Thr Leu Leu Gly Gly Phe His Pro Gln Thr Gln
1 5 10 15

Ser Leu Trp Leu Thr Asp Ile Ala His His His Leu Ala Ile Ala Phe
20 25 30

Ile Phe Leu Val Ala Gly His Met Tyr Arg Thr Asn Phe Gly Ile Gly
35 40 45

His Ser Met Lys Asp Leu Leu Asp Ala His Ile Pro Pro Gly Gly Arg
50 55 60

Leu Gly Arg Gly His Lys Gly Leu Tyr Asp Thr Ile Asn Asn Ser Leu
65 70 75 80

His Phe Gln Leu Gly Leu Ala Leu Ala Ser Leu Gly Val Ile Thr Ser
85 90 95

Leu Val Ala Gln His Met Tyr Ser Leu Pro Ala Tyr Ala Phe Ile Ala
100 105 110

Gln Asp Phe Thr Thr Gln Ala Ala Leu Tyr Thr His His Gln Tyr Ile
115 120 125

Ala Gly Phe Ile Met Thr Gly Ala Phe Ala His Gly Ala Ile Phe Phe
130 135 140

Ile Arg Asp Tyr Asn Pro Glu Gln Asn Glu Asp Asn Val Leu Ala Arg
145 150 155 160

Met Leu Asp His Lys Glu Ala Ile Ile Ser His Leu Ser Trp Ala Ser
165 170 175

Leu Phe Leu Gly Phe His Thr Leu Gly Leu Tyr Val His Asn Asp Val
180 185 190

Met Leu Ala Phe Gly Thr Pro Glu Lys
195 200

<210> 2080
<211> 276
<212> PRT
<213> Zea mays

<400> 2080

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Phe Gly Gln Leu Ser Ile Ile Phe Leu Trp Leu Ser Gly Met Tyr Phe
 1 5 10 15
 His Gly Ala Arg Phe Ser Asn Tyr Glu Ala Trp Leu Ser Asp Pro Thr
 20 25 30
 His Ile Gly Pro Ser Ala Gln Val Val Trp Pro Ile Val Gly Gln Glu
 35 40 45
 Ile Leu Asn Gly Asp Val Gly Gly Gly Phe Arg Gly Ile Gln Ile Thr
 50 55 60
 Ser Gly Phe Phe Gln Ile Trp Arg Ala Ser Gly Ile Thr Ser Glu Leu
 65 70 75 80
 Gln Leu Tyr Cys Thr Ala Ile Gly Ala Leu Ile Phe Ala Ser Leu Met
 85 90 95
 Leu Phe Ala Gly Trp Phe His Tyr His Lys Ala Ala Pro Lys Leu Ala
 100 105 110
 Trp Phe Gln Asp Val Glu Ser Met Leu Asn His His Leu Ala Gly Leu
 115 120 125
 Leu Gly Leu Gly Ser Leu Ser Trp Ala Gly His Gln Ile His Val Ser
 130 135 140
 Leu Pro Ile Asn Gln Phe Leu Asp Ala Gly Val Asp Pro Lys Glu Ile
 145 150 155 160
 Pro Leu Pro His Glu Phe Ile Leu Asn Arg Asp Leu Leu Ala Gln Leu
 165 170 175
 Tyr Pro Ser Phe Ala Glu Gly Ala Thr Pro Phe Phe Thr Leu Asn Trp
 180 185 190
 Ser Lys Tyr Ala Glu Phe Leu Ser Phe Arg Gly Gly Leu Asp Pro Ile
 195 200 205
 Thr Gly Gly Leu Trp Leu Ser Asp Ile Ala His His His Leu Ala Ile
 210 215 220
 Ala Ile Leu Phe Leu Ile Ala Gly His Met Tyr Arg Thr Asn Trp Gly
 225 230 235 240
 Ile Gly His Gly Leu Lys Asp Ile Leu Glu Ala His Lys Gly Pro Phe
 245 250 255
 Thr Gly Gln Gly His Lys Gly Leu Tyr Glu Ile Leu Thr Thr Ser Trp
 260 265 270
 His Ala Gln Leu
 275

<210> 2081

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2081

Trp Ala Ser Gly Phe Leu Glu Ile Leu Ile Ser Arg Asn Asn Pro Ile
 1 5 10 15

Leu Thr Thr Thr Phe Lys Ser Leu Gln Phe Arg Gln Cys Leu Ala Tyr
 20 25 30

Leu His Ser Tyr Val Trp Pro Val Arg Ala Pro Phe Glu Leu Cys Tyr
 35 40 45

Ala Leu Leu Gly Pro Tyr Cys Leu Leu Ser Asn Gln Ser Phe Leu Pro
 50 55 60

Lys Thr Ser Glu Asp Gly Phe Tyr Ile Ala Leu Ala Leu Phe Ile Ala
 65 70 75 80

Tyr Asn Thr Tyr Met Phe Met Glu Phe Ile Glu Cys Gly Gln Ser Ala
 85 90 95

Arg Ala Cys Trp Asn Asn His Arg Met Gln Arg Ile Thr Ser Ala Ser
 100 105 110

Ala Trp Leu Leu Ala Phe Leu Thr Val Ile Leu Lys Thr Leu
 115 120 125

<210> 2082

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 2082

Tyr Pro Ser Phe Ala Glu Gly Ala Thr Pro Phe Phe Thr Leu Asn Trp
 1 5 10 15

Ser Lys Tyr Ala Asp Phe Leu Thr Phe Arg Gly Gly Leu Asp Pro Val
 20 25 30

Thr Gly Gly Leu Trp Leu Thr Asp Ile Ala His His His Leu Ala Ile
 35 40 45

Ala Ile Leu Phe Leu Ile Ala Gly His Met Tyr Arg Thr Asn Trp Gly
 50 55 60

Ile Gly His Gly Leu Lys Asp Ile Leu Glu Ala His Lys Gly Pro Phe
 65 70 75 80

Thr Gly Gln Gly His Lys Gly Leu Tyr Glu Ile Leu Thr Thr Ser Trp
 85 90 95

His Ala Gln Leu Ser Leu Asn Leu Ala Met Leu Gly Ser Leu Thr Ile
 100 105 110

Val Val Ala His His Met Tyr Ser Met Pro Pro Tyr Pro Tyr Leu Ala
115 120 125

Thr Asp Tyr Gly Thr Gln Leu Ser Leu Phe Thr His His Met Trp Ile
130 135 140

Gly Gly Phe Leu Ile Val Gly Ala Ala Ala His Ala Ala Ile Phe Met
145 150 155 160

Val Arg Asp Tyr Asp Pro Thr Thr Arg Tyr Asn Asp Leu Leu Asp Arg
165 170 175

Val Leu Arg His Arg Asp Ala Ile Ile Ser His Leu Asn Trp Ala Cys
180 185 190

Ile Phe Leu Gly Phe His Ser Phe Gly Leu Tyr Ile His Asn Asp Thr
195 200 205

Met Ser Ala Leu Gly Arg Pro Gln Asp Met Phe Ser Asp Thr Ala Ile
210 215 220

Gln Leu Gln Pro Val Phe Ala Gln Trp Ile Gln Asn Thr His Ala Leu
225 230 235 240

Ala Pro Gly Ala Thr Ala Pro Gly Ala Thr Ala Ser Thr Ser Leu Thr
245 250 255

Trp Gly Gly Gly Asp Leu Val Ala Val Gly Gly Lys Val Ala Leu Leu
260 265 270

Pro Ile Pro Leu
275

<210> 2083
<211> 276
<212> PRT
<213> Solanum lycopersicum

<400> 2083
Phe Gly Gln Leu Ala Ile Ile Phe Leu Trp Thr Ser Gly Asn Leu Phe
1 5 10 15

His Val Ala Trp Gln Gly Asn Phe Glu Ser Trp Val Gln Asp Pro Leu
20 25 30

His Val Arg Pro Ile Ala His Ala Ile Trp Asp Pro His Phe Gly Gln
35 40 45

Pro Ala Val Glu Ala Phe Thr Arg Gly Gly Ala Leu Gly Pro Val Asn
50 55 60

Ile Ala Tyr Ser Gly Val Tyr Gln Trp Trp Tyr Thr Ile Gly Leu Arg
65 70 75 80

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Thr Asn Glu Asp Leu Tyr Thr Gly Ala Leu Phe Leu Leu Phe Leu Ser
85 90 95

Ala Ile Ser Leu Ile Ala Gly Trp Leu His Leu Gln Pro Lys Trp Lys
100 105 110

Pro Ser Val Ser Trp Phe Lys Asn Ala Glu Ser Arg Leu Asn His His
115 120 125

Leu Ser Gly Leu Phe Gly Val Ser Ser Leu Ala Trp Thr Gly His Leu
130 135 140

Val His Val Ala Ile Pro Ala Ser Arg Gly Glu Tyr Val Arg Trp Asn
145 150 155 160

Asn Phe Leu Asp Val Leu Pro His Pro Gln Gly Leu Gly Pro Leu Phe
165 170 175

Thr Gly Gln Trp Asn Leu Tyr Ala Gln Asn Pro Asp Ser Ser Ser His
180 185 190

Leu Phe Gly Thr Ala Glu Gly Ala Gly Thr Ala Ile Leu Thr Leu Leu
195 200 205

Gly Gly Phe His Pro Gln Thr Gln Ser Leu Trp Leu Thr Asp Ile Ala
210 215 220

His His His Leu Ala Ile Ala Phe Ile Phe Leu Val Ala Gly His Met
225 230 235 240

Tyr Arg Thr Asn Phe Gly Ile Gly His Ser Met Lys Asp Leu Leu Asp
245 250 255

Ala His Ile Pro Pro Gly Gly Arg Leu Gly Arg Gly His Lys Gly Leu
260 265 270

Tyr Asp Thr Ile
275

<210> 2084

<211> 226

<212> PRT

<213> Zea mays

<400> 2084

Thr Leu Phe Leu Gly Ala Thr Leu Ala Leu Ala Gln Arg Asp Ile Lys
1 5 10 15

Arg Ser Leu Ala Tyr Ser Thr Met Ser Gln Leu Gly Tyr Met Met Leu
20 25 30

Ala Leu Gly Ile Gly Ser Tyr Gln Ala Ala Leu Phe His Leu Ile Thr
35 40 45

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His Ala Tyr Ser Lys Ala Leu Leu Phe Leu Gly Ser Gly Ser Val Ile
50 55 60

His Ser Met Glu Pro Leu Val Gly Tyr Ser Pro Asp Lys Ser Gln Asn
65 70 75 80

Met Val Leu Met Gly Gly Leu Arg Lys Tyr Val Pro Ile Thr Arg Thr
85 90 95

Thr Phe Leu Cys Gly Thr Leu Ser Leu Cys Gly Ile Pro Pro Leu Ala
100 105 110

Cys Phe Trp Ser Lys Asp Glu Ile Leu Ser Asn Ser Trp Leu Tyr Ser
115 120 125

Pro Phe Phe Gly Ile Ile Ala Ser Phe Thr Ala Gly Leu Thr Ala Phe
130 135 140

Tyr Met Phe Arg Ile Tyr Leu Leu Thr Phe Asp Gly Tyr Leu Arg Val
145 150 155 160

His Phe Gln Asn Tyr Ser Ser Thr Lys Glu Gly Ser Leu Tyr Ser Ile
165 170 175

Ser Leu Trp Gly Lys Ser Ile Ser Lys Gly Val Asn Arg Asp Phe Val
180 185 190

Leu Ser Thr Met Lys Ser Gly Val Ser Phe Phe Ser Gln Asn Ile Pro
195 200 205

Lys Ile Pro Ala Asn Thr Arg Asn Lys Ile Gly Ser Phe Ser Thr Pro
210 215 220

Phe Gly
225

<210> 2085

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2085

Ser Val Val Phe Val Ala Pro Pro Pro Gly Met Pro Val Ser Gln Ile
1 5 10 15

Trp Thr Gln Lys Ser Ser Leu Ala Gly Glu His Ala Ala Ala Gly Asn
20 25 30

Phe Asp Thr Ala Met Arg Leu Leu Ser Arg Gln Leu Gly Ile Lys Asn
35 40 45

Phe Ala Pro Leu Lys Pro Leu Phe Leu Asp Leu His Met Gly Ser His
50 55 60

Ser Tyr Leu Arg Ala Leu Ala Thr Ala Pro Ile Ile

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65 70 75

<210> 2086
 <211> 76
 <212> PRT
 <213> Oryza sativa

<400> 2086
 Ser Ala Val Phe Val Ala Pro Pro Pro Gly Met Pro Val Ser Leu Ile
 1 5 10 15

Trp Thr Gln Lys Ser Ser Leu Ala Gly Glu His Ala Ala Ala Gly Asn
 20 25 30

Phe Asp Thr Ala Met Arg Leu Leu Ser Arg Gln Leu Gly Ile Lys Asn
 35 40 45

Phe Ala Pro Leu Lys Pro Leu Phe Val Asp Leu His Met Gly Ser His
 50 55 60

Ser Tyr Leu Arg Ala Leu Ala Thr Ala Pro Ile Ile
 65 70 75

<210> 2087
 <211> 251
 <212> PRT
 <213> Solanum lycopersicum

<400> 2087
 Ile Ala Gly Trp Leu His Leu Gln Pro Lys Trp Lys Pro Ser Val Ser
 1 5 10 15

Trp Phe Lys Asn Ala Glu Ser Arg Leu Asn His His Leu Ser Gly Leu
 20 25 30

Phe Gly Val Ser Ser Leu Ala Trp Thr Gly His Leu Val His Val Ala
 35 40 45

Ile Pro Ala Ser Arg Gly Glu Tyr Val Arg Trp Asn Asn Phe Leu Asp
 50 55 60

Val Leu Pro His Pro Gln Gly Leu Gly Pro Leu Phe Thr Gly Gln Trp
 65 70 75 80

Asn Leu Tyr Ala Gln Asn Pro Asp Ser Ser Ser His Leu Phe Gly Thr
 85 90 95

Ala Glu Gly Ala Gly Thr Ala Ile Leu Thr Leu Leu Gly Gly Phe His
 100 105 110

Pro Gln Thr Gln Ser Leu Trp Leu Thr Asp Ile Ala His His His Leu
 115 120 125

Ala Ile Ala Phe Ile Phe Leu Val Ala Gly His Met Tyr Arg Thr Asn
 130 135 140

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Phe Gly Ile Gly His Ser Met Lys Asp Leu Leu Asp Ala His Ile Pro
145 150 155 160

Pro Gly Gly Arg Leu Gly Arg Gly His Lys Gly Leu Tyr Asp Thr Ile
165 170 175

Asn Asn Ser Leu His Phe Gln Leu Gly Leu Ala Leu Ala Ser Leu Gly
180 185 190

Val Ile Thr Ser Leu Val Ala Gln His Met Tyr Ser Leu Pro Ala Tyr
195 200 205

Ala Phe Ile Ala Gln Asp Phe Thr Thr Gln Ala Ala Leu Tyr Thr His
210 215 220

His Gln Tyr Ile Ala Gly Phe Ile Met Thr Gly Ala Phe Ala His Gly
225 230 235 240

Ala Ile Phe Phe Ile Arg Asp Tyr Asn Pro Glu
245 250

<210> 2088

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2088

Met Ala Ser Pro Thr Arg Pro Gly Pro Tyr Met Pro Arg Pro Pro Ala
1 5 10 15

Val Pro Glu Trp Leu Asn Thr Gly Asp Asn Gly Trp Gln Leu Ala Ala
20 25 30

Ala Thr Phe Val Gly Leu Gln Ser Met Pro Gly Leu Val Val Leu Tyr
35 40 45

Gly Ser Ile Val Lys Lys Lys Trp Ala Val Asn Ser Ala Phe Met Ala
50 55 60

Leu Tyr Ala Tyr Ala Ser Thr Leu Ile Val Trp Val Leu Val Gly Phe
65 70 75 80

Arg Met Ala Phe Gly Asp Arg Leu Leu Pro Phe Trp Gly Lys Ala Gly
85 90 95

Ala Ala Leu Thr Glu Gly Phe Leu Val Ala Arg Ala Ser Val Pro Ala
100 105 110

Thr Ala His Tyr Gly Lys Asp Gly Ala Leu Glu Ser Pro Arg Thr Glu
115 120 125

Pro Phe Tyr Pro Glu Ala Ser Met Val Leu Phe Gln Phe Glu Leu Ala
130 135 140

Ala Ile Thr Leu Val Leu Leu Ala Gly Ser Leu Leu Gly Arg Met Asn

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<400> 2091

Met His Leu Arg Met Ala Ser Pro Pro Gln Pro Gly Pro Tyr Met Pro
1 5 10 15
Asp Leu Pro Ala Val Pro Ala Trp Leu Asn Lys Gly Asp Thr Ala Trp
20 25 30
Gln Leu Val Ala Ala Thr Phe Val Gly Ile Gln Ser Met Pro Gly Leu
35 40 45
Val Val Ile Tyr Gly Ser Ile Val Lys Lys Lys Trp Ala Val Asn Ser
50 55 60
Ala Phe Met Ala Leu Tyr Ala Tyr Ala Ser Thr Leu Ile Val Trp Val
65 70 75 80
Leu Val Gly Phe Arg Met Ala Phe Gly Asp Arg Leu Leu Pro Phe Trp
85 90 95
Ala Lys Ala Gly Pro Ala Leu Thr Gln Asp Phe Leu Val Gln Arg Ala
100 105 110
Val Phe Pro Ala Thr Ala His Tyr Gly Ser Asp Gly Thr Leu Glu Thr
115 120 125
Pro Arg Thr Glu Pro Phe Tyr Ala Glu Ala Ala Leu Val Leu Phe Glu
130 135 140
Phe Glu Phe Ala Ala Ile Thr Leu Val Leu Leu Ala Gly Ser Leu Leu
145 150 155 160
Gly Arg Met Asn Ile Lys Ala Trp Met Ala Phe Thr Pro Leu Trp Leu
165 170 175
Leu Phe Ser Tyr Thr Val Gly Ala Phe Ser Leu Trp Gly Gly Gly Phe
180 185 190
Leu Tyr Gln Trp Gly Val Ile Asp Tyr Ser Gly Gly Tyr Val Ile His
195 200 205
Leu Ser Ser Gly Val Ala Gly Phe Thr Ala Ala Tyr Trp Val Gly Pro
210 215 220
Arg Leu Lys Ser Asp Arg Glu Arg Phe Ser Pro Asn Asn Ile Leu Leu
225 230 235 240
Met Ile Ala Gly Gly Gly Leu Leu Trp Leu Gly
245 250

<210> 2092

<211> 76

<212> PRT

<213> Oryza sativa

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<400> 2092

Met Ala Lys Arg Ile Ala Ser Met Ser Ser Leu Leu Leu Ile Ala Leu
1 5 10 15

Leu Cys Leu Ser Ser His Leu Ala Gln Ala Gln Val Leu Phe Gln Gly
20 25 30

Phe Asn Trp Glu Ser Trp Lys Lys Gln Gly Gly Trp Tyr Asn Phe Leu
35 40 45

His Gly His Val Asp Asp Ile Ala Ala Thr Gly Val Thr His Val Trp
50 55 60

Leu Pro Pro Pro Ser His Ser Val Ala Pro Gln Gly
65 70 75

<210> 2093

<211> 76

<212> PRT

<213> Zea mays

<400> 2093

Gly Thr Leu Ser Leu Cys Gly Ile Pro Pro Leu Ala Cys Phe Trp Ser
1 5 10 15

Lys Asp Glu Ile Leu Ser Asn Ser Trp Leu Tyr Ser Pro Phe Phe Gly
20 25 30

Ile Ile Ala Ser Phe Thr Ala Gly Leu Thr Ala Phe Tyr Met Phe Arg
35 40 45

Ile Tyr Leu Leu Thr Phe Asp Gly Tyr Leu Arg Val His Phe Gln Asn
50 55 60

Tyr Ser Ser Thr Lys Glu Gly Ser Leu Tyr Ser Ile
65 70 75

<210> 2094

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 2094

Ile Ala Gly Trp Leu His Leu Gln Pro Lys Trp Lys Pro Ser Val Ser
1 5 10 15

Trp Phe Lys Asn Ala Glu Ser Arg Leu Asn His His Leu Ser Gly Leu
20 25 30

Phe Gly Val Ser Ser Leu Ala Trp Thr Gly His Leu Val His Val Ala
35 40 45

Ile Pro Ala Ser Arg Gly Glu Tyr Val Arg Trp Asn Asn Phe Leu Asp
50 55 60

Val Leu Pro His Pro Gln Gly Leu Gly Pro Leu Phe Thr Gly Gln Trp
65 70 75 80

Asn Leu Tyr Ala Gln Asn Pro Asp Ser Ser Ser His Leu Phe Gly Thr
 85 90 95
 Ala Glu Gly Ala Gly Thr Ala Ile Leu Thr Leu Leu Gly Gly Phe His
 100 105 110
 Pro Gln Thr Gln Ser Leu Trp Leu Thr Asp Ile Ala His His His Leu
 115 120 125
 Ala Ile Ala Phe Ile Phe Leu Val Ala Gly His Met Tyr Arg Thr Asn
 130 135 140
 Phe Gly Ile Gly His Ser Met
 145 150

 <210> 2095
 <211> 176
 <212> PRT
 <213> Zea mays

 <400> 2095
 Met Thr Ile Ala Val Gly Arg Val Thr Lys Glu Glu Asn Asp Leu Phe
 1 5 10 15

 Pro Leu Ile Asp Asp Trp Leu Arg Arg Asp Arg Phe Val Phe Val Gly
 20 25 30

 Trp Ser Gly Leu Leu Leu Phe Pro Cys Ala Tyr Phe Ala Leu Gly Gly
 35 40 45

 Trp Phe Thr Gly Thr Thr Phe Val Thr Ser Trp Tyr Thr His Gly Leu
 50 55 60

 Ala Ser Ser Tyr Leu Glu Gly Cys Asn Phe Leu Thr Ala Ala Val Ser
 65 70 75 80

 Thr Pro Ala Asn Ser Leu Ala His Ser Leu Leu Leu Leu Trp Gly Pro
 85 90 95

 Glu Ala Gln Gly Asp Phe Thr Arg Trp Ser Gln Leu Gly Gly Leu Trp
 100 105 110

 Thr Phe Leu Ala Leu His Gly Ala Phe Ala Leu Ile Gly Phe Met Leu
 115 120 125

 Arg Gln Phe Glu Leu Ala Arg Pro Val Gln Leu Arg Pro Tyr Asn Ala
 130 135 140

 Ile Ser Phe Ser Gly Pro Ile Ala Val Phe Leu Ser Val Phe Leu Ile
 145 150 155 160

 Tyr Pro Leu Gly Gln Ser Gly Trp Phe Phe Ser Pro Ser Phe Gly Val
 165 170 175

<210> 2096
 <211> 251
 <212> PRT
 <213> Zea mays

<400> 2096

Ile Gly Gly Trp Leu His Leu Gln Pro Lys Trp Lys Pro Ser Leu Ser
 1 5 10 15

Trp Phe Lys Asn Ala Glu Ser Arg Leu Asn His His Leu Ser Gly Leu
 20 25 30

Phe Gly Val Ser Ser Leu Ala Trp Thr Gly His Leu Val His Val Ala
 35 40 45

Ile Pro Gly Ser Ser Arg Gly Glu Tyr Val Arg Trp Asn Asn Phe Leu
 50 55 60

Asp Val Leu Pro Tyr Pro Gln Gly Leu Gly Pro Leu Leu Thr Gly Gln
 65 70 75 80

Trp Asn Leu Tyr Ala Gln Asn Pro Asp Ser Ser Asn His Leu Phe Gly
 85 90 95

Thr Thr Gln Gly Ala Gly Thr Ala Ile Leu Thr Leu Leu Gly Gly Phe
 100 105 110

His Pro Gln Thr Gln Ser Leu Trp Leu Thr Asp Ile Ala His His His
 115 120 125

Leu Ala Ile Ala Phe Ile Phe Leu Ile Ala Gly His Met Tyr Arg Thr
 130 135 140

Asn Phe Gly Ile Gly His Ser Ile Lys Asp Leu Leu Glu Ala His Thr
 145 150 155 160

Pro Pro Gly Gly Arg Leu Gly Arg Gly His Lys Gly Leu Tyr Asp Thr
 165 170 175

Ile Asn Asn Ser Ile His Phe Gln Leu Gly Leu Ala Leu Ala Ser Leu
 180 185 190

Gly Val Ile Thr Ser Leu Val Ala Gln His Met Tyr Ser Leu Pro Ala
 195 200 205

Tyr Ala Phe Ile Ala Gln Asp Phe Thr Thr Gln Ala Ala Leu Tyr Thr
 210 215 220

His His Gln Tyr Ile Ala Gly Phe Ile Met Thr Gly Ala Phe Ala His
 225 230 235 240

Gly Ala Ile Phe Phe Ile Arg Asp Tyr Asn Pro
 245 250

<210> 2097

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2097

Met Lys Asn Thr Ser Ser Leu Cys Leu Leu Leu Leu Val Val Leu Cys
1 5 10 15

Ser Leu Thr Cys Asn Ser Gly Gln Ala Gln Val Leu Phe Gln Gly Phe
20 25 30

Asn Trp Glu Ser Trp Lys Gln Gln Gly Gly Trp Tyr Asn Met Leu Lys
35 40 45

Gly Gln Val Asp Asp Ile Ala Lys Ala Gly Val Thr His Val Trp Leu
50 55 60

Pro Pro Pro Ser His Ser Val Ala Pro Gln Gly Tyr
65 70 75

<210> 2098

<211> 251

<212> PRT

<213> Oryza sativa

<400> 2098

Leu Glu Ile Phe Phe Ser Arg Asn Asn Ala Leu Leu Ala Gly Gly Arg
1 5 10 15

Arg Arg Leu His Pro Leu Gln Arg Ala Ala Tyr Leu Asn Thr Thr Val
20 25 30

Tyr Pro Phe Thr Ser Leu Phe Leu Met Ala Tyr Cys Leu Phe Pro Ala
35 40 45

Ile Pro Leu Ile Ala Gly Gly Gly Gly Trp Asn Ala Ala Pro Thr Pro
50 55 60

Thr Tyr Val Ala Phe Leu Ala Ala Leu Met Val Thr Leu Ala Ala Val
65 70 75 80

Ala Val Leu Glu Thr Arg Trp Ser Gly Ile Ala Leu Gly Glu Trp Trp
85 90 95

Arg Asn Glu Gln Phe Trp Met Val Ser Ala Thr Ser Ala Tyr Leu Ala
100 105 110

Ala Val Ala Gln Val Ala Leu Lys Val Ala Thr Gly Lys Glu Ile Ser
115 120 125

Phe Lys Leu Thr Ser Lys His Leu Ala Ser Ser Ala Thr Pro Val Ala
130 135 140

Gly Lys Asp Arg Gln Tyr Ala Glu Leu Tyr Ala Val Arg Trp Thr Ala
145 150 155 160

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Leu Met Ala Pro Thr Ala Ala Ala Leu Ala Val Asn Val Ala Ser Met
165 170 175

Ala Ala Ala Gly Gly Gly Gly Arg Trp Trp Trp Trp Asp Ala Pro Ser
180 185 190

Ala Ala Ala Ala Ala Ala Ala Ala Leu Pro Val Ala Phe Asn Val Trp
195 200 205

Val Val Val His Leu Tyr Pro Phe Ala Leu Gly Leu Met Gly Arg Arg
210 215 220

Ser Lys Ala Val Arg Pro Ile Leu Phe Leu Phe Ala Val Val Ala Tyr
225 230 235 240

Leu Ala Val Arg Phe Leu Cys Leu Leu Leu Gln
245 250

<210> 2099
<211> 251
<212> PRT
<213> Zea mays

<400> 2099
Phe Gly Gln Leu Ala Ile Ile Phe Leu Trp Thr Ser Gly Asn Leu Phe
1 5 10 15

His Val Ala Trp Gln Gly Asn Phe Glu Ser Trp Ile Gln Asp Pro Leu
20 25 30

His Val Arg Pro Ile Ala His Ala Ile Trp Asp Pro His Phe Gly Gln
35 40 45

Pro Ala Val Glu Ala Phe Thr Arg Gly Gly Ala Ala Gly Pro Val Asn
50 55 60

Ile Ala Tyr Ser Gly Val Tyr Gln Trp Trp Tyr Thr Ile Gly Leu Arg
65 70 75 80

Thr Asn Glu Asp Leu Tyr Thr Gly Ala Leu Phe Leu Leu Phe Leu Ser
85 90 95

Thr Leu Ser Leu Ile Gly Gly Trp Leu His Leu Gln Pro Lys Trp Lys
100 105 110

Pro Ser Leu Ser Trp Phe Lys Asn Ala Glu Ser Arg Leu Asn His His
115 120 125

Leu Ser Gly Leu Phe Gly Val Ser Ser Leu Ala Trp Thr Gly His Leu
130 135 140

Val His Val Ala Ile Pro Gly Ser Ser Arg Gly Glu Tyr Val Arg Trp
145 150 155 160

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Asn Asn Phe Leu Asp Val Leu Pro Tyr Pro Gln Gly Leu Gly Pro Leu
165 170 175

Leu Thr Gly Gln Trp Asn Leu Tyr Ala Gln Asn Pro Asp Ser Ser Asn
180 185 190

His Leu Phe Gly Thr Thr Gln Gly Ala Gly Thr Ala Ile Leu Thr Leu
195 200 205

Leu Gly Gly Phe His Pro Gln Thr Gln Ser Leu Trp Leu Thr Asp Ile
210 215 220

Ala His His His Leu Ala Ile Ala Phe Ile Phe Leu Ile Ala Gly His
225 230 235 240

Met Tyr Arg Thr Asn Phe Gly Ile Gly His Ser
245 250

<210> 2100

<211> 151

<212> PRT

<213> Zea mays

<400> 2100

Ile Gly Gly Trp Leu His Leu Gln Pro Lys Trp Lys Pro Ser Leu Ser
1 5 10 15

Trp Phe Lys Asn Ala Glu Ser Arg Leu Asn His His Leu Ser Gly Leu
20 25 30

Phe Gly Val Ser Ser Leu Ala Trp Thr Gly His Leu Val His Val Ala
35 40 45

Ile Pro Gly Ser Ser Arg Gly Glu Tyr Val Arg Trp Asn Asn Phe Leu
50 55 60

Asp Val Leu Pro Tyr Pro Gln Gly Leu Gly Pro Leu Leu Thr Gly Gln
65 70 75 80

Trp Asn Leu Tyr Ala Gln Asn Pro Asp Ser Ser Asn His Leu Phe Gly
85 90 95

Thr Thr Gln Gly Ala Gly Thr Ala Ile Leu Thr Leu Leu Gly Gly Phe
100 105 110

His Pro Gln Thr Gln Ser Leu Trp Leu Thr Asp Ile Ala His His His
115 120 125

Leu Ala Ile Ala Phe Ile Phe Leu Ile Ala Gly His Met Tyr Arg Thr
130 135 140

Asn Phe Gly Ile Gly His Ser
145 150

<210> 2101

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2101

Pro Ala Leu Thr Gln Asp Phe Leu Val Gln Arg Ala Val Phe Pro Ala
 1 5 10 15

Thr Ala His Tyr Gly Ser Asp Gly Thr Leu Glu Thr Pro Arg Thr Glu
 20 25 30

Pro Phe Tyr Ala Glu Ala Ala Leu Val Leu Phe Glu Phe Glu Phe Ala
 35 40 45

Ala Ile Thr Leu Val Leu Leu Ala Gly Ser Leu Leu Gly Arg Met Asn
 50 55 60

Ile Lys Ala Trp Met Ala Phe Thr Pro Leu Trp Leu Leu Phe Ser Tyr
 65 70 75 80

Thr Val Gly Ala Phe Ser Leu Trp Gly Gly Gly Phe Leu Tyr Gln Trp
 85 90 95

Gly Val Ile Asp Tyr Ser Gly Gly Tyr Val Ile His Leu Ser Ser Gly
 100 105 110

Val Ala Gly Phe Thr Ala Ala Tyr Trp Val Gly Pro Arg Leu Lys Ser
 115 120 125

Asp Arg Glu Arg Phe Ser Pro Asn Asn Ile Leu Leu Met Ile Ala Gly
 130 135 140

Gly Gly Leu Leu Trp Leu Gly Trp Ala Gly Phe Asn Gly Gly Ala Pro
 145 150 155 160

Tyr Ala Pro Asn Val Thr Ala Thr Val Ala Val Leu Asn Thr Asn Val
 165 170 175

<210> 2102

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2102

Cys Trp Val Thr Trp Gly Tyr Asn Met Ser Phe Gly His Lys Leu Leu
 1 5 10 15

Pro Phe Trp Gly Lys Ala Arg Pro Ala Leu Gly Gln Ser Phe Leu Leu
 20 25 30

Ala Gln Ala Val Leu Pro Gln Thr Thr Gln Phe Tyr Lys Gly Gly Gly
 35 40 45

Gly Ala Asp Ala Val Val Glu Thr Pro Trp Val Asn Pro Leu Tyr Pro
 50 55 60

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Met Ala Thr Met Val Tyr Phe Gln Cys Val Phe Ala Ala Ile Thr Leu
65 70 75 80

Ile Leu Leu Ala Gly Ser Leu Leu Gly Arg Met Asn Ile Lys Ala Trp
85 90 95

Met Leu Phe Val Pro
100

<210> 2103

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2103

Arg Ala Lys Tyr Leu Lys Ala Ile Ala Ala Lys Ile Lys Asp Lys Lys
1 5 10 15

Ser Tyr Leu Ala Leu Leu Glu Thr Leu Asp Ser Gly Lys Pro Leu Asp
20 25 30

Glu Ala Ala Gly Asp Met Glu Asp Val Ala Ala Cys Phe Glu Tyr Tyr
35 40 45

Ala Asp Leu Ala Glu Ala Leu Asp Gly Lys Gln Arg Ala Pro Ile Ser
50 55 60

Leu Pro Met Glu Asn Phe Glu Ser Tyr Val Leu Lys Glu Pro Ile Gly
65 70 75 80

Val Val Gly Leu Ile Thr Pro Trp Asn Tyr Pro Leu Leu Met Ala Thr
85 90 95

Trp Lys Val Ala Pro Ala Leu Ala Ala Gly Cys Thr Ala Val Leu Lys
100 105 110

Pro Ser Glu Leu Ala Ser Leu Thr Cys Leu Glu Leu Gly Gly Ile Cys
115 120 125

Ala Glu Ile Gly Leu Pro Pro Gly Val Leu Asn Ile Ile Thr Gly Leu
130 135 140

Gly Thr Glu Ala Gly Ala Pro Leu Ala Ser His Pro His Val Asp Lys
145 150 155 160

Ile Ala Phe Thr Gly Ser Thr Glu Thr Gly Lys Arg Ile Met Ile Thr
165 170 175

<210> 2104

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 2104

Met Ser Thr Leu Phe Phe Thr Phe Ser Leu Leu Leu Leu Ala Pro Leu
1 5 10 15

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Leu Val Ile Ser Ser Ile Gln Asp Pro Glu Leu Val Val Gln Asp Val
 20 25 30
 His Arg Ser Ile Asn Ala Ser Leu Thr Arg Arg Asn Leu Gly Tyr Leu
 35 40 45
 Ser Cys Gly Ser Gly Asn Pro Ile Asp Arg Leu Leu Ala Met Gln Pro
 50 55 60
 Gln Leu Gly Lys Lys Ser Pro Ala Phe Ser Tyr Cys Ala Ile Gly Phe
 65 70 75 80
 Gly Lys Asn Ala Ile Gly Gly Lys Asn Gly Arg Ile Tyr Val Val Thr
 85 90 95
 Asp Ser Gly Asn Asp Asp Pro Val Asn Pro Lys Pro Gly Thr Leu Arg
 100 105 110
 His Ala Val Ile Gln Asp Glu Pro Leu Trp Ile Ile Phe Lys
 115 120 125
 <210> 2105
 <211> 276
 <212> PRT
 <213> Zea mays
 <400> 2105
 Glu Leu Arg Pro Ser Glu Leu Trp Ala Ser Glu Lys Gly Tyr Lys Ala
 1 5 10 15
 Met Thr Ser Asn Phe Arg Arg Tyr Ser Tyr Arg Glu Leu Val Lys Ala
 20 25 30
 Thr Arg Lys Phe Lys Val Glu Leu Gly Arg Gly Glu Ser Gly Thr Val
 35 40 45
 Tyr Lys Gly Val Leu Glu Asp Asp Arg His Val Ala Val Lys Lys Leu
 50 55 60
 Glu Asn Val Arg Gln Gly Lys Glu Val Phe Gln Ala Glu Leu Ser Val
 65 70 75 80
 Ile Gly Arg Ile Asn His Met Asn Leu Val Arg Ile Trp Gly Phe Cys
 85 90 95
 Ser Glu Gly Ser His Arg Leu Leu Val Ser Glu Tyr Val Glu Asn Gly
 100 105 110
 Ser Leu Ala Asn Ile Leu Phe Ser Glu Gly Gly Asn Ile Leu Leu Asp
 115 120 125
 Trp Glu Gly Arg Phe Asn Ile Ala Leu Gly Val Ala Lys Gly Leu Ala
 130 135 140

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Tyr Leu His His Glu Cys Leu Glu Trp Val Ile His Cys Asp Val Lys
145 150 155 160

Pro Glu Asn Ile Leu Leu Asp Gln Ala Phe Glu Pro Lys Ile Thr Asp
165 170 175

Phe Gly Leu Val Lys Leu Leu Asn Arg Gly Gly Ser Thr Gln Asn Val
180 185 190

Ser His Val Arg Gly Thr Leu Gly Tyr Ile Ala Pro Glu Trp Val Ser
195 200 205

Ser Leu Pro Ile Thr Ala Lys Val Asp Val Tyr Ser Tyr Gly Val Val
210 215 220

Leu Leu Glu Leu Leu Thr Gly Thr Arg Val Ser Glu Leu Val Gly Gly
225 230 235 240

Thr Asp Glu Val His Ser Met Leu Arg Lys Leu Val Arg Met Leu Ser
245 250 255

Ala Lys Leu Glu Gly Glu Glu Gln Ser Trp Ile Asp Gly Tyr Leu Asp
260 265 270

Ser Lys Leu Asn
275

<210> 2106

<211> 251

<212> PRT

<213> Zea mays

<400> 2106

Ala Thr Gly Gly Phe Ser Glu Asp Ser Gln Val Gly Lys Gly Ser Phe
1 5 10 15

Ser Cys Val Phe Lys Gly Ile Leu Arg Asp Gly Thr Val Val Ala Val
20 25 30

Lys Arg Ala Ile Lys Ala Ser Asp Val Lys Lys Ser Ser Lys Glu Phe
35 40 45

His Asn Glu Leu Asp Leu Leu Ser Arg Leu Asn His Ala His Leu Leu
50 55 60

Asn Leu Leu Gly Tyr Cys Glu Asp Gly Ser Glu Arg Leu Leu Val Tyr
65 70 75 80

Glu Phe Met Ala His Gly Ser Leu Tyr Gln His Leu His Gly Lys Asp
85 90 95

Pro Asn Leu Lys Lys Arg Leu Asn Trp Ala Arg Arg Val Thr Ile Ala
100 105 110

Val Gln Ala Ala Arg Gly Ile Glu Tyr Leu His Gly Tyr Ala Cys Pro

115 120 125
 Pro Val Ile His Arg Asp Ile Lys Ser Ser Asn Ile Leu Ile Asp Glu
 130 135 140
 Asp His Asn Ala Arg Val Ala Asp Phe Gly Leu Ser Ile Leu Gly Pro
 145 150 155 160
 Ala Asp Ser Gly Thr Pro Leu Ser Glu Leu Pro Ala Gly Thr Leu Gly
 165 170 175
 Tyr Leu Asp Pro Glu Tyr Tyr Arg Leu His Tyr Leu Thr Thr Lys Ser
 180 185 190
 Asp Val Tyr Ser Phe Gly Val Val Leu Leu Glu Ile Leu Ser Gly Arg
 195 200 205
 Lys Ala Ile Asp Met Gln Phe Glu Glu Gly Asn Ile Val Glu Trp Ala
 210 215 220
 Val Pro Leu Ile Lys Ala Gly Asp Ile Phe Ala Ile Leu Asp Pro Val
 225 230 235 240
 Leu Ser Pro Pro Ser Asp Leu Glu Ala Leu Lys
 245 250
 <210> 2107
 <211> 126
 <212> PRT
 <213> Zea mays
 <400> 2107
 Ala Cys Pro Pro Val Ile His Arg Asp Ile Lys Ser Ser Asn Ile Leu
 1 5 10 15
 Ile Asp Glu Asp His Asn Ala Arg Val Ala Asp Phe Gly Leu Ser Ile
 20 25 30
 Leu Gly Pro Ala Asp Ser Gly Thr Pro Leu Ser Glu Leu Pro Ala Gly
 35 40 45
 Thr Leu Gly Tyr Leu Asp Pro Glu Tyr Tyr Arg Leu His Tyr Leu Thr
 50 55 60
 Thr Lys Ser Asp Val Tyr Ser Phe Gly Val Val Leu Leu Glu Ile Leu
 65 70 75 80
 Ser Gly Arg Lys Ala Ile Asp Met Gln Phe Glu Glu Gly Asn Ile Val
 85 90 95
 Glu Trp Ala Val Pro Leu Ile Lys Ala Gly Asp Ile Phe Ala Ile Leu
 100 105 110
 Asp Pro Val Leu Ser Pro Pro Ser Asp Leu Glu Ala Leu Lys
 115 120 125

<210> 2108

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2108

Met Ala Lys Arg His Leu Leu Leu Val Thr Thr Cys Leu Trp Ala Leu
1 5 10 15Ser Cys Ala Leu Leu Leu His Ala Ser Ser Asp Gly Phe Leu Arg Val
20 25 30Asn Leu Asn Lys Lys Arg Leu Asp Lys Glu Asp Leu Thr Ala Ala Lys
35 40 45Leu Ala Gln Gln Gly Asn Arg Leu Leu Lys Thr Gly Ser Ser Asp Ser
50 55 60Asp Pro Val Pro Leu Val Asp Tyr Leu Asn Thr Gln Tyr Tyr Gly Val
65 70 75 80Ile Gly Leu Gly Ser Pro Pro Gln Asn Phe Thr Val Ile Phe Asp Thr
85 90 95Gly Ser Ser Asn Leu
100

<210> 2109

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2109

Ser Leu Arg Ala Gly Asp Gln Ile Arg Arg Glu Ile Ala Thr Leu Lys
1 5 10 15Leu Leu Arg His Pro His Val Val Arg Leu His Glu Val Ala Ala Ser
20 25 30Lys Thr Lys Ile Tyr Met Val Leu Glu Phe Val Asn Gly Gly Glu Leu
35 40 45Phe Glu Arg Ile Ala Val Lys Gly Lys Leu Ser Glu Lys Glu Gly Arg
50 55 60Arg Leu Phe Gln Gln Leu Ile Asp Gly Val Ser Tyr Cys His Asp Arg
65 70 75 80Gly Val Tyr His Arg Asp Leu Lys Pro Glu Asn Val Leu Val Asp Gln
85 90 95Lys Gly Asn Ile Lys Ile Ser Asp Phe Gly Leu Ser Ala Leu Pro Gln
100 105 110His Leu Gly Asn Asp Gly Leu Leu His Thr Thr Cys Gly Ser Pro Asn
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115

120

125

Tyr Ile Ala Pro Glu Val Leu Gln Asn Lys Gly Tyr Asp Gly Ser Leu
 130 135 140

Ser Asp Ile Trp Ser Cys Gly Val Ile Leu Tyr Val Met Leu Ile Gly
 145 150 155 160

Tyr Leu Pro Phe Asp Asp Arg Asn Ile Val Val Leu Tyr Gln Lys Ile
 165 170 175

<210> 2110

<211> 251

<212> PRT

<213> Oryza sativa

<400> 2110

Met Val Asn Gly Glu Ala Glu Ala Glu Cys Thr Arg Ala Ser Leu Leu
 1 5 10 15

Gly Arg Tyr Glu Ile Gly Arg Thr Leu Gly Glu Gly Asn Phe Gly Lys
 20 25 30

Val Lys Tyr Ala Arg His Leu Ala Thr Gly Ala His Phe Ala Ile Lys
 35 40 45

Ile Leu Asp Arg Asn Lys Ile Leu Ser Leu Arg Phe Asp Asp Gln Ile
 50 55 60

Arg Arg Glu Ile Gly Thr Leu Lys Leu Leu Lys His Pro Asn Val Val
 65 70 75 80

Arg Leu His Glu Val Ala Ala Ser Lys Thr Lys Ile Tyr Met Val Leu
 85 90 95

Glu Tyr Val Asn Gly Gly Glu Leu Phe Asp Lys Ile Ala Val Lys Gly
 100 105 110

Lys Leu Ser Glu His Glu Gly Arg Arg Leu Phe Gln Gln Leu Ile Asp
 115 120 125

Ala Val Ser Tyr Cys His Asp Lys Gly Val Tyr His Arg Asp Leu Lys
 130 135 140

Pro Glu Asn Val Leu Val Asp Arg Arg Gly Asn Ile Lys Ile Ser Asp
 145 150 155 160

Phe Gly Leu Ser Ala Leu Pro Gln His Leu Gly Asn Asp Gly Leu Leu
 165 170 175

His Thr Thr Cys Gly Ser Pro Asn Tyr Ile Ala Pro Glu Val Leu Gln
 180 185 190

Asn Arg Gly Tyr Asp Gly Ser Leu Ser Asp Ile Trp Ser Cys Gly Val
 195 200 205

Ile Leu Tyr Val Met Leu Val Gly Tyr Leu Pro Phe Asp Asp Arg Asn
210 215 220

Leu Val Val Leu Tyr Gln Lys Ile Phe Lys Gly Asp Thr Gln Ile Pro
225 230 235 240

Lys Trp Leu Ser Pro Ser Ala Arg Asp Leu Leu
245 250

<210> 2111
<211> 126
<212> PRT
<213> Oryza sativa

<400> 2111
Gly Gly Glu Leu Phe Asp Lys Ile Ala Val Lys Gly Lys Leu Ser Glu
1 5 10 15

His Glu Gly Arg Arg Leu Phe Gln Gln Leu Ile Asp Ala Val Ser Tyr
20 25 30

Cys His Asp Lys Gly Val Tyr His Arg Asp Leu Lys Pro Glu Asn Val
35 40 45

Leu Val Asp Arg Arg Gly Asn Ile Lys Ile Ser Asp Phe Gly Leu Ser
50 55 60

Ala Leu Pro Gln His Leu Gly Asn Asp Gly Leu Leu His Thr Thr Cys
65 70 75 80

Gly Ser Pro Asn Tyr Ile Ala Pro Glu Val Leu Gln Asn Arg Gly Tyr
85 90 95

Asp Gly Ser Leu Ser Asp Ile Trp Ser Cys Gly Val Ile Leu Tyr Val
100 105 110

Met Leu Val Gly Tyr Leu Pro Phe Asp Asp Arg Asn Leu Val
115 120 125

<210> 2112
<211> 176
<212> PRT
<213> Oryza sativa

<400> 2112
Cys Ala Asn Cys Arg Asp Gly Phe Glu Asn Tyr Cys Ala Gly Leu Val
1 5 10 15

Pro Ser Phe Asn Ala Ala Leu Pro Asp Gly Ala Thr Val His Gly Gly
20 25 30

Phe Ser Glu Leu Ala Val Val Asn Gln Arg Tyr Val Val Arg Ile Pro
35 40 45

Gly Gly Gly Gly Gly Ala Ser Pro Ala Pro Leu Asp Arg Leu Ala Pro
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50				55				60							
Leu 65	Leu	Cys	Ala	Gly	Val 70	Thr	Val	Tyr	Cys	Pro 75	Met	Arg	Arg	Leu	Gly 80
Leu	Asp	Arg	Pro	Gly 85	Val	His	Leu	Gly	Val 90	Ala	Gly	Leu	Gly	Gly 95	Leu
Gly	His	Leu	Ala 100	Val	Lys	Phe	Gly	Lys 105	Ala	Phe	Gly	Val	Lys 110	Val	Thr
Val	Ile	Ser 115	Thr	Ser	Pro	Trp	Lys 120	Glu	Ala	Glu	Ala	Val 125	Glu	Arg	Leu
Gly	Ala 130	Asp	Ala	Phe	Leu	Leu 135	Ser	Thr	Asn	Ala	Glu 140	Gln	Met	Lys	Ala
Ala 145	Ala	Gly	Thr	Met	Asp 150	Gly	Ile	Ile	Asp	Thr 155	Val	Ser	Ala	Val	His 160
Asp	Leu	Thr	Pro	Leu 165	Ile	Thr	Leu	Leu	Arg 170	Thr	His	Gly	Gln	Leu 175	Val
<210> 2113															
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<212> PRT															
<213> Oryza sativa															
<400> 2113															
His 1	Val	Ile	Arg	Leu 5	His	Glu	Val	Met	Ala 10	Thr	Arg	Ser	Arg	Ile 15	Tyr
Phe	Val	Met	Glu 20	Tyr	Ala	Ser	Gly	Gly 25	Glu	Leu	Phe	Thr	Arg 30	Leu	Ser
Arg	Ser	Pro 35	Arg	Phe	Pro	Glu	Pro 40	Val	Ala	Arg	Arg	Tyr 45	Phe	Gln	Gln
Leu	Ile 50	Thr	Ala	Val	Glu	Phe 55	Cys	His	Ser	Arg	Gly 60	Val	Tyr	His	Arg
Asp 65	Leu	Lys	Pro	Glu	Asn 70	Leu	Leu	Leu	Asp	Ala 75	Arg	Gly	Asp	Leu	Lys 80
Val	Thr	Asp	Phe	Gly 85	Leu	Ser	Ala	Leu	Asp 90	Gly	Gly	Leu	Arg	Gly 95	Asp
Gly	Leu	Leu	His 100	Thr	Thr	Cys	Gly	Thr 105	Pro	Ala	Tyr	Val	Ala 110	Pro	Glu
Val	Leu	Leu 115	Lys	Arg	Gly	Tyr	Asp 120	Gly	Ala	Lys	Ala	Asp 125	Ile	Trp	Ser
Cys	Gly 130	Val	Ile	Leu	Phe	Val 135	Leu	Leu	Ala	Gly	Tyr 140	Leu	Pro	Phe	Asn

Glu Thr Asn Leu Val Ile Leu
145 150

<210> 2114
<211> 201
<212> PRT
<213> Oryza sativa

<400> 2114
Glu Leu Gly Arg Met Leu Gly Arg Gly Thr Phe Ala Lys Val Tyr Leu
1 5 10 15

Ala Arg Ala Val Ala Gly Gly Glu Ala Val Ala Val Lys Val Ile Asp
20 25 30

Lys Ala Glu Val Met Gly Thr Ala Gly Met Ala Pro Arg Val Leu Arg
35 40 45

Glu Val Ala Ala Met Arg Arg Leu Arg His Pro His Val Leu Arg Leu
50 55 60

His Glu Val Leu Ala Thr Arg Ala Arg Ile Tyr Leu Val Met Glu Leu
65 70 75 80

Ala Thr Gly Gly Asp Leu Leu Ser Arg Leu Ala Ala Leu Pro Arg Arg
85 90 95

Arg Leu Pro Glu Ser Ala Ala Arg Arg Val Phe Val Gln Leu Val Asp
100 105 110

Ala Leu Ser Tyr Cys His Ala Arg Gly Val Ala His Arg Asp Val Lys
115 120 125

Pro Gln Asn Val Leu Leu Asp Gly Asp Gly Asn Leu Lys Val Ser Asp
130 135 140

Phe Gly Leu Ala Ala Leu Pro Asp Thr Leu Arg Asp Asp Gly Arg Leu
145 150 155 160

His Thr Ala Cys Gly Thr Pro Ala Tyr Ala Ala Pro Glu Val Leu Arg
165 170 175

Arg Arg Ala Tyr Asp Gly Ala Lys Ala Asp Ala Trp Ser Cys Gly Val
180 185 190

Ile Leu Phe Val Leu Leu Ala Gly His
195 200

<210> 2115
<211> 101
<212> PRT
<213> Oryza sativa

<400> 2115
Cys His Glu Lys Gly Val Tyr His Arg Asp Leu Lys Pro Glu Asn Val
Page 1234

1 5 10 15
 Leu Val Asp Ala Lys Gly Asn Ile Lys Val Ser Asp Phe Gly Leu Ser
 20 25 30
 Ala Leu Pro Gln Asn Gln Arg Lys Asp Gly Leu Leu His Thr Thr Cys
 35 40 45
 Gly Ser Pro Asn Tyr Ile Ala Pro Glu Val Leu Leu Asn Arg Gly Tyr
 50 55 60
 Asp Gly Ser Leu Ser Asp Ile Trp Ser Cys Gly Val Ile Leu Tyr Val
 65 70 75 80
 Met Leu Thr Gly Asn Leu Pro Phe Asp Asp Gln Asn Thr Val Val Leu
 85 90 95
 Tyr Gln Lys Ile Leu
 100

<210> 2116
 <211> 276
 <212> PRT
 <213> Solanum lycopersicum

<400> 2116
 Cys Ser Ser Leu Glu Leu Val Asp Ile Ser Tyr Asn Asn Phe Ser Gly
 1 5 10 15
 Lys Leu Pro Val Asp Thr Leu Ser Lys Leu Ser Asn Ile Lys Thr Met
 20 25 30
 Val Leu Ser Phe Asn Lys Phe Val Gly Gly Leu Pro Asp Ser Phe Ser
 35 40 45
 Asn Leu Leu Lys Leu Glu Thr Leu Asp Met Ser Ser Asn Asn Leu Thr
 50 55 60
 Gly Val Ile Pro Ser Gly Ile Cys Lys Asp Pro Met Asn Asn Leu Lys
 65 70 75 80
 Val Leu Tyr Leu Gln Asn Asn Leu Phe Lys Gly Pro Ile Pro Asp Ser
 85 90 95
 Leu Ser Asn Cys Ser Gln Leu Val Ser Leu Asp Leu Ser Phe Asn Tyr
 100 105 110
 Leu Thr Gly Ser Ile Pro Ser Ser Leu Gly Ser Leu Ser Lys Leu Lys
 115 120 125
 Asp Leu Ile Leu Trp Leu Asn Gln Leu Ser Gly Glu Ile Pro Gln Glu
 130 135 140
 Leu Met Tyr Leu Gln Ala Leu Glu Asn Leu Ile Leu Asp Phe Asn Asp
 145 150 155 160

Leu Thr Gly Pro Ile Pro Ala Ser Leu Ser Asn Cys Thr Lys Leu Asn
165 170 175

Trp Ile Ser Leu Ser Asn Asn Gln Leu Ser Gly Glu Ile Pro Ala Ser
180 185 190

Leu Gly Arg Leu Ser Asn Leu Ala Ile Leu Lys Leu Gly Asn Asn Ser
195 200 205

Ile Ser Gly Asn Ile Pro Ala Glu Leu Gly Asn Cys Gln Ser Leu Ile
210 215 220

Trp Leu Asp Leu Asn Thr Asn Phe Leu Asn Gly Ser Ile Pro Pro Pro
225 230 235 240

Leu Phe Lys Gln Ser Gly Asn Ile Ala Val Ala Leu Leu Thr Gly Lys
245 250 255

Arg Tyr Val Tyr Ile Lys Asn Asp Gly Ser Lys Glu Cys His Gly Ala
260 265 270

Gly Asn Leu Leu
275

<210> 2117

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 2117

Ser Gln Leu Val Ser Leu Asp Leu Ser Phe Asn Tyr Leu Thr Gly Ser
1 5 10 15

Ile Pro Ser Ser Leu Gly Ser Leu Ser Lys Leu Lys Asp Leu Ile Leu
20 25 30

Trp Leu Asn Gln Leu Ser Gly Glu Ile Pro Gln Glu Leu Met Tyr Leu
35 40 45

Gln Ala Leu Glu Asn Leu Ile Leu Asp Phe Asn Asp Leu Thr Gly Pro
50 55 60

Ile Pro Ala Ser Leu Ser Asn Cys Thr Lys Leu Asn Trp Ile Ser Leu
65 70 75 80

Ser Asn Asn Gln Leu Ser Gly Glu Ile Pro Ala Ser Leu Gly Arg Leu
85 90 95

Ser Asn Leu Ala Ile Leu Lys Leu Gly Asn Asn Ser Ile Ser Gly Asn
100 105 110

Ile Pro Ala Glu Leu Gly Asn Cys Gln Ser Leu Ile Trp Leu Asp Leu
115 120 125

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Asn Thr Asn Phe Leu Asn Gly Ser Ile Pro Pro Pro Leu Phe Lys Gln
130 135 140

Ser Gly Asn Ile Ala Val Ala Leu Leu Thr Gly Lys Arg Tyr Val Tyr
145 150 155 160

Ile Lys Asn Asp Gly Ser Lys Glu Cys His Gly Ala Gly Asn Leu Leu
165 170 175

<210> 2118

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 2118

Ser Gln Leu Val Ser Leu Asp Leu Ser Phe Asn Tyr Leu Thr Gly Ser
1 5 10 15

Ile Pro Ser Ser Leu Gly Ser Leu Ser Lys Leu Lys Asp Leu Ile Leu
20 25 30

Trp Leu Asn Gln Leu Ser Gly Glu Ile Pro Gln Glu Leu Met Tyr Leu
35 40 45

Gln Ala Leu Glu Asn Leu Ile Leu Asp Phe Asn Asp Leu Thr Gly Pro
50 55 60

Ile Pro Ala Ser Leu Ser Asn Cys Thr Lys Leu Asn Trp Ile Ser Leu
65 70 75 80

Ser Asn Asn Gln Leu Ser Gly Glu Ile Pro Ala Ser Leu Gly Arg Leu
85 90 95

Ser Asn Leu Ala Ile Leu Lys Leu Gly Asn Asn Ser Ile Ser Gly Asn
100 105 110

Ile Pro Ala Glu Leu Gly Asn Cys Gln Ser Leu Ile Trp Leu Asp Leu
115 120 125

Asn Thr Asn Phe Leu Asn Gly Ser Ile Pro Pro Pro Leu Phe Lys Gln
130 135 140

Ser Gly Asn Ile Ala Val Ala Leu Leu Thr Gly Lys Arg Tyr Val Tyr
145 150 155 160

Ile Lys Asn Asp Gly Ser Lys Glu Cys His Gly Ala Gly Asn Leu Leu
165 170 175

Glu Phe Gly Gly Ile Arg Gln Glu Gln Leu Asp Arg Ile Ser Thr Arg
180 185 190

His Pro Cys Asn Phe Thr Arg Val Tyr Arg Gly Ile Thr Gln Pro Thr
195 200 205

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Phe Asn His Asn Gly Ser Met Ile Phe Leu Asp Leu Ser Tyr Asn Lys
 210 215 220

Leu Glu Gly Ser Ile Pro Lys Glu Leu Gly Ala Met Tyr Tyr Leu Ser
 225 230 235 240

Ile Leu Asn Leu Gly His Asn Asp Leu Ser Gly Met Ile Pro Gln Gln
 245 250 255

Leu Gly Gly Leu Lys Asn Val Ala Ile Leu Asp Leu Ser Tyr Asn Arg
 260 265 270

Phe Asn Gly Thr
 275

<210> 2119

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2119

Tyr Cys His Ser Arg Gly Val Tyr His Arg Asp Leu Lys Pro Glu Asn
 1 5 10 15

Leu Leu Leu Asp Ser Tyr Gly Asn Leu Lys Val Ser Asp Phe Gly Leu
 20 25 30

Ser Ala Leu Ser Gln Gln Ile Lys Asp Asp Gly Leu Leu His Thr Thr
 35 40 45

Cys Gly Thr Pro Asn Tyr Val Ala Pro Glu Val Leu Glu Asp Gln Gly
 50 55 60

Tyr Asp Gly Ala Met Ala Asp Leu Trp Ser Cys Gly Val Ile Leu Phe
 65 70 75 80

Val Leu Leu Ala Gly Tyr Leu Pro Phe Glu Asp Ser Asn Leu Met Thr
 85 90 95

Leu Tyr Lys Lys Ile
 100

<210> 2120

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2120

Tyr Cys His Ser Arg Gly Val Tyr His Arg Asp Leu Lys Pro Glu Asn
 1 5 10 15

Leu Leu Leu Asp Ser Tyr Gly Asn Leu Lys Val Ser Asp Phe Gly Leu
 20 25 30

Ser Ala Leu Ser Gln Gln Ile Lys Asp Asp Gly Leu Leu His Thr Thr
 35 40 45

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Cys Gly Thr Pro Asn Tyr Val Ala Pro Glu Val Leu Glu Asp Gln Gly
50 55 60

Tyr Asp Gly Ala Met Ala Asp Leu Trp Ser Cys Gly Val Ile Leu Phe
65 70 75 80

Val Leu Leu Ala Gly Tyr Leu Pro Phe Glu Asp Ser Asn Leu Met Thr
85 90 95

Leu Tyr Lys Lys Ile
100

<210> 2121

<211> 226

<212> PRT

<213> Oryza sativa

<400> 2121

Met Ala Ala Thr Lys Ser Lys Ala Ala Lys Lys Gly Ala Pro Leu Leu
1 5 10 15

Gly Lys Tyr Glu Leu Gly Arg Leu Leu Gly Arg Gly Thr Phe Ala Lys
20 25 30

Val Tyr His Ala Arg Ser Leu Ala Pro Gly Ala Asp Pro Val Ala Val
35 40 45

Lys Val Leu Asp Lys Pro Asp Leu Ala Ala Ala Gly Ala Gly Met Ala
50 55 60

Thr Arg Val Leu Arg Glu Val Ala Ala Met Arg Arg Leu Arg His Pro
65 70 75 80

Asn Val Leu Arg Leu His Glu Val Leu Ala Thr Arg Ser Lys Val Tyr
85 90 95

Leu Val Met Glu Leu Ala Pro Gly Gly Asp Leu Leu Ser Arg Leu Ala
100 105 110

Ser Leu Pro Ser Arg Arg Leu Pro Glu His Ala Ala Gln Arg Val Phe
115 120 125

Leu Gln Leu Val Ser Ala Leu Ile Tyr Cys His Ala Arg Gly Val Ser
130 135 140

His Arg Asp Val Lys Pro Gln Asn Val Leu Leu Asp Ala His Gly Asn
145 150 155 160

Leu Lys Val Ser Asp Phe Gly Leu Ala Ala Leu Pro Asp Ser Leu Arg
165 170 175

Asp Asp Gly Arg Leu His Thr Ala Cys Gly Thr Pro Ala Phe Ala Ala
180 185 190

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Pro Glu Val Leu Arg Arg Lys Ala Tyr Asp Gly Ala Lys Ala Asp Ala
 195 200 205

Trp Ser Cys Gly Val Ile Leu Phe Val Leu Leu Ala Gly His Leu Pro
 210 215 220

Phe Asp
 225

<210> 2122
 <211> 201
 <212> PRT
 <213> Zea mays

<400> 2122
 Val Val Glu Leu Leu Pro Phe Val Tyr Thr Pro Thr Val Gly Glu Ala
 1 5 10 15

Cys Gln Lys Tyr Gly Ser Ile Phe Gly Arg Pro Gln Gly Leu Tyr Val
 20 25 30

Ser Leu Lys Asp Lys Gly Lys Val Leu Glu Val Leu Arg Asn Trp Pro
 35 40 45

His Arg Asn Ile Gln Val Ile Cys Val Thr Asp Gly Glu Arg Ile Leu
 50 55 60

Gly Leu Gly Asp Leu Gly Cys Gln Gly Met Gly Ile Pro Val Gly Lys
 65 70 75 80

Leu Ala Leu Tyr Thr Ala Leu Gly Gly Val Asp Pro Ser Val Cys Leu
 85 90 95

Pro Ile Thr Ile Asp Val Gly Thr Asn Asn Glu Phe Leu Leu Asn Asp
 100 105 110

Glu Phe Tyr Ile Gly Leu Arg Gln Lys Arg Ala Thr Gly Glu Glu Tyr
 115 120 125

Asp Glu Leu Ile Glu Glu Phe Met Ser Ala Val Lys Gln Phe Tyr Gly
 130 135 140

Glu Lys Val Leu Ile Gln Phe Glu Asp Phe Ala Asn His Asn Ala Phe
 145 150 155 160

Asp Leu Leu Glu Lys Tyr Ser Lys Ser His Leu Val Phe Asn Asp Asp
 165 170 175

Ile Gln Gly Thr Ala Ser Val Val Leu Ala Gly Leu Leu Ala Ala Leu
 180 185 190

Lys Met Val Gly Gly Thr Leu Ala Glu
 195 200

<210> 2123

<211> 251
 <212> PRT
 <213> Zea mays

<400> 2123

Ser Tyr Leu Leu Glu Thr Leu Asn Asp Arg Tyr Ser Lys Lys Leu Val
 1 5 10 15

Gln Thr Tyr Ser Val Phe Pro Asn Gln Val Glu Thr Ser Asp Val Val
 20 25 30

Val Gln Pro Tyr Asn Ser Leu Leu Thr Leu Lys Arg Leu Thr Leu Asn
 35 40 45

Ala Asp Cys Val Val Val Leu Asp Asn Thr Ala Leu Asn Arg Ile Ala
 50 55 60

Val Glu Arg Leu His Leu Ser Asn Pro Thr Phe Ala Gln Thr Asn Ser
 65 70 75 80

Leu Val Ser Thr Val Met Ser Ala Ser Thr Thr Thr Leu Arg Tyr Pro
 85 90 95

Gly Tyr Met Asn Asn Asp Leu Val Gly Leu Leu Ala Ser Leu Ile Pro
 100 105 110

Thr Pro Arg Cys His Phe Leu Met Thr Gly Tyr Thr Pro Leu Thr Val
 115 120 125

Glu Arg Gln Val Asn Met Ile Arg Lys Thr Thr Val Leu Asp Val Met
 130 135 140

Arg Arg Leu Leu Gln Thr Lys Asn Ile Met Val Ser Ser Tyr Ala Arg
 145 150 155 160

Thr Lys Glu Ala Ser Gln Ala Lys Tyr Ile Ser Ile Leu Asn Ile Ile
 165 170 175

Gln Gly Glu Val Asp Pro Thr Gln Val His Glu Ser Leu Gln Arg Ile
 180 185 190

Arg Glu Arg Lys Leu Val Asn Phe Ile Tyr Trp Ala Pro Ala Ser Ile
 195 200 205

Gln Val Ala Leu Ser Arg Lys Ser Pro Tyr Val Gln Thr Thr His Arg
 210 215 220

Val Ser Gly Leu Met Leu Ala Asn His Thr Ser Ile Arg His Leu Phe
 225 230 235 240

Ser Lys Cys Leu Gly Gln Tyr Glu Lys Leu Arg
 245 250

<210> 2124
 <211> 176

<212> PRT

<213> Oryza sativa

<400> 2124

Lys Asp Thr Ile Leu Asn His Arg Met Leu His Gln Ile Lys Arg Glu
1 5 10 15

Ile Ser Ile Met Lys Ile Val Arg His Pro Asn Ile Val Arg Leu Asn
20 25 30

Glu Val Leu Ala Gly Lys Thr Lys Ile Tyr Ile Ile Leu Glu Leu Ile
35 40 45

Thr Gly Gly Glu Leu Phe Asp Lys Ile Ala Arg Gln Gly Lys Leu Arg
50 55 60

Glu Asn Glu Ala Arg Lys Tyr Phe Gln Gln Leu Ile Asp Ala Ile Asn
65 70 75 80

Tyr Cys His Ser Lys Gly Val Tyr His Arg Asp Leu Lys Pro Glu Asn
85 90 95

Leu Leu Leu Asp Ser Arg Gly Asn Leu Lys Val Ser Asp Phe Gly Leu
100 105 110

Ser Thr Leu Ala Gln Lys Gly Val Gly Leu Leu His Thr Thr Cys Gly
115 120 125

Thr Pro Asn Tyr Val Ala Pro Glu Val Leu Ser Asn Asn Gly Tyr Asp
130 135 140

Gly Ser Ala Ala Asp Val Trp Ser Cys Gly Val Ile Leu Tyr Val Leu
145 150 155 160

Met Ala Gly Tyr Leu Pro Phe Glu Glu Asp Asp Leu Pro Thr Leu Tyr
165 170 175

<210> 2125

<211> 201

<212> PRT

<213> Zea mays

<400> 2125

Met Ala Thr Pro Ala Val Lys Val Tyr Gly Trp Ala Ile Ser Pro Phe
1 5 10 15

Val Ser Arg Ala Leu Leu Ala Leu Glu Glu Ala Gly Val Asp Tyr Glu
20 25 30

Leu Val Pro Met Ser Arg Gln Asp Gly Asp His Arg Arg Pro Glu His
35 40 45

Leu Ala Arg Asn Pro Phe Gly Lys Val Pro Val Leu Glu Asp Gly Asp
50 55 60

Leu Thr Leu Phe Glu Ser Arg Ala Ile Ala Arg His Val Leu Arg Lys
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65	70					75					80				
His	Lys	Pro	Glu	Leu	Leu	Gly	Gly	Gly	Arg	Leu	Glu	Gln	Thr	Ala	Met
			85						90					95	
Val	Asp	Val	Trp	Leu	Glu	Val	Glu	Ala	His	Gln	Leu	Ser	Pro	Pro	Ala
			100					105					110		
Ile	Ala	Ile	Val	Val	Glu	Cys	Val	Phe	Ala	Pro	Phe	Leu	Gly	Arg	Glu
		115					120					125			
Arg	Asn	Gln	Ala	Val	Val	Asp	Glu	Asn	Val	Glu	Lys	Leu	Lys	Lys	Val
	130					135					140				
Leu	Glu	Val	Tyr	Glu	Ala	Arg	Leu	Ala	Thr	Cys	Thr	Tyr	Leu	Ala	Gly
145					150					155					160
Asp	Phe	Leu	Ser	Leu	Ala	Asp	Leu	Ser	Pro	Phe	Thr	Ile	Met	His	Cys
				165					170					175	
Leu	Met	Ala	Thr	Glu	Tyr	Ala	Ala	Leu	Val	His	Ala	Leu	Pro	His	Val
			180					185					190		
Ser	Ala	Trp	Trp	Gln	Gly	Leu	Ala	Ala							
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<211> 176															
<212> PRT															
<213> Oryza sativa															
<400> 2126															
Val	Lys	Val	Val	Ala	Lys	Glu	Lys	Val	Val	Arg	Ala	Gly	Met	Met	Glu
1				5					10					15	
Gln	Ile	Lys	Arg	Glu	Ile	Ala	Val	Met	Lys	Arg	Val	Ser	His	Pro	Asn
			20					25					30		
Ile	Val	Glu	Leu	His	Glu	Val	Met	Ala	Thr	Arg	Ser	Lys	Ile	Tyr	Leu
		35					40					45			
Ala	Leu	Glu	Leu	Val	Arg	Gly	Gly	Glu	Leu	Phe	Gly	Arg	Ile	Val	Arg
	50					55					60				
Leu	Gly	Arg	Val	Arg	Glu	Asp	Ala	Ala	Arg	His	Tyr	Phe	Arg	Gln	Leu
65				70						75					80
Val	Ser	Ala	Val	Asp	Phe	Cys	His	Ser	Arg	Gly	Val	Tyr	His	Arg	Asp
				85					90					95	
Leu	Lys	Pro	Glu	Asn	Leu	Leu	Leu	Asp	Glu	Ala	Gly	Asn	Leu	Lys	Val
			100					105					110		
Val	Asp	Phe	Gly	Leu	Ser	Ala	Leu	Ala	Asp	His	Ala	Arg	Ala	Asp	Gly
		115					120					125			

Leu Leu His Thr Leu Cys Gly Thr Pro Gly Tyr Ala Ala Pro Glu Val
 130 135 140

Leu Arg Asp Lys Gly Tyr Asp Gly Ala Lys Ala Asp Leu Trp Ser Cys
 145 150 155 160

Gly Val Ile Leu Tyr Val Leu Leu Ala Gly Ser Leu Pro Phe Pro Asp
 165 170 175

<210> 2127

<211> 201

<212> PRT

<213> Zea mays

<400> 2127

Tyr Thr Arg Arg Arg Tyr Asp Arg Thr Ser Val Gly Leu Ile Pro Asn
 1 5 10 15

Asn Arg Leu Asp Arg Asn Asn Thr Asn Ser Phe Tyr Ser Lys Ala Lys
 20 25 30

Ile Gln Ser Leu Ser Gln His Gln Glu Val Ile Gly Thr Leu Leu Asn
 35 40 45

Arg Asn Lys Glu Tyr Pro Ser Leu Met Ile Leu Leu Ala Ser Asn Cys
 50 55 60

Ser Arg Ile Gly Leu Phe Lys Asn Ser Lys Tyr Pro Asn Ala Val Lys
 65 70 75 80

Glu Ser Asn Pro Arg Ile Pro Ile Arg Asp Ile Phe Gly Leu Leu Gly
 85 90 95

Val Ile Val Pro Ser Ile Ser Asn Phe Ser Ser Ser Tyr Tyr Leu Leu
 100 105 110

Thr His Asn Gln Ile Leu Leu Lys Lys Tyr Leu Phe Leu Asp Asn Leu
 115 120 125

Lys Gln Thr Leu Gln Val Leu Gln Gly Leu Lys Tyr Ser Leu Ile Asp
 130 135 140

Glu Asn Lys Arg Ile Ser Asn Phe Asp Ser Asn Ile Met Leu Glu Pro
 145 150 155 160

Phe His Leu Asn Trp His Phe Leu His His Asp Ser Trp Glu Glu Thr
 165 170 175

Leu Ala Ile Ile His Leu Gly Gln Phe Ile Cys Glu Asn Leu Cys Leu
 180 185 190

Phe Lys Leu His Ile Lys Lys Ser Gly
 195 200

<210> 2128
 <211> 226
 <212> PRT
 <213> Zea mays

<400> 2128
 Val Arg Pro Ala Val Ala Tyr Glu Met Asp Glu Gly Ile Asn Leu Ala
 1 5 10 15
 Thr Leu Phe Pro Gln Asp Leu Leu Gln Glu Glu Asp Asn Leu Gln Leu
 20 25 30
 Arg Leu Val Asn Phe Ile Ser His Glu Asn Ser Lys Leu Thr Gln Arg
 35 40 45
 Ile Tyr His Thr Asn Ser Gln Phe Val Arg Thr Cys Leu Val Val Asn
 50 55 60
 Trp Glu Gln Glu Glu Lys Glu Gly Ala Arg Ala Ser Leu Val Glu Val
 65 70 75 80
 Lys Thr Asn Asp Leu Ile Arg Asp Phe Leu Arg Ile Glu Leu Val Lys
 85 90 95
 Ser Thr Ile Leu Tyr Thr Arg Arg Arg Tyr Asp Arg Thr Ser Val Gly
 100 105 110
 Leu Ile Pro Asn Asn Arg Leu Asp Arg Asn Asn Thr Asn Ser Phe Tyr
 115 120 125
 Ser Lys Ala Lys Ile Gln Ser Leu Ser Gln His Gln Glu Val Ile Gly
 130 135 140
 Thr Leu Leu Asn Arg Asn Lys Glu Tyr Pro Ser Leu Met Ile Leu Leu
 145 150 155 160
 Ala Ser Asn Cys Ser Arg Ile Gly Leu Phe Lys Asn Ser Lys Tyr Pro
 165 170 175
 Asn Ala Val Lys Glu Ser Asn Pro Arg Ile Pro Ile Arg Asp Ile Phe
 180 185 190
 Gly Leu Leu Gly Val Ile Val Pro Ser Ile Ser Asn Phe Ser Ser Ser
 195 200 205
 Tyr Tyr Leu Leu Thr His Asn Gln Ile Leu Leu Lys Lys Tyr Leu Phe
 210 215 220
 Leu Asp
 225

<210> 2129
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 2129

Met Gly Thr Arg Pro Arg Gly Val Val Leu Ala Pro Trp Ala Val Val
1 5 10 15Leu Val Leu Val Leu Ala Leu Arg Leu Ala Gly Ala Ser His Val Ile
20 25 30His Arg Ser Leu Glu Ala Glu Ala Ala Pro Ser Val Pro Ala Ser Ile
35 40 45Val Ser Pro Leu Leu Arg Thr Gly Tyr His Phe Gln Pro Pro Met Asn
50 55 60Trp Ile Asn Asp Pro Asn Ala Pro Leu Tyr Tyr Lys
65 70 75

<210> 2130

<211> 176

<212> PRT

<213> Zea mays

<400> 2130

Met Lys Asn Val Thr His Ser Phe Val Phe Leu Ala His Trp Pro Phe
1 5 10 15Ala Gly Ser Phe Gly Leu Asn Thr Asp Ile Leu Ala Thr Asn Leu Ile
20 25 30Asn Leu Thr Val Val Val Gly Val Leu Ile Phe Phe Gly Lys Gly Val
35 40 45Leu Lys Asp Leu Leu Asp Asn Arg Lys Gln Arg Ile Leu Ser Thr Ile
50 55 60Arg Asn Ser Glu Glu Leu Arg Lys Gly Thr Leu Glu Gln Leu Glu Lys
65 70 75 80Ala Arg Ile Arg Leu Gln Lys Val Glu Leu Glu Ala Asp Glu Tyr Arg
85 90 95Met Asn Gly Tyr Ser Glu Ile Glu Arg Glu Lys Glu Asn Leu Ile Asn
100 105 110Ala Thr Ser Ile Ser Leu Glu Gln Leu Glu Lys Ser Lys Asn Glu Thr
115 120 125Leu Tyr Phe Glu Lys Gln Arg Ala Met Asn Gln Val Arg Gln Gln Gly
130 135 140Phe Gln Gln Ala Val Gln Gly Ala Leu Gly Thr Leu Asn Ser Cys Leu
145 150 155 160Asn Thr Glu Leu His Phe Arg Thr Ile Arg Ala Asn Ile Gly Ile Leu
165 170 175

<210> 2131
 <211> 126
 <212> PRT
 <213> Zea mays

<400> 2131
 Cys Gln Glu Val Leu Glu Glu Leu Asp Val Tyr Lys Arg Leu Lys Leu
 1 5 10 15
 Thr Leu Glu Leu Val Lys Lys Glu Met Glu Ile Ser Lys Leu Gln Gln
 20 25 30
 Ser Ile Ala Lys Ala Ile Glu Glu Lys Ile Ser Gly Asp Gln Arg Arg
 35 40 45
 Tyr Leu Leu Asn Glu Gln Leu Lys Ala Ile Lys Lys Glu Leu Gly Leu
 50 55 60
 Glu Thr Asp Asp Lys Thr Ala Leu Ser Ala Lys Phe Arg Glu Arg Ile
 65 70 75 80
 Glu Ser Lys Lys Asp Lys Cys Pro Pro His Val Leu Gln Val Ile Glu
 85 90 95
 Glu Glu Leu Thr Lys Leu Gln Leu Leu Glu Ala Ser Ser Ser Glu Phe
 100 105 110
 Ser Val Thr Arg Asn Tyr Leu Asp Trp Leu Thr Val Leu Pro
 115 120 125

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 <212> PRT
 <213> Solanum lycopersicum

<400> 2132
 Leu Leu Tyr Ser Asp Val Glu Asn Asp Glu His Leu Cys Val Leu Lys
 1 5 10 15
 Asp Arg Thr Lys Pro Ile Leu Phe Thr Met Ala Arg Leu Asp Arg Val
 20 25 30
 Lys Asn Leu Thr Gly Leu Val Glu Trp Tyr Ala Lys Asn Pro Arg Leu
 35 40 45
 Arg Gly Leu Val Asn Leu Val Val Val Gly Gly Asp Arg Arg Lys Glu
 50 55 60
 Ser Lys Asp Leu Glu Glu Gln Ala Glu Met Lys Lys
 65 70 75

<210> 2133
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 <212> PRT
 <213> Solanum lycopersicum

<400> 2133

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Glu Gln Leu Ala Asp Leu Asp Leu Arg Ile Ile Ile Glu Asn Ser Leu
1 5 10 15

Val Glu Trp Glu Glu Leu Gly Glu Glu Gly His Thr Gly Asn Glu Trp
20 25 30

Glu Asp Arg Lys Val Gly Arg Arg Lys Asp Phe Leu Val Arg Arg Val
35 40 45

Glu Leu Ala Lys His Phe Ile Arg Thr Asn Ile Glu Pro Glu Trp Met
50 55 60

Val Leu Cys Leu Leu Pro Val Leu Pro Pro Glu Leu
65 70 75

<210> 2134
<211> 76
<212> PRT
<213> Zea mays

<400> 2134
Glu Gln Leu Ala Asp Leu Asp Leu Arg Ile Ile Ile Glu Asn Ser Leu
1 5 10 15

Val Glu Trp Lys Glu Leu Glu Asp Glu Gly Tyr Ser Gly Asp Glu Trp
20 25 30

Glu Asp Arg Lys Arg Arg Ile Arg Lys Val Phe Leu Ile Arg Arg Met
35 40 45

Gln Leu Ala Lys His Phe Ile Gln Thr Asn Val Glu Pro Glu Trp Met
50 55 60

Val Leu Cys Leu Leu Pro Val Leu Pro Pro Glu Leu
65 70 75

<210> 2135
<211> 176
<212> PRT
<213> Zea mays

<400> 2135
Glu Gln Leu Ala Asp Leu Asp Leu Arg Ile Ile Ile Glu Asn Ser Leu
1 5 10 15

Val Glu Trp Lys Glu Leu Glu Asp Glu Gly Tyr Ser Gly Asp Glu Trp
20 25 30

Glu Asp Arg Lys Arg Arg Ile Arg Lys Val Phe Leu Ile Arg Arg Met
35 40 45

Gln Leu Ala Lys His Phe Ile Gln Thr Asn Val Glu Pro Glu Trp Met
50 55 60

Val Leu Cys Leu Leu Pro Val Leu Pro Pro Glu Leu Arg Pro Ile Val
65 70 75 80

Tyr Arg Ser Gly Asp Lys Val Val Thr Ser Asp Ile Asn Glu Leu Tyr
85 90 95

Lys Arg Val Ile Arg Arg Asn Asn Asn Leu Ala Tyr Leu Leu Lys Arg
100 105 110

Ser Glu Leu Ala Pro Ala Asp Leu Val Met Cys Gln Glu Lys Leu Val
115 120 125

Gln Glu Ala Val Asp Thr Leu Leu Asp Ser Gly Ser Arg Gly Gln Pro
130 135 140

Thr Arg Asp Gly His Asn Lys Val Tyr Lys Ser Leu Ser Asp Val Ile
145 150 155 160

Glu Gly Lys Glu Gly Arg Phe Arg Glu Thr Leu Leu Gly Lys Arg Val
165 170 175

<210> 2136
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<213> Solanum lycopersicum

<400> 2136
Met Ala Glu Arg Val Leu Thr Arg Val His Arg Leu Arg Glu Arg Val
1 5 10 15

Asp Ala Thr Leu Cys Ala His Arg Asn Glu Ile Leu Leu Phe Leu Ser
20 25 30

Arg Ile Glu Ser His Gly Lys Gly Ile Leu Lys Pro His Glu Leu Leu
35 40 45

Ala Glu Phe Asp Ala Ile Arg Gln Asp Asp Lys Asp Lys Leu Asn Glu
50 55 60

His Ala Phe Glu Glu Leu Leu Lys Ser Thr Gln Glu Ala Ile Val Leu
65 70 75 80

Pro Pro Trp Val Ala Leu Ala Ile Arg Leu Arg Pro Gly Val Trp Glu
85 90 95

Tyr Val Arg Val Asn
100

<210> 2137
<211> 76
<212> PRT
<213> Zea mays

<400> 2137
Asn Gly Ile Tyr Ile Thr Leu Val Lys Asp Val Arg Asp Ala Phe Glu
1 5 10 15

Gly Ser Asp Leu Val Lys Ile Asp Cys Glu Gly Leu Asn Pro Ser Asp
20 25 30

Tyr Lys Lys Ile Gly Ala Lys Leu Arg Asp Leu Val Pro Cys Val Leu
35 40 45

Leu Ser Phe Asp Asp Glu Gln Ile Leu Met His Arg Gly Lys Glu Trp
50 55 60

Lys Ser Arg Tyr Ser Lys Pro Leu Thr Leu Ile Pro
65 70 75

<210> 2138

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2138

Leu Ile Gln Arg Ile Ile Arg Glu Lys Arg Ala Arg Arg Ala Ala Ala
1 5 10 15

Ser Pro Pro Arg Asp Ala Ile Asp Val Leu Ile Gly Asp Gly Ser Asp
20 25 30

Glu Leu Thr Asp Glu Leu Ile Ser Asp Asn Met Ile Asp Leu Met Ile
35 40 45

Pro Ala Glu Asp Ser Val Pro Val Leu Ile Thr Leu Ala Val Lys Phe
50 55 60

Leu Ser Glu Cys Pro Leu Ala Leu His Gln Leu Glu Glu Glu Asn Ile
65 70 75 80

Gln Leu Lys Arg Arg Lys Thr Asp Met Gly Glu Thr Leu Gln Trp Thr
85 90 95

Asp Tyr Met Ser Leu
100

<210> 2139

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2139

Asp Phe Tyr Val Leu Gln Glu Gly Asp Glu Val Leu Val Ile Ala Glu
1 5 10 15

Asp Asp Asp Thr Tyr Ala Pro Ala Pro Leu Pro Lys Val Met Arg Gly
20 25 30

Tyr Leu Pro Lys Asp Phe Val Val Pro Lys Ser Pro Glu Arg Ile Leu
35 40 45

Phe Cys Gly Trp Arg Arg Asp Met Glu Asp Met Ile Met Val Leu Asp
50 55 60

Ala Phe Leu Ala Pro Gly Ser Glu Leu Trp Met Phe Asn Asp Val Pro

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65				70				75				80			
Glu	Met	Asp	Arg	Glu ₈₅	Arg	Lys	Leu	Ile	Asp ₉₀	Gly	Gly	Leu	Asp	Phe ₉₅	Ser
Arg	Leu	Glu	Asn ₁₀₀	Ile	Thr	Leu	Val	His ₁₀₅	Arg	Glu	Gly	Asn	Ala ₁₁₀	Val	Ile
Arg	Arg	His ₁₁₅	Leu	Glu	Ser	Leu	Pro ₁₂₀	Leu	Glu	Ser	Phe	Asp ₁₂₅	Ser	Ile	Leu
Ile	Leu ₁₃₀	Ala	Asp	Glu	Ser	Val ₁₃₅	Glu	Asp	Ser	Ala	Ile ₁₄₀	Gln	Ala	Asp	Ser
Arg ₁₄₅	Ser	Leu	Ala	Thr	Leu ₁₅₀	Leu									
<210> 2140															
<211> 76															
<212> PRT															
<213> Zea mays															
<400> 2140															
Met ₁	Asp	Arg	Leu	Asp ₅	Gly	Ser	Ala	Arg	Leu ₁₀	Leu	Leu	Val	Ser	Asp ₁₅	Leu
Asp	Gln	Thr	Met ₂₀	Ile	Asp	His	Asp	Asp ₂₅	Arg	Glu	Asn	Leu	Ser ₃₀	Leu	Leu
Arg	Phe	Glu ₃₅	Ala	Leu	Trp	Glu	Ala ₄₀	Glu	Phe	Ala	Gln	Asp ₄₅	Ser	Leu	Leu
Val	Phe ₅₀	Ser	Thr	Gly	Arg	Thr ₅₅	Pro	Val	Ser	Tyr	Lys ₆₀	Gly	Leu	Arg	Arg
Asp ₆₅	Lys	Pro	Leu	Val ₇₀	Thr	Pro	Asp	Val	Thr	Ile ₇₅	Met				
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<211> 76															
<212> PRT															
<213> Oryza sativa															
<400> 2141															
Ala ₁	Leu	Glu	Gly	Lys ₅	Phe	Lys	Glu	Leu	Arg ₁₀	Asp	Glu	Gln	Cys	Ser ₁₅	Tyr
Asp	Asn	Thr	Leu ₂₀	Ile	Cys	Leu	Asn	Lys ₂₅	Met	Trp	Asn	Gln	Leu ₃₀	Ile	Asp
Asp	Leu	Val ₃₅	Leu	Leu	Gly	Val	Arg ₄₀	Ala	Gly	Gly	Asp	Leu ₄₅	Asn	Gly	Leu
Gln	Ala ₅₀	Leu	Asp	His	Glu	Glu ₅₅	Met	Ser	Glu	Glu	Ser ₆₀	Leu	Glu	Ser	Cys

Pro Ser Glu Glu Ile Phe Leu Phe Arg Leu Leu Asn
65 70 75

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<212> PRT

<213> Solanum lycopersicum

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Phe Asp Phe Ile Glu Lys His Asn Leu His Asp Ala Val Arg Glu Lys
1 5 10 15

Val Leu Gln Leu Met Met Ile Asp Cys Lys Arg Ala Val Leu Leu Leu
20 25 30

Ile Gln Gln Arg Asp Leu Ile Pro Pro Ser Glu Val Val Ser Gln Leu
35 40 45

Ile Ala Ala Arg Asp Lys Cys Asp Tyr Arg Tyr Phe Leu His Leu Tyr
50 55 60

Leu His Ser Leu Phe Glu Val Asn Leu His Ala Gly Lys Asp Tyr His
65 70 75 80

Asp Met Gln Val Glu Leu Tyr Ala Asp Tyr Asp Pro Lys Met Leu Leu
85 90 95

Thr Phe Leu Arg Ser Ser Gln His Tyr Thr Leu Glu Lys Ala Tyr Glu
100 105 110

Ile Cys Val Lys Lys Asp Leu Leu Lys Glu Gln Val Phe Ile Leu Gly
115 120 125

Arg Met Gly Asn Ala Lys Gln Ala Leu Ala Val Ile Ile Asn Arg Leu
130 135 140

Gly Asp Ile Glu Glu Ala Ile Glu Phe Val Ser Met Gln Gln Asp Asp
145 150 155 160

Glu Leu Trp Glu Glu Leu Ile Gln Gln Ser Phe His Lys Pro Glu Met
165 170 175

Val Gly Val Leu Leu Glu His Thr Val Gly Asn Leu Asp Pro Leu Tyr
180 185 190

Ile Val Asn Met Leu Pro Asn Asp Leu Glu Ile Pro Arg Leu Arg Asp
195 200 205

Arg Leu Val Lys Ile Val Thr Asp Tyr Arg Thr Glu Thr Ser Leu Arg
210 215 220

His Gly Cys Asn Asp Ile Leu Lys Ala Asp Cys Val Asn Leu Leu Val
225 230 235 240

Lys Tyr Tyr Lys Glu Ala Lys Arg Gly Val Cys Leu Ser Asp Glu Val

245

250

255

Asp Asp Val Ser Ser Arg Arg Gly Glu Lys Ser Val Ser His Leu Gly
 260 265 270

Glu Arg Thr Met
 275

<210> 2143

<211> 276

<212> PRT

<213> Zea mays

<400> 2143

Cys Gln Glu Val Leu Glu Glu Leu Asp Val Tyr Lys Arg Leu Lys Leu
 1 5 10 15

Thr Leu Glu Leu Val Lys Lys Glu Met Glu Ile Ser Lys Leu Gln Gln
 20 25 30

Ser Ile Ala Lys Ala Ile Glu Glu Lys Ile Ser Gly Asp Gln Arg Arg
 35 40 45

Tyr Leu Leu Asn Glu Gln Leu Lys Ala Ile Lys Lys Glu Leu Gly Leu
 50 55 60

Glu Thr Asp Asp Lys Thr Ala Leu Ser Ala Lys Phe Arg Glu Arg Ile
 65 70 75 80

Glu Ser Lys Lys Asp Lys Cys Pro Pro His Val Leu Gln Val Ile Glu
 85 90 95

Glu Glu Leu Thr Lys Leu Gln Leu Leu Glu Ala Ser Ser Ser Glu Phe
 100 105 110

Ser Val Thr Arg Asn Tyr Leu Asp Trp Leu Thr Val Leu Pro Trp Gly
 115 120 125

Asn Tyr Ser Asp Glu Asn Phe Asp Val His His Ala Gln Lys Ile Leu
 130 135 140

Asp Glu Asp His Tyr Gly Leu Ser Asp Val Lys Glu Arg Ile Leu Glu
 145 150 155 160

Phe Ile Ala Val Gly Lys Leu Arg Gly Thr Ser Gln Gly Lys Ile Ile
 165 170 175

Cys Leu Ser Gly Pro Pro Gly Val Gly Lys Thr Ser Ile Gly Arg Ser
 180 185 190

Ile Ala Arg Ala Leu Asn Arg Gln Phe Tyr Arg Phe Ser Val Gly Gly
 195 200 205

Leu Ala Asp Val Ala Glu Ile Lys Gly His Arg Arg Thr Tyr Val Gly
 210 215 220

Ala Met Pro Gly Lys Met Val Gln Cys Leu Lys Ser Val Gly Thr Ala
225 230 235 240

Asn Pro Leu Val Leu Ile Asp Glu Ile Asp Lys Leu Gly Lys Gly His
245 250 255

Ser Gly Asp Pro Ala Ser Ala Leu Leu Glu Leu Leu Asp Pro Glu Gln
260 265 270

Asn Val Asn Phe
275

<210> 2144
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<213> Zea mays

<400> 2144
Glu Gln Leu Ala Asp Leu Asp Leu Arg Ile Ile Ile Glu Asn Ser Leu
1 5 10 15

Val Glu Trp Lys Glu Leu Glu Asp Glu Gly Tyr Ser Gly Asp Glu Trp
20 25 30

Glu Asp Arg Lys Arg Arg Ile Arg Lys Val Phe Leu Ile Arg Arg Met
35 40 45

Gln Leu Ala Lys His Phe Ile Gln Thr Asn Val Glu Pro Glu Trp Met
50 55 60

Val Leu Cys Leu Leu Pro Val Leu Pro Pro Glu Leu Arg Pro Ile Val
65 70 75 80

Tyr Arg Ser Gly Asp Lys Val Val Thr Ser Asp Ile Asn Glu Leu Tyr
85 90 95

Lys Arg Val Ile Arg Arg Asn Asn Asn Leu Ala Tyr Leu Leu Lys Arg
100 105 110

Ser Glu Leu Ala Pro Ala Asp Leu Val Met Cys Gln Glu Lys Leu Val
115 120 125

Gln Glu Ala Val Asp Thr Leu Leu Asp Ser Gly Ser Arg Gly Gln Pro
130 135 140

Thr Arg Asp Gly His Asn Lys Val Tyr Lys Ser Leu Ser Asp Val Ile
145 150 155 160

Glu Gly Lys Glu Gly Arg Phe Arg Glu Thr Leu Leu Gly Lys Arg Val
165 170 175

Asp Tyr Ser Gly Arg Ser Val Ile Val Val Gly Pro Ser Leu Ser Leu
180 185 190

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His Gln Cys Gly Leu Pro Leu Glu Ile Ala Ile Lys Leu Phe Gln Leu
195 200 205

Phe Val Ile Arg Asp Leu Ile Thr Lys Arg Ala Thr Ser Asn Val Arg
210 215 220

Ile Ala Lys Arg Lys Ile Trp Glu Lys Glu Pro Ile Val Trp Glu Ile
225 230 235 240

Leu Gln Glu Val Met Arg Gly His Pro Val Leu Leu Asn Arg Ala Pro
245 250 255

Thr Leu His Arg Leu Gly Ile Gln Ala Phe Gln Pro Thr Leu Val Glu
260 265 270

Gly Arg Thr Ile
275

<210> 2145
<211> 226
<212> PRT
<213> Zea mays

<400> 2145
Arg Gly His Met Thr Glu Arg Ala Glu Leu Leu Lys Glu Glu Val Arg
1 5 10 15

Lys Thr Leu Lys Ala Ala Ala Asn Gln Ile Thr Asn Ala Leu Asp Leu
20 25 30

Ile Ile Thr Leu Gln Arg Leu Gly Leu Asp His His Tyr Glu Asn Glu
35 40 45

Ile Ser Glu Leu Leu Arg Phe Val Tyr Ser Ser Ser Asp Tyr Asp Asp
50 55 60

Lys Asp Leu Tyr Val Val Ser Leu Arg Phe Tyr Leu Leu Arg Lys His
65 70 75 80

Gly His Cys Val Ser Ser Asp Val Phe Thr Ser Phe Lys Asp Glu Glu
85 90 95

Gly Asn Phe Val Val Asp Asp Thr Lys Cys Leu Leu Ser Leu Tyr Asn
100 105 110

Ala Ala Tyr Val Arg Thr His Gly Glu Lys Val Leu Asp Glu Ala Ile
115 120 125

Thr Phe Thr Arg Arg Gln Leu Glu Ala Ser Leu Leu Asp Pro Leu Glu
130 135 140

Pro Ala Leu Ala Asp Glu Val His Leu Thr Leu Gln Thr Pro Leu Phe
145 150 155 160

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Arg Arg Leu Arg Ile Leu Glu Ala Ile Asn Tyr Ile Pro Ile Tyr Gly
165 170 175

Lys Glu Ala Gly Arg Asn Glu Ala Ile Leu Glu Leu Ala Lys Leu Asn
180 185 190

Phe Asn Leu Ala Gln Leu Ile Tyr Cys Glu Glu Leu Lys Glu Val Thr
195 200 205

Leu Trp Trp Lys Gln Leu Asn Val Glu Thr Asn Leu Ser Phe Ile Arg
210 215 220

Asp Arg
225

<210> 2146

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 2146

Phe Asp Phe Ile Glu Lys His Asn Leu His Asp Ala Val Arg Glu Lys
1 5 10 15

Val Leu Gln Leu Met Met Ile Asp Cys Lys Arg Ala Val Leu Leu Leu
20 25 30

Ile Gln Gln Arg Asp Leu Ile Pro Pro Ser Glu Val Val Ser Gln Leu
35 40 45

Ile Ala Ala Arg Asp Lys Cys Asp Tyr Arg Tyr Phe Leu His Leu Tyr
50 55 60

Leu His Ser Leu Phe Glu Val Asn Leu His Ala Gly Lys Asp Tyr His
65 70 75 80

Asp Met Gln Val Glu Leu Tyr Ala Asp Tyr Asp Pro Lys Met Leu Leu
85 90 95

Thr Phe Leu Arg Ser Ser Gln His Tyr Thr Leu Glu Lys Ala Tyr Glu
100 105 110

Ile Cys Val Lys Lys Asp Leu Leu Lys Glu Gln Val Phe Ile Leu Gly
115 120 125

Arg Met Gly Asn Ala Lys Gln Ala Leu Ala Val Ile Ile Asn Arg Leu
130 135 140

Gly Asp Ile Glu Glu Ala Ile Glu Phe Val Ser Met Gln Gln Asp Asp
145 150 155 160

Glu Leu Trp Glu Glu Leu Ile Gln Gln Ser Phe His Lys Pro Glu Met
165 170 175

<210> 2147

<211> 226
 <212> PRT
 <213> Zea mays

<400> 2147

Arg Gly His Met Thr Glu Arg Ala Glu Leu Leu Lys Glu Glu Val Arg
 1 5 10 15

Lys Thr Leu Lys Ala Ala Ala Asn Gln Ile Lys Asn Ala Leu Asp Leu
 20 25 30

Ile Ile Thr Leu Gln Arg Leu Gly Leu Asp His His Tyr Glu Asn Glu
 35 40 45

Ile Ser Glu Leu Leu Arg Phe Val Tyr Ser Ser Ser Asp Tyr Asp Asp
 50 55 60

Lys Asp Leu Tyr Val Val Ser Leu Arg Phe Tyr Leu Leu Arg Lys His
 65 70 75 80

Gly His Cys Val Ser Ser Asp Val Phe Thr Ser Phe Lys Asp Glu Glu
 85 90 95

Gly Asn Phe Val Val Asp Asp Thr Lys Cys Leu Leu Ser Leu Tyr Asn
 100 105 110

Ala Ala Tyr Phe Arg Thr His Gly Glu Lys Val Leu Asp Glu Ala Ile
 115 120 125

Ala Phe Thr Arg Arg Gln Leu Glu Ala Ser Leu Leu Asp Pro Leu Glu
 130 135 140

Pro Ala Leu Ala Asp Glu Val His Leu Thr Leu Gln Thr Pro Leu Phe
 145 150 155 160

Arg Arg Leu Arg Ile Leu Glu Ala Ile Asn Tyr Ile Pro Ile Tyr Gly
 165 170 175

Lys Glu Ala Gly Arg Asn Glu Ala Ile Leu Glu Leu Ala Lys Leu Asn
 180 185 190

Phe Asn Leu Ala Gln Leu Ile Tyr Cys Gly Glu Leu Lys Glu Val Thr
 195 200 205

Leu Trp Trp Lys Gln Leu Asn Val Glu Thr Asn Leu Ser Phe Ile Arg
 210 215 220

Asp Arg
 225

<210> 2148
 <211> 226
 <212> PRT
 <213> Zea mays

<400> 2148

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Arg Gly His Met Thr Glu Arg Ala Glu Leu Leu Lys Glu Glu Val Arg
1 5 10 15

Lys Thr Leu Lys Ala Ala Ala Asn Gln Ile Lys Asn Ala Leu Asp Leu
20 25 30

Ile Ile Thr Leu Gln Arg Leu Gly Leu Asp His His Tyr Glu Asn Glu
35 40 45

Ile Ser Glu Leu Leu Arg Phe Val Tyr Ser Ser Ser Asp Tyr Asp Asp
50 55 60

Lys Asp Leu Tyr Val Val Ser Leu Arg Phe Tyr Leu Leu Arg Lys His
65 70 75 80

Gly His Cys Val Ser Ser Asp Val Phe Thr Ser Phe Lys Asp Glu Glu
85 90 95

Gly Asn Phe Val Val Asp Asp Thr Lys Cys Leu Leu Thr Leu Tyr Asn
100 105 110

Ala Ala Tyr Leu Arg Thr His Gly Glu Lys Val Leu Asp Glu Ala Ile
115 120 125

Thr Phe Thr Arg Arg Gln Leu Glu Ala Ser Leu Leu Asp Pro Leu Glu
130 135 140

Pro Ala Leu Leu Ala Asp Glu Val Ser Leu Thr Leu Gln Thr Pro Leu
145 150 155 160

Phe Arg Arg Leu Arg Ile Leu Glu Ala Ile Asn Tyr Ile Pro Ile Tyr
165 170 175

Gly Lys Glu Ala Gly Arg Asn Glu Ala Ile Leu Glu Leu Ala Lys Leu
180 185 190

Asn Phe Asn Leu Ala Gln Leu Ile Tyr Cys Glu Glu Leu Lys Glu Val
195 200 205

Thr Leu Trp Trp Lys Gln Leu Asn Val Glu Thr Asn Leu Ser Phe Ile
210 215 220

Arg Asp
225

<210> 2149
<211> 101
<212> PRT
<213> Zea mays

<400> 2149
Gly Thr Leu His Leu Ile Gly Leu Leu Ser Asp Gly Gly Val His Ser
1 5 10 15

Arg Leu Asp Gln Leu Gln Leu Leu Lys Gly Val Ser Glu Arg Gly
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20

25

30

Ala Lys Lys Ile Arg Val His Ile Leu Thr Asp Gly Arg Asp Val Leu
 35 40 45

Asp Gly Ser Ser Ile Gly Phe Val Glu Thr Leu Glu Asn Asp Leu Leu
 50 55 60

Glu Leu Arg Ala Lys Gly Val Asp Ala Gln Ile Ala Ser Gly Gly Gly
 65 70 75 80

Arg Met Tyr Val Thr Met Asp Arg Tyr Glu Asn Asp Trp Asp Val Val
 85 90 95

Lys Arg Gly Trp Asp
 100

<210> 2150

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2150

Glu Asn Arg Val Lys Val Phe His Lys Arg Ser Asp Glu Leu Lys Val
 1 5 10 15

Arg Asp Asp Leu Asp Ser Pro Ala Asp Ile Leu Val Ser Glu Ile Leu
 20 25 30

Asp Ser Glu Leu Leu Gly Glu Gly Leu Ile Pro Thr Leu Gln Gln Ala
 35 40 45

Tyr Asp Met Leu Leu Ala Lys Asn Pro Lys Ile Val Pro Tyr Arg Ala
 50 55 60

Thr Thr Tyr Gly Gln Leu Val Glu Ser Thr Phe Leu Trp Lys Leu His
 65 70 75 80

Asp Leu His Asn Asn Glu Ala Asn Ala Ala Asp Gly Val Trp Leu Thr
 85 90 95

Pro Gly Glu Met Glu Arg Ile Val Ser Val Lys Pro Gln Gln His Ala
 100 105 110

Met Gln Cys Asp Ala Leu Glu Asp Glu Ile Arg Leu Leu Ser
 115 120 125

<210> 2151

<211> 76

<212> PRT

<213> Zea mays

<400> 2151

Leu Ile Arg Ser Lys Phe Leu Glu Pro Leu Glu Glu Trp Met Ala Lys
 1 5 10 15

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Asn Arg Phe Gly Arg Phe Ser Ser Leu Val Glu Thr Ala Ile Asp Leu
20 25 30

Ala Gln Leu Glu Asn Gly Glu Tyr Arg Ile Ser Pro Leu Tyr Ser Ser
35 40 45

Asp Leu Gly Val Leu Lys Asp Glu Leu Ser Val Val Glu Asn His Ile
50 55 60

Asn Asn Leu His Val Asp Thr Ala Ser Asp Leu Asp
65 70 75

<210> 2152

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 2152

Arg Gly Ile Leu Val Ile Gly Ser Ile Gly Thr Gly Arg Ser Tyr Leu
1 5 10 15

Val Lys Tyr Leu Ala Thr Asn Ser Tyr Val Pro Phe Ile Thr Val Phe
20 25 30

Leu Asn Lys Phe Leu Asp Asn Lys Ser Lys Gly Phe Leu Leu Asp Glu
35 40 45

Ile Asp Ile Asp Asp Ser Asp Asp Ile Asp Asp Ser Asp Asn Leu Asp
50 55 60

Ala Ser Asp Asp Ile Asp Arg Asp Leu Asp Thr Glu Leu Glu Leu Leu
65 70 75 80

Thr Arg Met Asn Gly Leu Thr Val Asp Met Met Pro Glu Ile Asp Arg
85 90 95

Phe Tyr Ile Thr Leu Gln Phe Glu Leu Ala Lys Ala Met Ser Pro Cys
100 105 110

Ile Ile Trp Ile Pro Asn Ile His Asp Leu Asp Val Asn Glu Ser Asn
115 120 125

Asp Leu Ser Leu Gly Leu Leu Val Asn His Leu Ser Arg Asp Cys Glu
130 135 140

Arg Cys Ser Thr Arg Asn Ile
145 150

<210> 2153

<211> 126

<212> PRT

<213> Zea mays

<400> 2153

Glu Asn Tyr Glu Leu Gly Leu Pro Cys Ile Glu Lys Ala Gly Val Ala
1 5 10 15

1005_005_PCT_SL17083606

His Lys Ile Asp Phe Arg Glu Gly Pro Ala Leu Pro Val Leu Asp Asp
20 25 30

Leu Ile Ala Glu Glu Lys Asn His Gly Ser Phe Asp Phe Val Phe Val
35 40 45

Asp Ala Asp Lys Asp Asn Tyr Leu Asn Tyr His Glu Arg Leu Leu Lys
50 55 60

Leu Val Lys Leu Gly Gly Leu Ile Gly Tyr Asp Asn Thr Leu Trp Asn
65 70 75 80

Gly Ser Val Val Leu Pro Asp Asp Ala Pro Met Arg Lys Tyr Ile Arg
85 90 95

Phe Tyr Arg Asp Phe Val Leu Val Leu Asn Lys Ala Leu Ala Ala Asp
100 105 110

Asp Arg Val Glu Ile Cys Gln Leu Pro Val Gly Asp Gly Val
115 120 125

<210> 2154
<211> 176
<212> PRT
<213> Zea mays

<400> 2154
Met Ala Ser Trp Asp Asn Leu Gly Glu Leu Ser Asn Ile Ala Gln Leu
1 5 10 15

Thr Gly Leu Asp Ala Val Lys Leu Ile Ser Leu Ile Val Arg Ala Ala
20 25 30

Ser Thr Ala Arg Leu His Lys Arg Asn Cys Arg Arg Phe Ala Gln His
35 40 45

Leu Lys Leu Ile Gly Gly Leu Leu Glu Gln Leu Arg Val Ser Glu Leu
50 55 60

Arg Lys Tyr Pro Glu Thr Arg Glu Pro Leu Glu Gln Leu Glu Asp Ala
65 70 75 80

Leu Arg Arg Gly Tyr Leu Leu Val Asn Ser Cys Gln Asp Arg Ser Tyr
85 90 95

Leu Tyr Leu Leu Ala Met Gly Trp Asn Ile Val Tyr Gln Phe Arg Lys
100 105 110

Ala Gln Ser Glu Ile Asp Asn Tyr Leu Arg Leu Val Pro Leu Ile Thr
115 120 125

Leu Val Asp Asn Ala Arg Ile Arg Asp Arg Leu Glu Tyr Ile Glu Arg
130 135 140

1005_005_PCT_SL17083606

Asp Gln Cys Glu Tyr Ser Phe Asp Glu Glu Asp Lys Lys Val Gln Asp
145 150 155 160

Ala Leu Leu Asn Pro Asp Pro Cys Thr Asn Pro Thr Ile Val Leu Lys
165 170 175

<210> 2155

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 2155

Met Ala Ala Leu Ile Pro Glu Asn Leu Ser Arg Glu Gln Cys Leu Tyr
1 5 10 15

Leu Ala Lys Leu Ala Glu Gln Ala Glu Arg Tyr Glu Glu Met Val Gln
20 25 30

Phe Met Asp Lys Leu Val Leu Asn Ser Thr Pro Ala Gly Glu Leu Thr
35 40 45

Val Glu Glu Arg Asn Leu Leu Ser Val Ala Tyr Lys Asn Val Ile Gly
50 55 60

Ser Leu Arg Ala Ala Trp Arg Ile Val Ser Ser Ile Glu Gln Lys Glu
65 70 75 80

Glu Ser Arg Lys Asn Glu Glu His Val His Leu Val Lys Glu Tyr Arg
85 90 95

Gly Lys Val Glu Asn Glu Leu Ser Gln Val Cys Ala Gly Ile Leu Lys
100 105 110

Leu Leu Glu Ser Asn Leu Val Pro Ser Ala Thr Thr Ser Glu
115 120 125

<210> 2156

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2156

Leu Asp Ile Thr Arg Phe Ser Ser Tyr His Glu Leu Arg Arg Glu Leu
1 5 10 15

Gly Arg Leu Phe Gly Leu Glu Gly Gln Leu Glu Asn Pro Leu Arg Ser
20 25 30

Gly Trp Gln Leu Val Phe Val Asp Arg Glu Asp Asp Val Leu Leu Val
35 40 45

Gly Asp Asp Pro Trp Gln Glu Phe Val Asn Ser Val Ser Cys Ile Lys
50 55 60

Ile Leu Ser Pro Gln Glu Val Gln Gln Met Gly Lys
65 70 75

<210> 2157
 <211> 226
 <212> PRT
 <213> Zea mays

<400> 2157
 Ala Lys His Tyr Ile Glu Phe Trp Lys Lys Val Pro Pro Asn Glu Pro
 1 5 10 15
 Tyr Arg Val Ile Leu Ser Asp Val Arg Asp Lys Leu Tyr Asn Thr Arg
 20 25 30
 Glu Arg Ser Arg Glu Leu Leu Ser Ser Gly His Ser Asp Ile Pro Glu
 35 40 45
 Glu Ala Thr Leu Thr Asn Val Glu Gln Leu Leu Glu Pro Leu Glu Leu
 50 55 60
 Cys Tyr Arg Ser Leu Cys Ala Cys Gly Asp Ser Val Ile Ala Asp Gly
 65 70 75 80
 Thr Leu Leu Asp Phe Leu Arg Gln Val Ser Thr Phe Gly Leu Ser Leu
 85 90 95
 Val Arg Leu Asp Ile Arg Gln Glu Ser Asp Arg His Thr Asp Val Leu
 100 105 110
 Asp Ala Ile Thr Thr Tyr Leu Gly Ile Gly Ser Tyr Arg Glu Trp Thr
 115 120 125
 Glu Glu Arg Arg Gln Glu Trp Leu Leu Ser Glu Leu Asn Gly Lys Arg
 130 135 140
 Pro Leu Phe Gly Ser Asp Leu Pro Lys Thr Glu Glu Ile Ser Asp Val
 145 150 155 160
 Leu Asp Thr Phe His Val Ile Ala Glu Leu Pro Ser Asp Asn Phe Gly
 165 170 175
 Ala Tyr Ile Ile Ser Met Ala Thr Ala Pro Ser Asp Val Leu Ala Val
 180 185 190
 Glu Leu Leu Gln Arg Glu Cys His Val Lys Thr Pro Leu Arg Val Val
 195 200 205
 Pro Leu Phe Glu Lys Leu Ala Asp Leu Glu Ala Ala Pro Ala Ala Leu
 210 215 220
 Ala Arg
 225

<210> 2158
 <211> 151
 <212> PRT
 <213> Solanum lycopersicum

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<400> 2158

Gly Val Glu Val Glu Val Thr Asp Met Asp Trp Glu Ser Thr Phe Phe
1 5 10 15

Leu Arg His Leu Pro Ser Ser Asn Ile Ser Gln Leu Pro Asp Leu Asp
20 25 30

Asp Val Tyr Arg Glu Val Met Arg Asp Phe Arg Lys Arg Leu Glu Lys
35 40 45

Leu Ala Glu Glu Leu Leu Asp Leu Leu Cys Glu Asn Leu Gly Leu Glu
50 55 60

Lys Ser Tyr Leu Lys Asn Thr Phe Tyr Gly Ser Lys Gly Pro Asn Phe
65 70 75 80

Gly Thr Lys Val Ser Asn Tyr Pro Pro Cys Pro Lys Pro Asp Leu Ile
85 90 95

Lys Gly Leu Arg Ala His Thr Asp Ala Gly Gly Ile Ile Leu Leu Phe
100 105 110

Gln Asp Asp Lys Val Ser Gly Leu Gln Leu Leu Lys Asp Gly Arg Trp
115 120 125

Ile Asp Val Pro Pro Met Arg His Ser Ile Val Val Asn Leu Gly Asp
130 135 140

Gln Leu Glu Val Ile Thr Asn
145 150

<210> 2159

<211> 151

<212> PRT

<213> Zea mays

<400> 2159

Arg Arg Asn Asn Asn Leu Ala Tyr Leu Leu Lys Arg Ser Glu Leu Ala
1 5 10 15

Pro Ala Asp Leu Val Met Cys Gln Glu Lys Leu Val Gln Glu Ala Val
20 25 30

Asp Thr Leu Leu Asp Ser Gly Ser Arg Gly Gln Pro Thr Arg Asp Gly
35 40 45

His Asn Lys Val Tyr Lys Ser Leu Ser Asp Val Ile Glu Gly Lys Glu
50 55 60

Gly Arg Phe Arg Glu Thr Leu Leu Gly Lys Arg Val Asp Tyr Ser Gly
65 70 75 80

Arg Ser Val Ile Val Val Gly Pro Ser Leu Ser Leu His Gln Cys Gly
85 90 95

1005_005_PCT_SL17083606

Leu Pro Leu Glu Ile Ala Ile Lys Leu Phe Gln Leu Phe Val Ile Arg
100 105 110

Asp Leu Ile Thr Lys Arg Ala Thr Ser Asn Val Arg Ile Ala Lys Arg
115 120 125

Lys Ile Trp Glu Lys Glu Pro Ile Val Trp Glu Ile Leu Gln Glu Val
130 135 140

Met Arg Gly His Pro Val Leu
145 150

<210> 2160

<211> 76

<212> PRT

<213> Zea mays

<400> 2160

Glu Leu Thr Leu Ala Leu Glu Lys Leu Val Asn Glu Lys Leu His Ser
1 5 10 15

Leu His Gly Val Ala Thr Arg Cys Asn Asp Pro Gln Leu Ile Asp Phe
20 25 30

Ile Glu Ser Glu Phe Leu Glu Glu Gln Gly Glu Ala Ile Asn Lys Val
35 40 45

Ser Lys Tyr Val Ala Gln Leu Arg Arg Val Gly Asn Lys Gly His Gly
50 55 60

Val Trp His Phe Asp Gln Met Leu Leu Gln Glu Ala
65 70 75

<210> 2161

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2161

Leu Ile Asp Lys Glu Phe Asn Val Met Gly Tyr Thr Leu Leu Leu Ser
1 5 10 15

Leu Ile Glu Tyr Lys Thr Leu Val Met Arg Gly Asp Ile Glu Arg Ala
20 25 30

Asn Asp Ile Leu Pro Ser Ile Pro Lys Ala Gln Tyr Asn Asn Val Ala
35 40 45

His Phe Leu Glu Ser Arg Gly Met Leu Glu Glu Ala Leu Glu Ile Ala
50 55 60

Thr Asp Ala Asp Tyr Arg Phe Asp Leu Ala Val Gln Leu Gly Lys Leu
65 70 75 80

Glu Val Ala Lys Ala Ile Ala Met Glu Ala Gln Ser Glu Ser Lys Trp
85 90 95

Lys Gln Leu Gly Glu
100

<210> 2162
<211> 101
<212> PRT
<213> Zea mays

<400> 2162
Val Arg Pro Ala Val Ala Tyr Glu Met Asp Glu Gly Ile Asn Leu Ala
1 5 10 15

Thr Leu Phe Pro Gln Asp Leu Leu Gln Glu Glu Asp Asn Leu Gln Leu
20 25 30

Arg Leu Val Asn Phe Ile Ser His Glu Asn Ser Lys Leu Thr Gln Arg
35 40 45

Ile Tyr His Thr Asn Ser Gln Phe Val Arg Thr Cys Leu Val Val Asn
50 55 60

Trp Glu Gln Glu Glu Lys Glu Gly Ala Arg Ala Ser Leu Val Glu Val
65 70 75 80

Lys Thr Asn Asp Leu Ile Arg Asp Phe Leu Arg Ile Glu Leu Val Lys
85 90 95

Ser Thr Ile Leu Tyr
100

<210> 2163
<211> 101
<212> PRT
<213> Zea mays

<400> 2163
Glu Trp Thr Glu Glu Arg Arg Gln Glu Trp Leu Leu Ser Glu Leu Asn
1 5 10 15

Gly Lys Arg Pro Leu Phe Gly Ser Asp Leu Pro Lys Thr Glu Glu Ile
20 25 30

Ser Asp Val Leu Asp Thr Phe His Val Ile Ala Glu Leu Pro Ser Asp
35 40 45

Asn Phe Gly Ala Tyr Ile Ile Ser Met Ala Thr Ala Pro Ser Asp Val
50 55 60

Leu Ala Val Glu Leu Leu Gln Arg Glu Cys His Val Lys Thr Pro Leu
65 70 75 80

Arg Val Val Pro Leu Phe Glu Lys Leu Ala Asp Leu Glu Ala Ala Pro
85 90 95

Ala Ala Leu Ala Arg

100

<210> 2164

<211> 126

<212> PRT

<213> Zea mays

<400> 2164

Val Phe Arg Ser Glu Val Glu Lys Arg Met Pro Asn Gly Val Leu Glu
 1 5 10 15

Arg Ala Ala Pro Glu Asp Leu Val Asp Lys Arg Trp Glu Arg Arg Asp
 20 25 30

Tyr Leu Gly Val His Pro Gln Lys Gln Glu Gly Leu Ser Tyr Val Gly
 35 40 45

Leu His Val Pro Val Gly Arg Leu Gln Ala Ala Asp Met Phe Glu Leu
 50 55 60

Ala Arg Leu Ala Asp Glu Tyr Gly Thr Gly Glu Leu Arg Leu Thr Val
 65 70 75 80

Glu Gln Asn Ile Val Leu Pro Asn Val Ser Asn Glu Arg Leu Asp Ala
 85 90 95

Leu Leu Ala Glu Pro Leu Leu Gln Glu Gln Arg Leu Ser Pro Arg Pro
 100 105 110

Ser Met Leu Leu Arg Gly Leu Val Ala Cys Thr Gly Asn Gln
 115 120 125

<210> 2165

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 2165

Ala Val Gln Ala Glu Val Thr Asp Leu Asp Trp Glu Ser Thr Phe Phe
 1 5 10 15

Leu Arg His Leu Pro Thr Ser Asn Ile Ser Gln Val Pro Asp Leu Asp
 20 25 30

Glu Glu Tyr Arg Glu Val Met Arg Asp Phe Ala Lys Arg Leu Glu Lys
 35 40 45

Leu Ala Glu Glu Leu Leu Asp Leu Leu Cys Glu Asn Leu Gly Leu Glu
 50 55 60

Lys Gly Tyr Leu Lys Asn Ala Phe Tyr Gly Ser Lys Gly Pro Asn Phe
 65 70 75 80

Gly Thr Lys Val Ser Asn Tyr Pro Pro Cys Pro Lys Pro Asp Leu Ile
 85 90 95

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Lys Gly Leu Arg Ala His Thr Asp Ala Gly Gly Ile Ile Leu Leu Phe
 100 105 110

Gln Asp Asp Lys Val Ser Gly Leu Gln Leu Leu Lys Asp Glu Gln Trp
 115 120 125

Ile Asp Val Pro Pro Met Arg His Ser Ile Val Val Asn Leu Gly Asp
 130 135 140

Gln Leu Glu Val Ile Thr Asn
 145 150

<210> 2166

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 2166

Ala Val Gln Ala Glu Val Thr Asp Leu Asp Trp Glu Ser Thr Phe Phe
 1 5 10 15

Leu Arg His Leu Pro Thr Ser Asn Ile Ser Gln Val Pro Asp Leu Asp
 20 25 30

Glu Glu Tyr Arg Glu Val Met Arg Asp Phe Ala Lys Arg Leu Glu Lys
 35 40 45

Leu Ala Glu Glu Leu Leu Asp Leu Leu Cys Glu Asn Leu Gly Leu Glu
 50 55 60

Lys Gly Tyr Leu Lys Asn Ala Phe Tyr Gly Ser Lys Gly Pro Asn Phe
 65 70 75 80

Gly Thr Lys Val Ser Asn Tyr Pro Pro Cys Pro Lys Pro Asp Leu Ile
 85 90 95

Lys Gly Leu Arg Ala His Thr Asp Ala Gly Gly Ile Ile Leu Leu Phe
 100 105 110

Gln Asp Asp Lys Val Ser Gly Leu Gln Leu Leu Lys Asp Glu Gln Trp
 115 120 125

Ile Asp Val Pro Pro Met Arg His Ser Ile Val Val Asn Leu Gly Asp
 130 135 140

Gln Leu Glu Val Ile Thr Asn
 145 150

<210> 2167

<211> 101

<212> PRT

<213> Zea mays

<400> 2167

Ala Ala Val Arg Ala Leu Asn Ile Ala Glu Gly Lys Thr Asp Val Asn
 1 5 10 15

1005_005_PCT_SL17083606

Lys Asn Phe Ser Leu Phe Gly Leu Met Asn Arg Thr Cys Thr Val Gly
20 25 30

Met Gly Lys Arg Leu Leu Asn Arg Trp Leu Lys Gln Pro Leu Leu Asp
35 40 45

Val Asn Glu Ile Asn Asn Arg Leu Asp Met Val Gln Ala Phe Val Glu
50 55 60

Asp Pro Glu Leu Arg Gln Gly Leu Arg Gln Gln Leu Lys Arg Ile Ser
65 70 75 80

Asp Ile Asp Arg Leu Thr His Ser Leu Arg Lys Lys Ser Ala Asn Leu
85 90 95

Gln Pro Val Val Lys
100

<210> 2168
<211> 201
<212> PRT
<213> Zea mays

<400> 2168
Gly Ser Lys Val Thr Lys Tyr Tyr Ile Glu Phe Trp Lys Gln Ile Pro
1 5 10 15

Pro Asn Glu Pro Tyr Arg Val Ile Leu Gly His Val Arg Asp Lys Leu
20 25 30

Tyr Asn Thr Arg Glu Arg Ala Arg His Leu Leu Ala Ser Gly Val Ser
35 40 45

Glu Ile Ser Ala Glu Ser Ser Phe Thr Ser Ile Glu Glu Phe Leu Glu
50 55 60

Pro Leu Glu Leu Cys Tyr Lys Ser Leu Cys Asp Cys Gly Asp Lys Ala
65 70 75 80

Ile Ala Asp Gly Ser Leu Leu Asp Leu Leu Arg Gln Val Phe Thr Phe
85 90 95

Gly Leu Ser Leu Val Lys Leu Asp Ile Arg Gln Glu Ser Glu Arg His
100 105 110

Thr Asp Val Ile Asp Ala Ile Thr Thr His Leu Gly Ile Gly Ser Tyr
115 120 125

Arg Glu Trp Pro Glu Asp Lys Arg Gln Glu Trp Leu Leu Ser Glu Leu
130 135 140

Arg Gly Lys Arg Pro Leu Leu Pro Pro Asp Leu Pro Gln Thr Asp Glu
145 150 155 160

1005_005_PCT_SL17083606

Ile Ala Asp Val Ile Gly Ala Phe His Val Leu Ala Glu Leu Pro Pro
165 170 175

Asp Ser Phe Gly Pro Tyr Ile Ile Ser Met Ala Thr Ala Pro Ser Asp
180 185 190

Val Leu Ala Val Glu Leu Leu Gln Arg
195 200

<210> 2169
<211> 176
<212> PRT
<213> Zea mays

<400> 2169
Tyr Asp Ser Val Asn Gln Leu Gly Glu Lys Ala Ser Leu Val Gln Asp
1 5 10 15

Arg Ser Ile Thr Lys His Leu Val Glu Ile Trp Leu Asp Leu Leu Lys
20 25 30

Ser Met Met Thr Glu Val Glu Trp Arg Leu Ser Lys Tyr Val Pro Thr
35 40 45

Glu Lys Glu Tyr Met Ile Asn Ala Ser Leu Ile Phe Gly Leu Gly Pro
50 55 60

Ile Val Leu Pro Ala Leu Tyr Phe Val Gly Pro Lys Ile Ser Glu Ser
65 70 75 80

Ile Val Lys Asp Pro Glu Tyr Asp Glu Leu Phe Lys Leu Met Ser Thr
85 90 95

Cys Gly Arg Leu Leu Asn Asp Val Gln Thr Phe Glu Arg Glu Tyr Asn
100 105 110

Glu Gly Lys Leu Asn Ser Val Ser Leu Leu Val Leu His Gly Gly Pro
115 120 125

Met Ser Ile Ser Asp Ala Lys Arg Lys Leu Gln Lys Pro Ile Asp Thr
130 135 140

Cys Arg Arg Asp Leu Leu Ser Leu Val Leu Arg Glu Glu Ser Val Val
145 150 155 160

Pro Arg Pro Cys Lys Glu Leu Phe Trp Lys Met Cys Lys Val Cys Tyr
165 170 175

<210> 2170
<211> 76
<212> PRT
<213> Oryza sativa

<400> 2170
His Glu Leu Arg Ser Glu Val Gly Arg Leu Phe Gly Leu Glu Gly Gln
1 5 10 15

1005_005_PCT_SL17083606

Leu Glu Asp Pro Leu Arg Ser Gly Trp Gln Leu Val Phe Val Asp Arg
20 25 30

Glu Asp Asp Val Leu Leu Val Gly Asp Asp Pro Trp Gln Glu Phe Val
35 40 45

Asn Ser Val Ser Cys Ile Lys Ile Leu Ser Pro Gln Glu Val Gln Gln
50 55 60

Met Gly Lys Pro Gly Ile Glu Leu Phe Ser Thr Ser
65 70 75

<210> 2171

<211> 226

<212> PRT

<213> Zea mays

<400> 2171

His Ser Glu Val Gly His Lys Ser Leu Leu Lys Ser Asp Asp Leu Tyr
1 5 10 15

Gln Tyr Ile Leu Asp Thr Ser Val Tyr Pro Arg Glu Pro Glu Ser Met
20 25 30

Lys Glu Leu Arg Glu Val Thr Ala Lys His Pro Trp Asn Leu Met Thr
35 40 45

Thr Ser Ala Asp Glu Gly Gln Phe Leu Asn Met Leu Ile Lys Leu Ile
50 55 60

Gly Ala Lys Lys Thr Met Glu Ile Gly Val Tyr Thr Gly Tyr Ser Leu
65 70 75 80

Leu Ala Thr Ala Leu Ala Leu Pro Glu Asp Gly Thr Ile Leu Ala Met
85 90 95

Asp Ile Asn Arg Glu Asn Tyr Glu Leu Gly Leu Pro Cys Ile Glu Lys
100 105 110

Ala Gly Val Ala His Lys Ile Asp Phe Arg Glu Gly Pro Ala Leu Pro
115 120 125

Val Leu Asp Asp Leu Ile Ala Glu Glu Lys Asn His Gly Ser Phe Asp
130 135 140

Phe Val Phe Val Asp Ala Asp Lys Asp Asn Tyr Leu Asn Tyr His Glu
145 150 155 160

Arg Leu Leu Lys Leu Val Lys Leu Gly Gly Leu Ile Gly Tyr Asp Asn
165 170 175

Thr Leu Trp Asn Gly Ser Val Val Leu Pro Asp Asp Ala Pro Met Arg
180 185 190

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Lys Tyr Ile Arg Phe Tyr Arg Asp Phe Val Leu Val Leu Asn Lys Ala
195 200 205

Leu Ala Ala Asp Asp Arg Val Glu Ile Cys Gln Leu Pro Val Gly Asp
210 215 220

Gly Val
225

<210> 2172
<211> 101
<212> PRT
<213> Solanum lycopersicum

<400> 2172
Gln Trp His Val His Glu Leu Glu Leu Val Glu Val Val Ala Asp Gln
1 5 10 15

Val Ala Val Ala Leu Ser His Ala Ala Ile Leu Glu Glu Ser Met Arg
20 25 30

Ala Arg Asp Leu Leu Met Glu Gln Asn Val Ala Leu Asp Leu Ala Arg
35 40 45

Arg Glu Ala Glu Met Ala Val Arg Ala Arg Asn Asp Phe Leu Ala Val
50 55 60

Met Asn His Glu Met Arg Thr Pro Met His Ala Ile Ile Ala Leu Ser
65 70 75 80

Ser Leu Leu Gln Glu Thr Asp Leu Thr Pro Glu Gln Arg Leu Met Val
85 90 95

Glu Thr Ile Leu Lys
100

<210> 2173
<211> 176
<212> PRT
<213> Solanum lycopersicum

<400> 2173
Ala Ala Leu Lys Val Leu Val Glu Lys Met Gly Val Pro Asp Ser Lys
1 5 10 15

Ala Arg Cys Lys Ile Arg Asp Ala Gln Ile Val Ser Ser Tyr Leu Ile
20 25 30

Asp Arg Asn Thr Val Lys Leu Gly Cys Cys Asp Trp Trp Met Lys Arg
35 40 45

Ser Lys Arg Val Ala Thr Leu Glu Phe Asp Arg Val Arg Lys Ser Met
50 55 60

Gly Val Ile Val Arg Glu Pro Asn Gly Ser Asn Arg Leu Leu Val Lys
65 70 75 80

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Gly Ala Phe Glu Ser Leu Leu Glu Arg Ser Thr Tyr Val Gln Leu Ala
85 90 95

Asp Gly Ser Thr Val Pro Leu Asp Glu Ser Cys Arg Gln Leu Leu Leu
100 105 110

Leu Lys Gln Leu Glu Met Ser Ser Lys Gly Leu Arg Cys Leu Gly Leu
115 120 125

Ala Tyr Lys Asp Asp Leu Gly Glu Leu Ser Gly Tyr Tyr Ala Ala Thr
130 135 140

His Pro Ala His Lys Lys Leu Leu Asp Pro Ser Cys Tyr Ser Ser Ile
145 150 155 160

Glu Ser Asp Leu Val Phe Val Gly Val Val Gly Leu Arg Asp Pro Pro
165 170 175

<210> 2174

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 2174

Pro Arg Thr Gly Ser Asp Leu Arg Asn Gln Ser Arg Ser Gly Lys Lys
1 5 10 15

Ser Gln Tyr Arg Ile Arg Leu Glu Glu Lys Gln Lys Leu Arg Phe His
20 25 30

Tyr Gly Leu Thr Glu Arg Gln Leu Leu Lys Tyr Val Arg Ile Ala Arg
35 40 45

Lys Ala Lys Gly Ser Thr Gly Gln Val Leu Leu Gln Leu Leu Glu Met
50 55 60

Arg Leu Asp Asn Ile Leu Phe Arg Leu Gly Met Ala Ser Thr Ile Pro
65 70 75 80

Ala Ala Arg Gln Leu Val Asn His Arg His Ile Leu Val Asn Gly His
85 90 95

Ile Val Asp Ile Pro Ser Tyr Arg Cys Lys Pro Arg Asp Ile Ile Thr
100 105 110

Ala Lys Asp Glu Gln Lys Ser Arg Ala Leu Ile Gln Ile Ser Leu Asp
115 120 125

Ser Ser Pro His Glu Glu Leu Pro Asn His Leu Thr Leu Gln Pro Phe
130 135 140

Gln Tyr Lys Gly Leu Val Asn Gln Ile Ile Asp Ser Lys Trp Val Gly
145 150 155 160

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Leu Lys Ile Asn Glu Leu Leu Val Val Glu Tyr Tyr Ser Arg Gln Thr
 165 170 175

<210> 2175

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2175

Leu Thr Val Lys Asp Glu Leu Phe Lys Asp Glu Ser Phe Arg Arg Leu
 1 5 10 15

Ser Ser Ala Val Ala Tyr Asp Gly Lys Arg Asn Leu Phe Thr Cys Ala
 20 25 30

Glu Leu Pro Asp Gly Leu Phe Arg Val Lys Val Arg Ser Arg Thr Tyr
 35 40 45

Ile Val Ser Val Glu Phe Lys Lys Lys Leu Pro Leu Ser Gln Leu Ser
 50 55 60

Glu Leu Pro Val Pro Arg Glu Val Leu Gln Gly Leu Asp Val Ile Val
 65 70 75 80

Arg Glu Ala Ser Ser Trp Arg Lys Ile Ile Ile Gly Gln Gly Phe Tyr
 85 90 95

Ser Gln Gly Arg Ser Val Pro Ile Gly Pro Asp Val Val Ala Leu Lys
 100 105 110

Gly Thr Gln Gln Thr Leu Lys Cys Thr Gln Lys Gly Leu Ile Leu Cys
 115 120 125

Val Asp Tyr Ser Val Met Pro Phe Arg Lys Ala Gly Pro Val Leu Asp
 130 135 140

Leu Val Gln Lys Ser Val Arg Tyr Leu Asp Tyr Arg Thr Thr Leu Asn
 145 150 155 160

Lys His Gln Leu Asp Thr Leu Lys Asn Glu Leu Lys Gly Gln Arg Val
 165 170 175

<210> 2176

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2176

Thr Leu Gln Asp His Leu Lys Asp Ala Val Asn Gly Leu Asn His Glu
 1 5 10 15

Ser Leu Asn Val Arg Tyr Met Val Ala Cys Glu Leu Asn Lys Leu Phe
 20 25 30

Asn Asp Arg Arg Gly Asp Ile Thr Ser Leu Ile Ile Gly Glu Asp Ile
 35 40 45

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Ala Asp Leu Asp Ile Ile Ser Ser Leu Ile Met Ser Leu Leu Lys Gly
50 55 60

Cys Ala Glu Glu Ser Arg Thr Val Val Gly Gln Arg Leu Lys Leu Val
65 70 75 80

Cys Ala Asp Cys Leu Gly Ala Leu Gly Ala Val Asp Pro Ala Lys Phe
85 90 95

Lys Val Met Ser Cys Glu Arg Phe Lys Ile Glu Cys Ser Asp Asp Asp
100 105 110

Leu Ile Phe Glu Leu Ile His Lys His Leu Ala Arg Ala Phe Arg Ala
115 120 125

Ala Ser Asp Thr Thr Val Gln Asp Ser Ala Ala Leu Ala Ile Gln Glu
130 135 140

Leu Leu Lys Leu Ser Gly Cys Gln Ser Leu Pro Asn Glu Ser Ser Ser
145 150 155 160

Cys Lys Met Ser Lys Arg Gly Gln Lys Leu Trp Gly Arg Phe Ser Ser
165 170 175

<210> 2177

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2177

Ser Arg Leu Leu Ser Val Gln Pro Tyr Lys Arg Pro Thr Ala Ser Asp
1 5 10 15

Leu Leu Arg His Pro Trp Val Ile Gly Asp Cys Ala Lys Gln Asp Leu
20 25 30

Met Asp Ala Glu Val Val Ser Lys Leu Gln Lys Phe Asn Ala Arg Arg
35 40 45

Lys Leu Arg Ala Ala Ala Ile Ala Ser Val Leu Ser Cys Lys Val Ala
50 55 60

Leu Arg Thr Lys Arg Leu Arg Asn Leu Leu Gly Thr
65 70 75

<210> 2178

<211> 151

<212> PRT

<213> Zea mays

<400> 2178

Val Ala Ser Trp Gly Val Asp Tyr Val Val Leu Thr Ser Val Asp Arg
1 5 10 15

Asp Asp Leu Pro Asp Gly Gly Ser Ser His Phe Ala Gln Thr Val Lys
20 25 30

Ala Leu Lys Glu Leu Lys Pro Gly Ile Leu Val Glu Cys Leu Thr Ser
35 40 45

Asp Phe Arg Gly Asp Leu Glu Ala Ile Ser Ser Leu Ala Asn Ser Gly
50 55 60

Leu Asp Val Tyr Ala His Asn Ile Glu Thr Val Arg Ser Leu Gln Arg
65 70 75 80

Val Val Arg Asp Pro Arg Ala Gly Tyr Asp Gln Ser Leu Ala Val Leu
85 90 95

Lys His Ala Lys Gly Ser Arg Glu Asp Met Ile Thr Lys Ser Ser Ile
100 105 110

Met Leu Gly Leu Gly Glu Thr Asp Glu Glu Val Lys Gln Ala Met Met
115 120 125

Asp Leu Arg Ala Ile Gly Val Asp Ile Leu Thr Leu Gly Gln Tyr Leu
130 135 140

Gln Pro Ser Glu Arg His Leu
145 150

<210> 2179
<211> 126
<212> PRT
<213> Zea mays

<400> 2179
Val Lys Leu Asp Ile Arg Gln Glu Ser Glu Arg His Thr Asp Val Ile
1 5 10 15

Asp Ala Ile Thr Thr His Leu Gly Ile Gly Ser Tyr Arg Glu Trp Pro
20 25 30

Glu Asp Lys Arg Gln Glu Trp Leu Leu Ser Glu Leu Arg Gly Lys Arg
35 40 45

Pro Leu Leu Pro Pro Asp Leu Pro Gln Thr Asp Glu Ile Ala Asp Val
50 55 60

Ile Gly Ala Phe His Val Leu Ala Glu Leu Pro Pro Asp Ser Phe Gly
65 70 75 80

Pro Tyr Ile Ile Ser Met Ala Thr Ala Pro Ser Asp Val Leu Ala Val
85 90 95

Glu Leu Leu Gln Arg Glu Cys Gly Val Arg Gln Pro Leu Pro Val Val
100 105 110

Pro Leu Phe Glu Arg Leu Ala Asp Leu Gln Ser Ala Pro Ala
115 120 125

<210> 2180

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2180

Leu Ile Asp Lys Gln Phe Asn Val Val Gly Tyr Thr Leu Leu Leu Thr
 1 5 10 15

Met Ile Glu Tyr Lys Thr Leu Val Met Arg Gly Asp Phe Asp Arg Ala
 20 25 30

Asn Ala Leu Leu Pro Ser Ile Pro Lys Glu Gln His Asp Ser Val Ala
 35 40 45

Arg Phe Leu Glu Ser Arg Gly Met Leu Glu Glu Ala Leu Glu Ile Ala
 50 55 60

Thr Asp Ser Asn Tyr Arg Phe Asp Leu Ala Val Gln Leu Gly Arg Leu
 65 70 75 80

Glu Val Ala Lys Ala Ile Ala Ile Glu Ala Gln Ser Glu Ser Lys Trp
 85 90 95

Arg Gln Leu Gly Glu Leu Ala Met Ser Thr Gly Lys Leu Asp Met Ala
 100 105 110

Glu Glu Cys Leu Leu His Ala Met Asp Leu Ser Gly Leu Leu
 115 120 125

<210> 2181

<211> 76

<212> PRT

<213> Zea mays

<400> 2181

Met Ala Ser Trp Asp Asn Leu Gly Glu Leu Ser Asn Ile Ala Gln Leu
 1 5 10 15

Thr Gly Leu Asp Ala Val Lys Leu Ile Ser Leu Ile Val Arg Ala Ala
 20 25 30

Ser Thr Ala Arg Leu His Lys Arg Asn Cys Arg Arg Phe Ala Gln His
 35 40 45

Leu Lys Leu Ile Gly Gly Leu Leu Glu Gln Leu Arg Val Ser Glu Leu
 50 55 60

Arg Lys Tyr Pro Glu Thr Arg Glu Pro Leu Glu Gln
 65 70 75

<210> 2182

<211> 201

<212> PRT

<213> Oryza sativa

<400> 2182

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Val Gly Ala Phe Phe Lys Ser Ser His Leu Lys Ser Gln Leu Thr Ala
1 5 10 15

Asp Met Arg Arg Arg Leu Ser Pro Ala Leu Ser Ser Phe Pro Asp Ser
20 25 30

Ser Leu Leu His Val Gln His Leu Ala Lys Ser Val Val Phe Glu Ile
35 40 45

Leu Val Arg Gly Leu Ile Gly Leu Glu Ala Gly Glu Glu Met Gln Gln
50 55 60

Leu Lys Gln Gln Phe Gln Glu Phe Ile Val Gly Leu Met Ser Leu Pro
65 70 75 80

Ile Lys Leu Pro Gly Thr Arg Leu Tyr Arg Ser Leu Gln Ala Lys Lys
85 90 95

Lys Met Ala Arg Leu Ile Gln Arg Ile Ile Arg Glu Lys Arg Ala Arg
100 105 110

Arg Ala Ala Ala Ser Pro Pro Arg Asp Ala Ile Asp Val Leu Ile Gly
115 120 125

Asp Gly Ser Asp Glu Leu Thr Asp Glu Leu Ile Ser Asp Asn Met Ile
130 135 140

Asp Leu Met Ile Pro Ala Glu Asp Ser Val Pro Val Leu Ile Thr Leu
145 150 155 160

Ala Val Lys Phe Leu Ser Glu Cys Pro Leu Ala Leu His Gln Leu Glu
165 170 175

Glu Glu Asn Ile Gln Leu Lys Arg Arg Lys Thr Asp Met Gly Glu Thr
180 185 190

Leu Gln Trp Thr Asp Tyr Met Ser Leu
195 200

<210> 2183

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2183

Met Ala Arg Ala Gly Gly His Gly Met Gly Asn Pro Val Asn Val Gly
1 5 10 15

Ile Ala Val Gln Ala Asp Trp Glu Asn Arg Glu Phe Ile Ser Asn Ile
20 25 30

Ser Leu Asn Val Arg Arg Leu Phe Asp Phe Leu Leu Arg Phe Glu Ala
35 40 45

Thr Thr Lys Ser Lys Leu Ala Ser Leu Asn Glu Lys Leu Asp Ile Leu

50

55

60

Glu Arg Lys Leu Glu Val Leu Glu Val Gln Val Ser
65 70 75

<210> 2184
<211> 276
<212> PRT
<213> Zea mays

<400> 2184
Asn Ile Gly Ser Phe Glu Asp Ile Leu Phe Ala Asn Asn Asp Met Glu
1 5 10 15

Asp Ser Pro Val Ile Val Ala Leu Phe Pro Ala Cys Arg Glu Ser Gln
20 25 30

Leu Tyr Val Gly Leu Ser Phe Leu Asp Met Thr Asn Arg Lys Leu Gly
35 40 45

Leu Ala Glu Phe Pro Glu Asp Ser Arg Phe Thr Asn Val Glu Ser Ala
50 55 60

Leu Val Ala Leu Gly Cys Lys Glu Cys Leu Leu Pro Ala Asp Cys Glu
65 70 75 80

Lys Ser Ile Asp Leu Asn Pro Leu Gln Asp Val Ile Ser Asn Cys Asn
85 90 95

Val Leu Leu Thr Glu Lys Lys Lys Ala Asp Phe Lys Ser Arg Asp Leu
100 105 110

Ala Gln Asp Leu Gly Arg Ile Ile Arg Gly Ser Val Glu Pro Val Arg
115 120 125

Asp Leu Leu Ser Gln Phe Asp Tyr Ala Leu Gly Pro Leu Gly Ala Leu
130 135 140

Leu Ser Tyr Ala Glu Leu Leu Ala Asp Asp Thr Asn Tyr Gly Asn Tyr
145 150 155 160

Thr Ile Glu Lys Tyr Asn Leu Asn Cys Tyr Met Arg Leu Asp Ser Ala
165 170 175

Ala Val Arg Ala Leu Asn Ile Ala Glu Gly Lys Thr Asp Val Asn Lys
180 185 190

Asn Phe Ser Leu Phe Gly Leu Met Asn Arg Thr Cys Thr Val Gly Met
195 200 205

Gly Lys Arg Leu Leu Asn Arg Trp Leu Lys Gln Pro Leu Leu Asp Val
210 215 220

Asn Glu Ile Asn Asn Arg Leu Asp Met Val Gln Ala Phe Val Glu Asp
225 230 235 240

Pro Glu Leu Arg Gln Gly Leu Arg Gln Gln Leu Lys Arg Ile Ser Asp
245 250 255

Ile Asp Arg Leu Thr His Ser Leu Arg Lys Lys Ser Ala Asn Leu Gln
260 265 270

Pro Val Val Lys
275

<210> 2185

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2185

Met Glu Val Glu Ala Arg Arg Gln Ser Ala Ala Asp Tyr Ile Glu Ala
1 5 10 15

Val Gln Val Asp Val Thr Ala Asn Met Arg Ala Ile Leu Val Asp Trp
20 25 30

Leu Val Glu Val Ala Asp Glu Tyr Lys Leu Val Ala Asp Thr Leu Tyr
35 40 45

Leu Ala Val Ser Tyr Leu Asp Arg Tyr Leu Ser Ala His Pro Leu Arg
50 55 60

Arg Asn Arg Leu Gln Leu Leu Gly Val Gly Ala Met Leu Ile Ala Ala
65 70 75 80

Lys Tyr Glu Glu Ile Ser Pro Pro His Val Glu Asp Phe Cys Tyr Ile
85 90 95

Thr Asp Asn Thr Tyr Thr Arg Gln Glu Val Val Lys Met Glu Ser Asp
100 105 110

Ile Leu Lys Leu Leu Glu Phe Glu Met Gly Asn Pro Thr Ile Lys Thr
115 120 125

Phe Leu Arg Arg Phe Thr Arg Ser Cys Gln Glu Asp Lys Lys Arg Ser
130 135 140

Ser Leu Leu Leu Glu Phe Met Gly Ser Tyr Leu Ala Glu Leu Ser Leu
145 150 155 160

Leu Asp Tyr Gly Cys Leu Arg Phe Leu Pro Ser Val Val Ala Ala Ser
165 170 175

<210> 2186

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2186

Leu Ile Leu Tyr Arg Gly Arg Asn Tyr Asp Pro Lys Gln Arg Pro Gln

1 5 10 15
 Ile Pro Leu Met Leu Trp Lys Pro Leu Ala Pro Ile Tyr Pro Arg Leu
 20 25 30
 Val Gln Asn Val Ala Asp Gly Leu Thr Phe Glu Lys Thr Lys Glu Leu
 35 40 45
 Arg Asn Thr Gly Leu Asn Ser Ser Pro Leu Met Lys Leu Thr Arg Asn
 50 55 60
 Gly Val Tyr Val Asn Val Val Asp Arg Val Arg Glu Ala Phe Lys Thr
 65 70 75 80
 Val Glu Val Val Arg Leu Asp Cys Ser His Val Gly Ser Ser Asp Cys
 85 90 95
 Lys Lys Ile Gly Val Lys Leu Arg Asp Leu Val Pro Cys Val Pro Leu
 100 105 110
 Leu Phe Lys Asp Glu Gln Ile Ile Leu Trp Arg Gly Lys Val
 115 120 125
 <210> 2187
 <211> 101
 <212> PRT
 <213> Solanum lycopersicum
 <400> 2187
 Ser Arg Leu Leu Glu Ile His Ser Lys Met Leu Glu Ile Asn Lys Leu
 1 5 10 15
 Glu Glu Ile Arg Leu Gly Leu His Arg Ser Asp Tyr Met Leu Asp Glu
 20 25 30
 Gln Thr Lys Leu Leu Leu Gln Ile Glu Leu Asn Thr Ile Ser Ser Ser
 35 40 45
 Phe Pro Gly Leu Ser Cys Leu Val Ser Glu Leu His Arg Ser Leu Leu
 50 55 60
 Gln Gln Tyr Arg Glu Asp Ile Ala Ser Asp Pro Asn Arg Ile Pro Ala
 65 70 75 80
 Asn Asn Ala Val Asn Gln Phe Ala Glu Ala Leu Ala Lys Ala Trp Asn
 85 90 95
 Glu Tyr Gly Asp Pro
 100

<210> 2188
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 2188

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Tyr Gln Asn Thr Val Asp Ser Leu Leu Glu Ser Trp Tyr Pro Gly Ile
1 5 10 15

Thr Tyr Ser Arg Tyr Gly His Glu Leu Phe Ile Leu Cys Lys Gln Thr
20 25 30

Asp Glu Phe Thr Ile Asp Asp Cys Asp Ile Asp Asn Ile Leu Glu Val
35 40 45

Leu Asp Leu Tyr Ser Val Asp Ile Asn Trp Ser Ser Asp Gly Leu Leu
50 55 60

Met Ala Asp Asn Asn Asp Lys Ala Leu Ile Leu His
65 70 75

<210> 2189

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 2189

Glu Ile Ser Ser Lys Cys Leu His Asn Leu Leu Leu Ser Glu Glu Met
1 5 10 15

Ile His Arg Asn Asn Glu Ser Pro Leu Ile Ser Thr His Leu Arg Ser
20 25 30

Pro Asn Ala Arg Glu Phe Leu Tyr Ser Ile Leu Phe Leu Leu Val
35 40 45

Ala Gly Tyr Leu Val Arg Thr His Leu Leu Phe Val Ser Arg Ala Ser
50 55 60

Ser Glu Leu Gln Thr Glu Phe Glu Arg Val Lys Ser Leu Met Thr Pro
65 70 75 80

Ser Ser Met Ile Glu Leu Arg Lys Leu Leu Asp Arg Tyr Pro Thr Ser
85 90 95

Glu Pro Asn Ser Phe Trp Leu Lys Asn Leu Phe Leu Val Ala Leu Glu
100 105 110

Gln Leu Gly Asp Ser Leu Glu Glu Ile Arg Gly Ser Ala Ser Gly Gly
115 120 125

Asn Met Leu Gly Pro Ala Tyr Gly Val Lys Ser Ile Arg Ser Lys Lys
130 135 140

Lys Asp Trp Asn Ile Asn Leu Ile Glu Ile Ile Asp Leu Ile Pro Asn
145 150 155 160

Pro Ile Asn Arg Ile Thr Phe Ser Arg Asn Thr Arg His Leu Ser His
165 170 175

Thr Ser Lys Glu Ile Tyr Ser Leu Ile Arg Lys Arg Lys Asn Val Asn

180

185

190

Gly Asp Trp Ile Asp Glu Lys Ile Glu Ser Trp Val Ala Asn Ser Asp
 195 200 205

Ser Ile Asp Asp Glu Glu Arg Glu Phe Leu Val Gln Phe Ser Thr Leu
 210 215 220

Thr Thr
 225

<210> 2190

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2190

Ser Tyr Ala Ser Glu Ile Tyr Thr Asn Leu Met Ala Ser Glu Leu Ile
 1 5 10 15

Arg Arg Pro Arg Ser Asn Tyr Met Glu Ala Leu Gln Arg Asp Ile Thr
 20 25 30

Lys Gly Met Arg Gly Ile Leu Ile Asp Trp Leu Val Glu Val Ser Glu
 35 40 45

Glu Tyr Lys Leu Val Pro Asp Thr Leu Tyr Leu Thr Ile Asn Leu Ile
 50 55 60

Asp Arg Phe Leu Ser Gln His Tyr Ile Glu Arg Gln Lys Leu Gln Leu
 65 70 75 80

Leu Gly Ile Thr Ser Met Leu Ile Ala Ser Lys Tyr Glu Glu Ile Cys
 85 90 95

Ala Pro Arg Val Glu
 100

<210> 2191

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 2191

Asn Gly Leu Met Ala Leu Tyr Asp Ser Leu Phe Ser Gln Leu Asp Val
 1 5 10 15

Thr Ser Ala Gln Leu Leu Val Thr Asp Asn Asp Phe Arg Asp Pro Asp
 20 25 30

Phe Arg Arg Gln Leu Asn Asp Thr Val Asn Ser Leu Leu Ser Leu Lys
 35 40 45

Val Ile Pro Ile Phe Asn Glu Asn Asp Ala Ile Ser Thr Arg Arg Ala
 50 55 60

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Pro Tyr Glu Asp Ser Ser Gly Ile Phe Trp Asp Asn Asp Ser Leu Ala
65 70 75 80

Ala Leu Leu Ala Leu Glu Leu Lys Ala Asp Leu Leu Val Leu Leu Ser
85 90 95

Asp Val Asp Gly Leu Tyr Ser Gly Pro Pro Arg Asp Pro Asp Ser Lys
100 105 110

Leu Ile Tyr Thr Tyr Ile Lys Glu Ile His Glu Arg Val Ile
115 120 125

<210> 2192

<211> 201

<212> PRT

<213> Oryza sativa

<400> 2192

Arg Val Leu Leu Gly Arg Tyr Glu Leu Gly Gly Leu Leu Gly Arg Gly
1 5 10 15

Ala Ser Ala Lys Val Tyr Leu Ala Arg Asp Leu Leu Thr Gly Arg Asp
20 25 30

Val Ala Ile Lys Ser Phe Pro Asn Pro Arg His Gly Gly Gly Leu Arg
35 40 45

Gly Gly Glu Glu Asp Val Leu Leu Arg Pro Ala Pro Ile Glu Arg Glu
50 55 60

Ala Ala Ile Leu Pro Arg Leu Arg His Arg His Val Met Arg Leu Arg
65 70 75 80

Glu Ile Leu Ala Thr Arg Lys Lys Val His Phe Val Leu Asp Leu Ala
85 90 95

Ala Gly Gly Glu Leu Phe Ser Leu Leu Asp Ala Ser Gly Arg Met Thr
100 105 110

Glu Asp Leu Ala Arg His Tyr Phe Arg Gln Leu Ile Ser Ala Val Arg
115 120 125

Tyr Cys His Ser Arg Gly Val Tyr His Arg Asp Ile Lys Pro Glu Asn
130 135 140

Leu Leu Leu Asp Asp Ala Gly Asp Leu Lys Val Ala Asp Phe Gly Leu
145 150 155 160

Gly Ala Val Ala Asp Gly Ala Leu His His Thr Leu Cys Gly Thr Pro
165 170 175

Ala Tyr Val Ala Pro Glu Ile Leu Ser Arg Lys Gly Tyr Asn Pro Ala
180 185 190

Lys Val Asp Ile Trp Ser Cys Gly Val

195

200

<210> 2193

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 2193

Ser Ser Gln His Tyr Thr Leu Glu Lys Ala Tyr Glu Ile Cys Val Lys
1 5 10 15Lys Asp Leu Leu Lys Glu Gln Val Phe Ile Leu Gly Arg Met Gly Asn
20 25 30Ala Lys Gln Ala Leu Ala Val Ile Ile Asn Arg Leu Gly Asp Ile Glu
35 40 45Glu Ala Ile Glu Phe Val Ser Met Gln Gln Asp Asp Glu Leu Trp Glu
50 55 60Glu Leu Ile Gln Gln Ser Phe His Lys Pro Glu Met Val Gly Val Leu
65 70 75 80Leu Glu His Thr Val Gly Asn Leu Asp Pro Leu Tyr Ile Val Asn Met
85 90 95Leu Pro Asn Asp Leu
100

<210> 2194

<211> 176

<212> PRT

<213> Zea mays

<400> 2194

Asn Gly Ile Tyr Ile Thr Leu Val Lys Asp Val Arg Asp Ala Phe Glu
1 5 10 15Gly Ser Asp Leu Val Lys Ile Asp Cys Glu Gly Leu Asn Pro Ser Asp
20 25 30Tyr Lys Lys Ile Gly Ala Lys Leu Arg Asp Leu Val Pro Cys Val Leu
35 40 45Leu Ser Phe Asp Asp Glu Gln Ile Leu Met His Arg Gly Lys Glu Trp
50 55 60Lys Ser Arg Tyr Ser Lys Pro Leu Thr Leu Ile Pro Lys Val Pro Lys
65 70 75 80Asn Asn Leu Ala Met Thr Ser Val Met Asn Ser Ser Asp Glu Val Ser
85 90 95Asp Ala Asn Thr Gln Val Ala Ile Arg Glu Val Leu Arg Pro Lys Met
100 105 110

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Phe Lys Leu Trp Lys Ser Ala Val Asp Ser Ser Leu Ala Leu Leu Leu
 115 120 125

Asp Asp Ala Glu Ala Asn Asn Leu Thr Pro Asp Ser Leu Leu Thr Leu
 130 135 140

Val Glu Glu Phe Ser Val Thr Ser Gln Ala Val Glu His Ser Phe Pro
 145 150 155 160

Ala Leu Leu Val Thr Asn Gly Asp Ala Ser Thr Asp Ser Leu Ser Ala
 165 170 175

<210> 2195

<211> 201

<212> PRT

<213> Zea mays

<400> 2195

Ala Ala Val Arg Ala Leu Asn Ile Ala Glu Gly Lys Thr Asp Val Asn
 1 5 10 15

Lys Asn Phe Ser Leu Phe Gly Leu Met Asn Arg Thr Cys Thr Val Gly
 20 25 30

Met Gly Lys Arg Leu Leu Asn Arg Trp Leu Lys Gln Pro Leu Leu Asp
 35 40 45

Val Asn Glu Ile Asn Asn Arg Leu Asp Met Val Gln Ala Phe Val Glu
 50 55 60

Asp Pro Glu Leu Arg Gln Gly Leu Arg Gln Gln Leu Lys Arg Ile Ser
 65 70 75 80

Asp Ile Asp Arg Leu Thr His Ser Leu Arg Lys Lys Ser Ala Asn Leu
 85 90 95

Gln Pro Val Val Lys Leu Tyr Gln Ser Cys Ser Arg Ile Pro Tyr Ile
 100 105 110

Lys Gly Ile Leu Gln Gln Tyr Asn Gly Gln Phe Ser Thr Leu Ile Arg
 115 120 125

Ser Lys Phe Leu Glu Pro Leu Glu Glu Trp Met Ala Lys Asn Arg Phe
 130 135 140

Gly Arg Phe Ser Ser Leu Val Glu Thr Ala Ile Asp Leu Ala Gln Leu
 145 150 155 160

Glu Asn Gly Glu Tyr Arg Ile Ser Pro Leu Tyr Ser Ser Asp Leu Gly
 165 170 175

Val Leu Lys Asp Glu Leu Ser Val Val Glu Asn His Ile Asn Asn Leu
 180 185 190

His Val Asp Thr Ala Ser Asp Leu Asp

195

<210> 2196

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2196

Ile Leu Ile Asp Trp Leu Val Glu Val Ala Glu Glu Tyr Arg Leu Val
1 5 10 15

Pro Asp Thr Leu Tyr Leu Thr Val Asn Tyr Ile Asp Arg Tyr Leu Ser
20 25 30

Gly Asn Glu Ile Asn Arg Gln Arg Leu Gln Leu Leu Gly Val Ala Cys
35 40 45

Met Leu Ile Ala Ala Lys Tyr Glu Glu Ile Cys Ala Pro Gln Val Glu
50 55 60

Glu Phe Cys Tyr Ile Thr Asp Asn Thr Tyr Phe Arg Asp Glu Val Leu
65 70 75 80

Glu Met Glu Ala Ser Val Leu Asn Tyr Leu Lys Phe Glu Val Thr Ala
85 90 95

Pro Thr Ala Lys Cys Phe Leu Arg Arg Phe Val Arg Val Ala Gln Val
100 105 110

Ser Asp Glu Asp Pro Ala Leu His Leu Glu Phe Leu Ala Asn
115 120 125

<210> 2197

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2197

Met Ala Pro Ser Phe Asp Phe Ala Ala Ser Ile Leu Leu Cys Ala Glu
1 5 10 15

Asp Asn Thr Ala Ile Leu Asp Leu Gly Glu Glu Ser Glu Glu Ile Ser
20 25 30

Trp Val Val Gly Val Asp Ala Ser Leu Gly Asp Leu Ser Met Asp Phe
35 40 45

Pro Leu Gln Ser Asp Asp Cys Ile Glu Ala Leu Leu Gly Arg Glu Glu
50 55 60

Gln Gln His Ile Pro Met Glu Gly Tyr Leu Gln Arg Leu Leu Leu Gln
65 70 75 80

Pro Asp Gly Leu Asp Leu Val Ala Val Arg Ser Asp Ala Ile Asp Trp
85 90 95

Ile Trp Lys Val His
100

<210> 2198

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2198

Leu Ile Asp Lys Gln Phe Asn Val Val Gly Tyr Thr Leu Leu Leu Thr
1 5 10 15

Met Ile Glu Tyr Lys Thr Leu Val Met Arg Gly Asp Phe Asp Arg Ala
20 25 30

Asn Ala Leu Leu Pro Ser Ile Pro Lys Glu Gln His Asp Ser Val Ala
35 40 45

Arg Phe Leu Glu Ser Gln Gly Met Leu Glu Glu Ala Leu Glu Ile Ala
50 55 60

Thr Asp Ser Asn Tyr Arg Phe Asp Leu Ala Val Gln Leu Gly Arg Leu
65 70 75 80

Glu Val Ala Lys Ala Ile Ala Ile Glu Ala Gln Ser Glu Ser Lys Trp
85 90 95

Arg Gln Leu Gly Glu Leu Ala Met Ser Thr Gly Lys Leu Asp Met Ala
100 105 110

Glu Glu Cys Leu Leu His Ala Met Asp Leu Ser Gly Leu Leu
115 120 125

<210> 2199

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2199

Met Asp Glu Asp Arg Ala Val Glu Ala Ala Ala Ser Ala Trp Pro Gly
1 5 10 15

Pro Ser Arg Arg Arg Arg Leu Ile Glu Phe Leu Leu His Ala Ser Thr
20 25 30

Arg Leu Asp Leu Arg Pro Val Val Lys Tyr Thr Ala Leu Ser Phe Phe
35 40 45

Ala Asp Arg Leu Leu Pro Ser Leu Arg Arg Lys Met Gly Phe Cys Gly
50 55 60

Ala Arg Gly Gly Arg Ala Val Thr Ser Trp Leu Leu Glu Pro Leu Arg
65 70 75 80

Asp Ser Asn Leu Glu Leu Phe Ala Leu Val Ala Val Trp Ile Ala Ser
85 90 95

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Lys Ile His Glu Leu Lys Pro Leu Ser Val Lys Ser Leu Lys Ala Leu
100 105 110

Gly Asp Arg Ile Ile Ala Asp Gln His Phe Thr Cys Arg Asp Phe Ala
115 120 125

Asn Ala Glu Leu Val Phe Met Glu Val Val Glu Tyr Asn Ile Gly Ser
130 135 140

Leu Asn Ile Ala Phe Thr Tyr Leu Glu Glu Leu Leu Val Gln Phe Arg
145 150 155 160

Glu Ile Ser Lys Ile Gly Asp Leu Leu Asn Met Asp Val Cys Met Glu
165 170 175

<210> 2200

<211> 251

<212> PRT

<213> Zea mays

<400> 2200

Ser Ile Arg Asn His Leu Ala Asn Leu Asn Lys Tyr Arg Asp Gln Arg
1 5 10 15

Asp Arg Pro Asp Leu Thr Ala Pro Glu Ser Leu Gln Leu Tyr Leu Asp
20 25 30

Thr Arg Val Glu Gln Leu Lys Val Ala Thr Glu Leu Ser Leu Trp Gln
35 40 45

Glu Ala Phe Arg Ser Val Glu Asp Ile His Gly Leu Met Thr Met Val
50 55 60

Lys Lys Met Pro Lys Pro Ser Ile Leu Val Val Tyr Tyr Ala Lys Leu
65 70 75 80

Thr Glu Ile Phe Trp Ile Ser Asp Ser His Leu Tyr His Ala Tyr Ala
85 90 95

Trp Leu Lys Leu Phe Asn Leu Gln Lys Ser Tyr Asn Lys Asn Leu Ser
100 105 110

Gln Lys Asp Leu Gln Leu Ile Ala Ser Ser Val Leu Leu Ala Ala Leu
115 120 125

Ser Val Ser Pro Tyr Asp Lys Lys Tyr Gly Ala Phe Glu Thr Glu Asn
130 135 140

Glu Lys Glu Arg Asn Met Arg Leu Ser Asn Leu Val Asn Phe Ser Leu
145 150 155 160

Asp Asn Lys Arg Glu Asn Arg Glu Met Pro Ser Arg Pro Tyr Leu Leu
165 170 175

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Ser Glu Leu Ala Ser Lys Gly Val Leu Ser Cys Ala Ser Gln Glu Val
180 185 190

Arg Asp Leu Tyr Asn Leu Leu Glu His Arg Phe Leu Pro Leu Asp Leu
195 200 205

Ala Ser Lys Val Gln Pro Leu Leu Leu Lys Ile Ser Lys Ile Gly Gly
210 215 220

Lys Leu Ser Ser Ala Ser Ser Val Pro Glu Val Lys Leu Ser Gln Tyr
225 230 235 240

Ile Ser Ala Leu Glu Lys Leu Thr Thr Leu Arg
245 250

<210> 2201

<211> 276

<212> PRT

<213> Oryza sativa

<400> 2201

Asp Leu Val Ala Ile Ala Ser Asp Thr Ser Phe Tyr Ile Leu Lys Tyr
1 5 10 15

Asn Arg Asp Val Val Ala Ser Tyr Leu Glu Ser Gly Lys Pro Val Asp
20 25 30

Glu Glu Gly Val Glu Asp Ala Phe Glu Leu Leu His Glu Val Asn Glu
35 40 45

Arg Val Arg Thr Gly Ile Trp Val Gly Asp Cys Phe Ile Tyr Asn Asn
50 55 60

Ser Ser Trp Arg Leu Asn Tyr Cys Val Gly Gly Glu Val Thr Thr Met
65 70 75 80

Tyr His Leu Asp Arg Pro Met Tyr Leu Leu Gly Tyr Leu Ala Asn Gln
85 90 95

Ser Arg Val Tyr Leu Ile Asp Lys Glu Phe Asn Val Met Gly Tyr Thr
100 105 110

Leu Leu Leu Ser Leu Ile Glu Tyr Lys Thr Leu Val Met Arg Gly Asp
115 120 125

Ile Glu Arg Ala Asn Asp Ile Leu Pro Ser Ile Pro Lys Ala Gln Tyr
130 135 140

Asn Asn Val Ala His Phe Leu Glu Ser Arg Gly Met Leu Glu Glu Ala
145 150 155 160

Leu Glu Ile Ala Thr Asp Ala Asp Tyr Arg Phe Asp Leu Ala Val Gln
165 170 175

Leu Gly Lys Leu Glu Val Ala Lys Ala Ile Ala Met Glu Ala Gln Ser

180

185

190

Glu Ser Lys Trp Lys Gln Leu Gly Glu Leu Ala Met Ser Thr Gly Lys
 195 200 205

Leu Asp Met Ala Glu Glu Cys Leu Val Gln Ala Lys Asp Leu Ser Gly
 210 215 220

Leu Leu Leu Leu Tyr Ser Ser Leu Gly Asp Ala Glu Gly Ile Glu Lys
 225 230 235 240

Leu Ala Ser Gln Ala Lys Glu His Gly Lys Asn Asn Val Ala Phe Leu
 245 250 255

Cys Leu Phe Met Leu Gly Lys Leu Glu Asp Cys Ile Gln Leu Leu Ile
 260 265 270

Asp Ser Asn Arg
 275

<210> 2202

<211> 251

<212> PRT

<213> Oryza sativa

<400> 2202

Arg Thr Asn Cys Phe Ser Val His Leu Glu Ser Leu Asp Asp Gln Thr
 1 5 10 15

Ile Tyr Glu Tyr Asp Val Cys Val Thr Pro Glu Val Gly Ile Asn Arg
 20 25 30

Ala Val Ile Arg Glu Leu Val Lys Gln Gln Lys Asp Ser Gly Leu Gly
 35 40 45

Gly Arg Leu Pro Ala Tyr Asp Gly Arg Lys Arg Leu Tyr Thr Ser Gly
 50 55 60

Pro Leu Pro Phe Asp Ser His Arg Phe Leu Val Leu Leu Asp Ser Ile
 65 70 75 80

Glu Asp Ser Pro Glu Glu Ser Arg His Leu Arg Val Arg Asp Phe Val
 85 90 95

Val Thr Leu Lys Phe Ala Ala Lys Ile Ser Leu Trp Thr Leu Arg Lys
 100 105 110

Phe Arg Gly Gly Lys Pro Asn Arg Glu Ser Arg Ala Ala Leu Arg Ala
 115 120 125

Leu Asp Val Val Leu Lys Glu Leu Pro Thr Ala Arg Tyr Thr Gln Phe
 130 135 140

Ala Gly Ser Phe Tyr Ser Pro Asn Leu Gly Glu Cys Arg Gln Leu Cys
 145 150 155 160

Lys Val Leu Glu Ser Trp Arg Gly Phe His Gln Arg Ile Gln Ala Thr
165 170 175

Gln Met Gly Leu Gln Leu Asn Ile Asp Val Ser Ser Ser Val Phe Ile
180 185 190

Lys Pro Val Pro Val Val Asp Tyr Val Ala Gln Leu Leu Asn Glu Asp
195 200 205

Ile Leu Leu Asp Arg Pro Leu Cys Ser Thr Glu Phe Leu Lys Ile Lys
210 215 220

Glu Ala Leu Glu Gly Leu Lys Val Gln Ile Asn Gly Ile Leu Phe Asn
225 230 235 240

Thr Tyr His Val Gln Asp Leu Val His Gln Ala
245 250

<210> 2203

<211> 226

<212> PRT

<213> Oryza sativa

<400> 2203

Leu Val Asn His Phe Ser Val Asp Tyr Pro Lys Glu Ser Thr Phe Phe
1 5 10 15

His Tyr Glu Ile Arg Ile Lys Leu Gly Asp Gly Pro Asn Arg Lys Leu
20 25 30

Ser Lys Ala Glu Leu Leu Thr Val Lys Asn Glu Leu Phe Glu His Glu
35 40 45

Ser Leu Gln Glu Leu Ser Ser Ala Val Ala Tyr Asp Gly Glu Arg Asn
50 55 60

Leu Tyr Thr Cys Ala Glu Leu Pro Glu Asp Cys Ile Val Pro Val Ser
65 70 75 80

Lys Phe Arg Val Lys Asp Ser Ser Arg Thr Tyr Ile Val Ser Val Lys
85 90 95

Leu Lys Lys Pro Leu Pro Leu Ser Gln Leu Leu Glu Gln Arg Pro Gly
100 105 110

Pro Arg Asp Val Met Gln Gly Leu Asp Val Ile Val Arg Glu Ala Ser
115 120 125

Ser Phe Gly Lys Ile Val Leu Gly Gln Gly Phe Tyr Pro Gln Ser Gly
130 135 140

Ser Glu Ala Ile Ser Asp Ser Asn Ile Val Ala Leu Lys Gly Thr Gln
145 150 155 160

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Gln Ser Leu Lys Cys Thr Gln Lys Gly Leu Ile Leu Cys Val Asp Tyr
165 170 175

Ser Val Leu Pro Cys Trp Lys Ala Gly Ser Val Leu Asp Leu Val Lys
180 185 190

Thr Met Lys Phe Met Glu Tyr Pro Leu Leu Glu Asp Gln Leu Lys Lys
195 200 205

Leu Asn Asn Ala Leu Lys Gly Leu Cys Val Thr Val Ser His Arg Lys
210 215 220

Thr Glu
225

<210> 2204
<211> 101
<212> PRT
<213> Oryza sativa

<400> 2204
Val Val Gly Ala Gly Arg Gly Pro Leu Val Arg Ala Ser Leu Gln Ala
1 5 10 15

Ala Glu Glu Thr Gly Arg Lys Leu Lys Val Tyr Ala Val Glu Lys Asn
20 25 30

Pro Asn Ala Val Ile Thr Leu His Ser Leu Ile Lys Leu Glu Gly Trp
35 40 45

Glu Ser Leu Val Thr Ile Ile Ser Ser Asp Met Arg Cys Trp Glu Ala
50 55 60

Pro Glu Lys Ala Asp Ile Leu Val Ser Glu Leu Leu Gly Ser Phe Gly
65 70 75 80

Asp Asn Glu Leu Ser Pro Glu Cys Leu Asp Gly Ala Gln Arg Phe Leu
85 90 95

Lys Pro Asp Gly Ile
100

<210> 2205
<211> 201
<212> PRT
<213> Oryza sativa

<400> 2205
Leu Ile Asp Lys Glu Phe Asn Val Met Gly Tyr Thr Leu Leu Leu Ser
1 5 10 15

Leu Ile Glu Tyr Lys Thr Leu Val Met Arg Gly Asp Ile Glu Arg Ala
20 25 30

Asn Asp Ile Leu Pro Ser Ile Pro Lys Ala Gln Tyr Asn Asn Val Ala
35 40 45

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His Phe Leu Glu Ser Arg Gly Met Leu Glu Glu Ala Leu Glu Ile Ala
50 55 60

Thr Asp Ala Asp Tyr Arg Phe Asp Leu Ala Val Gln Leu Gly Lys Leu
65 70 75 80

Glu Val Ala Lys Ala Ile Ala Met Glu Ala Gln Ser Glu Ser Lys Trp
85 90 95

Lys Gln Leu Gly Glu Leu Ala Met Ser Thr Gly Lys Leu Asp Met Ala
100 105 110

Glu Glu Cys Leu Val Gln Ala Lys Asp Leu Ser Gly Leu Leu Leu Leu
115 120 125

Tyr Ser Ser Leu Gly Asp Ala Glu Gly Ile Glu Lys Leu Ala Ser Gln
130 135 140

Ala Lys Glu His Gly Lys Asn Asn Val Ala Phe Leu Cys Leu Phe Met
145 150 155 160

Leu Gly Lys Leu Glu Asp Cys Ile Gln Leu Leu Ile Asp Ser Asn Arg
165 170 175

Ile Pro Glu Ala Ala Leu Met Ala Arg Ser Tyr Leu Pro Ser Lys Val
180 185 190

Ser Glu Ile Val Ala Ile Trp Arg Asn
195 200

<210> 2206
<211> 76
<212> PRT
<213> Oryza sativa

<400> 2206
Ala Glu Val Arg Gly Val Phe Asp Asn Lys Ser Pro Gln Asp His Glu
1 5 10 15

Gly Leu Leu Glu Asn Leu Ser Tyr Met Lys Leu Val Ile Lys Glu Thr
20 25 30

Leu Arg Leu Asn Pro Val Leu Pro Leu Leu Leu Pro His Leu Cys Arg
35 40 45

Glu Thr Cys Glu Ile Gly Gly Tyr Glu Ile Val Glu Gly Thr Arg Val
50 55 60

Leu Ile Asn Ser Trp Ala Met Ala Arg Ser Pro Glu
65 70 75

<210> 2207
<211> 176
<212> PRT

<213> Oryza sativa

<400> 2207

Met Thr Thr Val Ala Ser Leu Ser Leu Leu Pro His Leu Leu Ile Lys
1 5 10 15

Pro Ser Phe Arg Cys Cys Ser Arg Lys Gly Val Gly Arg Tyr Gly Gly
20 25 30

Ile Lys Val Tyr Ala Val Leu Gly Asp Asp Gly Ala Asp Tyr Ala Lys
35 40 45

Asn Asn Ala Trp Glu Ala Leu Phe His Val Asp Asp Pro Gly Pro Arg
50 55 60

Val Pro Ile Ala Lys Gly Lys Phe Leu Asp Val Asn Gln Ala Leu Glu
65 70 75 80

Val Val Arg Phe Asp Ile Gln Tyr Cys Asp Trp Arg Ala Arg Gln Asp
85 90 95

Leu Leu Thr Ile Met Val Leu His Asn Lys Val Val Glu Val Leu Asn
100 105 110

Pro Leu Ala Arg Glu Phe Lys Ser Ile Gly Thr Leu Arg Lys Glu Leu
115 120 125

Ala Glu Leu Gln Glu Glu Leu Ala Lys Ala His Asn Gln Val His Leu
130 135 140

Ser Glu Thr Arg Val Ser Ser Ala Leu Asp Lys Leu Ala Gln Met Glu
145 150 155 160

Thr Leu Val Asn Asp Arg Leu Leu Gln Asp Gly Gly Ser Ser Ala Ser
165 170 175

<210> 2208

<211> 176

<212> PRT

<213> Zea mays

<400> 2208

Val Ser Leu Cys Gln Ile Leu Arg Ala Ser Lys Leu Asn Ile Val Asp
1 5 10 15

Phe Phe Lys Glu Met Pro Gln Phe Cys Ile Lys Val Ala His Ile Leu
20 25 30

Thr Gly Leu Tyr Gly Ser Asp Trp Glu Lys Arg Leu Glu Leu Lys Glu
35 40 45

Leu Gln Ala Asn Val Val His Leu Ser Leu Leu Ser Ser Tyr Tyr Lys
50 55 60

Arg Ala Tyr Gln Glu Leu Phe Leu Ser Asn Asp Gly Lys Ser Ser Asp
65 70 75 80

Asn Ser Ser Glu Ser Asn Asn Gln Glu Ala Ser Asp Tyr Tyr Arg Phe
85 90 95

Gly Trp Leu Leu Phe Leu Val Leu Arg Ile Gln Thr Phe Ser Arg Phe
100 105 110

Lys Asp Leu Val Thr Ser Thr Asn Glu Leu Val Ser Val Leu Ala Val
115 120 125

Leu Ile Ile His Val Pro Val Arg Leu Arg Asn Phe Asp Ile Lys Asp
130 135 140

Ser Ser Tyr Phe Gly Lys Lys Ser Asp Arg Gly Val Ser Leu Ile Ala
145 150 155 160

Ser Leu Cys Glu Lys His His Thr Ser Glu Asp Glu Leu Ser Lys Ala
165 170 175

<210> 2209

<211> 76

<212> PRT

<213> Zea mays

<400> 2209

Gln Ile Phe Asp Ser Trp Ala Thr Glu Leu Ser Pro Ala Asp Phe Glu
1 5 10 15

Glu Phe Ser Leu Pro Tyr Leu Lys Gln Ile Val Asp Ser Val Arg Glu
20 25 30

Thr His Pro Asp Leu Pro Leu Ile Leu Tyr Ala Ser Gly Ser Gly Gly
35 40 45

Leu Leu Glu Arg Leu Pro Leu Thr Gly Val Asp Val Val Ser Leu Asp
50 55 60

Trp Thr Val Asp Met Ala Glu Gly Arg Lys Arg Leu
65 70 75

<210> 2210

<211> 151

<212> PRT

<213> Zea mays

<400> 2210

Gly Arg Gln Glu Glu Val Arg Leu Val Met Asp Lys Ile Arg Ala Ala
1 5 10 15

Ala Thr Ala Ala Pro Pro Ala Ala Val Asp Leu Ser Asp Leu Leu Ser
20 25 30

Gly Tyr Thr Asn Asp Val Val Ser Arg Ala Val Leu Gly Ala Ser His
35 40 45

Arg Asn Gln Gly Arg Asn Arg Leu Phe Ser Glu Leu Thr Glu Ile Asn

50 55 60
 Val Ser Leu Leu Ala Gly Phe Asn Leu Glu Asp Tyr Phe Pro Pro Asn
 65 70 75 80
 Met Ala Met Ala Asp Val Leu Leu Arg Leu Val Ser Val Lys Ala Arg
 85 90 95
 Arg Leu Asn Gln Arg Trp Asn Asp Val Phe Asp Glu Leu Ile Gln Glu
 100 105 110
 His Val Gln Ser Arg Pro Ser Gly Glu Ser Glu Glu Ser Glu Ala Asp
 115 120 125
 Phe Ile His Val Leu Leu Ser Ile Gln Gln Glu Tyr Gly Leu Thr Thr
 130 135 140
 Asp Asn Leu Lys Ala Ile Leu
 145 150
 <210> 2211
 <211> 226
 <212> PRT
 <213> Solanum lycopersicum
 <400> 2211
 Leu Ser Asn Ser Leu Asn Phe Tyr Ser Pro Thr Arg Phe Leu Glu Pro
 1 5 10 15
 His Leu Leu Lys Ser Ser Lys Ile Phe Ile Pro Lys Ser Pro Leu Lys
 20 25 30
 Cys Ala Lys Val Pro Glu Met Gln Thr Gln Leu Glu Asp Ser Ala Lys
 35 40 45
 Pro Ile Val Asp Pro His Asp Ile Asp Ser Lys Leu Val Gln Lys Leu
 50 55 60
 Ala Asn Asp Ala Leu Val Trp Cys Pro Leu Arg Gly Leu Leu Val Gly
 65 70 75 80
 Asp Arg Asn Ser Glu Arg Ser Gly Thr Ile Pro Gly Val Asp Met Val
 85 90 95
 His Ala Pro Val Ala Leu Ile Pro Met Ser Phe Pro Glu Ser His Trp
 100 105 110
 Lys Gln Ala Cys Glu Val Ala Pro Ile Phe Asn Glu Leu Val Asp Arg
 115 120 125
 Val Ser Gln Asp Gly Glu Phe Leu Gln Gln Ser Leu Ser Arg Thr Arg
 130 135 140
 Lys Ala Asp Pro Phe Thr Ser Arg Leu Leu Glu Ile His Ser Lys Met
 145 150 155 160

Leu Glu Ile Asn Lys Leu Glu Glu Ile Arg Leu Gly Leu His Arg Ser
165 170 175

Asp Tyr Met Leu Asp Glu Gln Thr Lys Leu Leu Leu Gln Ile Glu Leu
180 185 190

Asn Thr Ile Ser Ser Ser Phe Pro Gly Leu Ser Cys Leu Val Ser Glu
195 200 205

Leu His Arg Ser Leu Leu Gln Gln Tyr Arg Glu Asp Ile Ala Ser Asp
210 215 220

Pro Asn
225

<210> 2212
<211> 101
<212> PRT
<213> Zea mays

<400> 2212
Glu Asp Leu Gln Asp Thr Asp Ser Asn Leu Val Cys Asp Gly Ala Phe
1 5 10 15

Phe His Val Arg Cys Ala Cys His Ile Leu Asn Leu Val Ala Lys Asp
20 25 30

Gly Leu Ala Val Ile Ala Gly Thr Ile Glu Lys Ile Lys Ala Ile Val
35 40 45

Leu Ala Val Lys Ser Ser Pro Leu Gln Trp Glu Glu Leu Met Lys Cys
50 55 60

Ala Ser Glu Cys Asp Leu Asp Lys Ser Lys Gly Ile Ser Tyr Asp Val
65 70 75 80

Ser Thr Arg Trp Asn Ser Thr Tyr Leu Met Leu Arg Asp Ala Leu Tyr
85 90 95

Tyr Lys Pro Ala Leu
100

<210> 2213
<211> 201
<212> PRT
<213> Zea mays

<400> 2213
Met Asp Pro Ala Leu Leu Asp Asp Val Ile Arg Arg Leu Leu Glu Val
1 5 10 15

Lys Asn Leu Lys Pro Gly Lys Asn Ala Gln Leu Ser Glu Ser Glu Ile
20 25 30

Lys Gln Leu Cys Ala Ala Ala Lys Glu Ile Phe Leu Gln Gln Pro Asn
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35

40

45

Leu Leu Glu Leu Glu Ala Pro Ile Lys Ile Cys Gly Asp Val His Gly
50 55 60

Gln Tyr Ser Asp Leu Leu Arg Leu Phe Asp Tyr Gly Gly Tyr Pro Pro
65 70 75 80

Gln Ala Asn Tyr Leu Phe Leu Gly Asp Tyr Val Asp Arg Gly Lys Gln
85 90 95

Ser Leu Glu Thr Ile Cys Leu Leu Leu Ala Tyr Lys Val Lys Tyr Pro
100 105 110

Glu Asn Phe Phe Leu Leu Arg Gly Asn His Glu Cys Ala Ser Val Asn
115 120 125

Arg Ile Tyr Gly Phe Tyr Asp Glu Cys Lys Arg Arg Phe Ser Val Lys
130 135 140

Leu Trp Lys Thr Phe Thr Asp Cys Phe Asn Cys Leu Pro Val Ser Ala
145 150 155 160

Leu Ile Asp Glu Lys Ile Leu Cys Met His Gly Gly Leu Ser Pro Glu
165 170 175

Leu Asn Lys Leu Glu Gln Ile Leu Asn Leu Asn Arg Pro Thr Asp Val
180 185 190

Pro Asp Thr Gly Leu Leu Cys Asp Leu
195 200

<210> 2214

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2214

Cys Asp Ala Asn Asn Ser Leu Ala Val Val Glu Tyr Val Asp Glu Ile
1 5 10 15

Tyr Ser Phe Tyr Arg Arg Ser Glu Gly Leu Ser Cys Val Ser Pro Asn
20 25 30

Tyr Met Leu Ser Gln Asn Asp Ile Asn Glu Lys Met Arg Gly Ile Leu
35 40 45

Ile Asp Trp Leu Ile Glu Val His Tyr Lys Leu Glu Leu Leu Asp Glu
50 55 60

Thr Leu Phe Leu Thr Val Asn Ile Ile Asp Arg Phe Leu Ala Arg Glu
65 70 75 80

Asn Val Val Arg Lys Lys Leu Gln Leu Val Gly Val Thr Ala Met Leu
85 90 95

Leu Ala Cys Lys Tyr
100

<210> 2215
<211> 276
<212> PRT
<213> Oryza sativa

<400> 2215
Glu Thr Leu Gln Met Asp Gly Leu Asp Val Leu His Phe Phe Ile Lys
1 5 10 15

Arg Leu Ala Glu Val Ser Cys Thr Ser Ile Lys Tyr Val Met Ser Gln
20 25 30

Val Val Ala Ala Phe Ile Pro Ser Leu Glu Arg Cys Arg Glu Arg Pro
35 40 45

Leu Val His Leu Gly Lys Ile Val Glu Ile Leu Glu Glu Leu Val Val
50 55 60

Lys Asn Ile Ile Leu Leu Lys Gln His Ile Arg Glu Leu Pro Leu Leu
65 70 75 80

Pro Ser Leu Pro Ser Leu Ser Gly Val Asn Lys Val Ile Gln Glu Ala
85 90 95

Arg Gly Leu Met Thr Leu Gln Asp His Leu Lys Asp Ala Val Asn Gly
100 105 110

Leu Asn His Glu Ser Leu Asn Val Arg Tyr Met Val Ala Cys Glu Leu
115 120 125

Asn Lys Leu Phe Asn Asp Arg Arg Gly Asp Ile Thr Ser Leu Ile Ile
130 135 140

Gly Glu Asp Ile Ala Asp Leu Asp Ile Ile Ser Ser Leu Ile Met Ser
145 150 155 160

Leu Leu Lys Gly Cys Ala Glu Glu Ser Arg Thr Val Val Gly Gln Arg
165 170 175

Leu Lys Leu Val Cys Ala Asp Cys Leu Gly Ala Leu Gly Ala Val Asp
180 185 190

Pro Ala Lys Phe Lys Val Met Ser Cys Glu Arg Phe Lys Ile Glu Cys
195 200 205

Ser Asp Asp Asp Leu Ile Phe Glu Leu Ile His Lys His Leu Ala Arg
210 215 220

Ala Phe Arg Ala Ala Ser Asp Thr Thr Val Gln Asp Ser Ala Ala Leu
225 230 235 240

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Ala Ile Gln Glu Leu Leu Lys Leu Ser Gly Cys Gln Ser Leu Pro Asn
245 250 255

Glu Ser Ser Ser Cys Lys Met Ser Lys Arg Gly Gln Lys Leu Trp Gly
260 265 270

Arg Phe Ser Ser
275

<210> 2216
<211> 126
<212> PRT
<213> Oryza sativa

<400> 2216
Ile Thr Leu Val His Arg Glu Gly Asn Ala Val Ile Arg Arg His Leu
1 5 10 15

Glu Ser Leu Pro Leu Glu Ser Phe Asp Ser Ile Leu Ile Leu Ala Asp
20 25 30

Glu Ser Val Glu Asp Ser Ala Ile Gln Ala Asp Ser Arg Ser Leu Ala
35 40 45

Thr Leu Leu Leu Ile Arg Asp Ile Gln Ala Lys Arg Leu Pro Phe Arg
50 55 60

Glu Ala Met Val Ser His Val Thr Arg Gly Ser Phe Cys Glu Gly Ser
65 70 75 80

Trp Ile Gly Glu Met Gln Gln Ala Ser Asp Lys Ser Val Ile Ile Ser
85 90 95

Glu Ile Leu Asp Pro Arg Thr Lys Asn Leu Leu Ser Val Ser Lys Ile
100 105 110

Ser Asp Tyr Val Leu Ser Asn Glu Leu Val Ser Met Ala Leu
115 120 125

<210> 2217
<211> 151
<212> PRT
<213> Oryza sativa

<400> 2217
Lys Lys Leu Leu Ile Phe Asp Ala Glu Glu Tyr Leu Ala Glu Ser Leu
1 5 10 15

Ala Lys Tyr Thr Ala Arg Leu Ser Gly Glu Ala Val Ala Glu Arg Gly
20 25 30

Ala Phe Thr Val Ala Leu Ser Gly Gly Ser Leu Ile Lys Ala Leu Arg
35 40 45

Lys Leu Thr Glu Ser Pro Tyr Leu Glu Ala Val Glu Trp Ser Lys Trp
50 55 60

His Val Phe Trp Val Asp Glu Arg Val Val Pro Lys Asp His Ala Asp
65 70 75 80

Ser Asn Tyr Lys Leu Ala Met Asp Gly Leu Leu Ser Lys Val Pro Ile
85 90 95

Pro Ala Ser Gln Ile Tyr Ala Ile Asn Asp Thr Leu Ser Ala Glu Gly
100 105 110

Ala Ala Asp Glu Tyr Glu Thr Cys Leu Lys Gln Leu Val Asn Asp Gly
115 120 125

Val Val Ala Ile Ser Glu Val Thr Gly Phe Pro Lys Leu Asp Leu Met
130 135 140

Leu Leu Gly Met Gly Pro Asp
145 150

<210> 2218

<211> 251

<212> PRT

<213> Solanum lycopersicum

<400> 2218

Leu Pro Val Leu Val Pro Tyr Ile Pro Thr Glu Asn Pro Arg Leu Arg
1 5 10 15

Asp Thr Ala Tyr Glu Val Ala Leu Val Ala Leu Ala Thr Asn Pro Ser
20 25 30

Phe His Lys Asp Leu Leu Ser Thr Val Lys Ser Trp Pro Pro Arg Ile
35 40 45

Tyr Ser Thr Thr Pro Val Phe Ser Ala Ile Glu Pro Gln Ile Asn Thr
50 55 60

Ser Ser Met Thr Asp Pro Leu Lys Glu Ala Leu Ala Glu Leu Tyr Val
65 70 75 80

Ile Asp Gly Gln His Asp Lys Ala Phe Ala Leu Tyr Ala Asp Leu Met
85 90 95

Lys Pro Asp Leu Phe Asp Phe Ile Glu Lys His Asn Leu His Asp Ala
100 105 110

Val Arg Glu Lys Val Leu Gln Leu Met Met Ile Asp Cys Lys Arg Ala
115 120 125

Val Leu Leu Leu Ile Gln Gln Arg Asp Leu Ile Pro Pro Ser Glu Val
130 135 140

Val Ser Gln Leu Ile Ala Ala Arg Asp Lys Cys Asp Tyr Arg Tyr Phe
145 150 155 160

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Leu His Leu Tyr Leu His Ser Leu Phe Glu Val Asn Leu His Ala Gly
165 170 175

Lys Asp Tyr His Asp Met Gln Val Glu Leu Tyr Ala Asp Tyr Asp Pro
180 185 190

Lys Met Leu Leu Thr Phe Leu Arg Ser Ser Gln His Tyr Thr Leu Glu
195 200 205

Lys Ala Tyr Glu Ile Cys Val Lys Lys Asp Leu Leu Lys Glu Gln Val
210 215 220

Phe Ile Leu Gly Arg Met Gly Asn Ala Lys Gln Ala Leu Ala Val Ile
225 230 235 240

Ile Asn Arg Leu Gly Asp Ile Glu Glu Ala Ile
245 250

<210> 2219
<211> 151
<212> PRT
<213> Zea mays

<400> 2219
Val Asp Asp Thr Lys Cys Leu Leu Ser Leu Tyr Asn Ala Ala Tyr Val
1 5 10 15

Arg Thr His Gly Glu Lys Val Leu Asp Glu Ala Ile Thr Phe Thr Arg
20 25 30

Arg Gln Leu Glu Ala Ser Leu Leu Asp Pro Leu Glu Pro Ala Leu Ala
35 40 45

Asp Glu Val His Leu Thr Leu Gln Thr Pro Leu Phe Arg Arg Leu Arg
50 55 60

Ile Leu Glu Ala Ile Asn Tyr Ile Pro Ile Tyr Gly Lys Glu Ala Gly
65 70 75 80

Arg Asn Glu Ala Ile Leu Glu Leu Ala Lys Leu Asn Phe Asn Leu Ala
85 90 95

Gln Leu Ile Tyr Cys Glu Glu Leu Lys Glu Val Thr Leu Trp Trp Lys
100 105 110

Gln Leu Asn Val Glu Thr Asn Leu Ser Phe Ile Arg Asp Arg Ile Val
115 120 125

Glu Cys His Phe Trp Met Thr Gly Ala Cys Cys Glu Pro Gln Tyr Ser
130 135 140

Leu Ser Arg Val Ile Ala Thr
145 150

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<210> 2220
<211> 151
<212> PRT
<213> Zea mays

<400> 2220
Val Ser Asp Pro Tyr Ile Thr Asn Leu Thr Pro Leu Ser Ser Tyr Arg
1 5 10 15

Gly Gly Tyr Leu Thr Ser Leu Gln Arg Glu Ser Gly Asp Ser Pro Thr
20 25 30

Leu Leu Ser Glu Lys Asp Tyr Gly Val Phe Asp Ile His Ile Asp Arg
35 40 45

Glu Arg Ser Gln Pro Val Leu Ser Ala Val Lys Lys Leu Gln Trp Gln
50 55 60

Pro Tyr Arg Ile Asn Lys Leu Val Tyr Asp Phe Ile Gln Lys His Trp
65 70 75 80

Ser Val Leu Val Ser Val Gly Leu Leu Arg Pro Lys Asn Leu Ala Leu
85 90 95

Phe Lys Arg Lys Glu Ala Leu Arg Leu Leu Ser Ser Leu Leu Phe Lys
100 105 110

His Glu Glu Leu Ser Thr Ile Tyr Arg Tyr Ser Glu Leu Lys Ser Val
115 120 125

Leu Leu Lys Asn Ile His Ala Ser Thr Phe Glu Leu Tyr Thr Met Lys
130 135 140

Ile Ala Glu Ala Tyr Leu Asp
145 150

<210> 2221
<211> 151
<212> PRT
<213> Zea mays

<400> 2221
Gly Ser Asp Tyr Glu Ile Val Pro Ile Asn Phe Ala Thr Ala Glu His
1 5 10 15

Lys Ser Pro Glu His Leu Val Arg Asn Pro Phe Gly Gln Val Pro Ala
20 25 30

Leu Gln Asp Gly Asp Leu Tyr Leu Phe Glu Ser Arg Ala Ile Cys Lys
35 40 45

Tyr Ala Ala Arg Lys Asn Lys Pro Glu Leu Leu Arg Glu Gly Asn Leu
50 55 60

Glu Glu Ala Ala Met Val Asp Val Trp Ile Glu Val Glu Ala Asn Gln
65 70 75 80

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Tyr Thr Ala Ala Leu Asn Pro Ile Leu Phe Gln Val Leu Ile Ser Pro
85 90 95

Met Leu Gly Gly Thr Thr Asp Gln Lys Val Val Asp Glu Asn Leu Glu
100 105 110

Lys Leu Lys Lys Val Leu Glu Val Tyr Glu Ala Arg Leu Thr Lys Cys
115 120 125

Lys Tyr Leu Ala Gly Asp Phe Leu Ser Leu Ala Asp Leu Asn His Val
130 135 140

Ser Val Thr Leu Cys Leu Phe
145 150

<210> 2222

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2222

Leu Tyr Tyr Lys Ala Ile Gln Ala Arg Arg Arg Leu His Gly Val Leu
1 5 10 15

Ser Asp Ile Met Arg Glu Arg Arg Ala Arg Gly Glu Pro Gly Ser Asp
20 25 30

Leu Leu Gly Cys Leu Met Gln Ser Arg Ala Gly Asp Asp Gly Ala Leu
35 40 45

Leu Thr Asp Glu Gln Val Ala Asp Asn Ile Ile Gly Val Leu Phe Ala
50 55 60

Ala Gln Asp Thr Thr Ala Ser Val Leu Thr Trp Ile
65 70 75

<210> 2223

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2223

Asn Tyr Gln Gln Ser Leu Gln Phe Arg Asp Leu Asp Lys Glu Lys Arg
1 5 10 15

Lys Ile Leu Val Gln Val Thr Arg Asn Gly Leu Arg Gln Arg Val Leu
20 25 30

Ile Asp Asp Leu Leu Pro Gly Asp Ala Val His Leu Ala Val Gly Asp
35 40 45

Gln Val Pro Ala Asp Gly Leu Phe Ile Ser Gly Phe Ser Val Leu Val
50 55 60

Asp Glu Ser Ser Leu Thr Gly Glu Ser Glu Pro Val Phe Val Asn Glu
65 70 75 80

Asp Asn Pro Tyr Leu Leu Ser Gly Thr Lys Val Leu Asp Gly Ser Cys
85 90 95

Lys Met Leu Val Thr Ala Val Gly Met Arg Thr Gln Trp Gly Lys Leu
100 105 110

Met Ala Val Leu Thr Asp Gly Gly Asp Asp Glu Thr Pro Leu
115 120 125

<210> 2224

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 2224

Ser Asn Thr Leu Gln Asn Val Leu Arg Lys Ala Glu Glu Tyr Leu Ile
1 5 10 15

Met Leu Pro Pro Glu Thr Pro Phe Phe Glu Phe Glu His Lys Phe Gln
20 25 30

Glu Ile Gly Leu Glu Lys Gly Trp Gly Asp Thr Ala Glu Arg Val Leu
35 40 45

Glu Met Val Cys Met Leu Leu Asp Leu Leu Glu Ala Pro Asp Ser Cys
50 55 60

Thr Leu Glu Lys Phe Leu Gly Arg Ile Pro Met Val Phe Asn Val Val
65 70 75 80

Ile Leu Ser Pro His Gly Tyr Phe Ala Gln Glu Asn Val Leu Gly Tyr
85 90 95

Pro Asp Thr Gly Gly Gln Val Val Tyr Ile Leu Asp Gln Val Pro Ala
100 105 110

Leu Glu Arg Glu Met Leu Lys Arg Ile Lys Glu Gln Gly Leu
115 120 125

<210> 2225

<211> 101

<212> PRT

<213> Zea mays

<400> 2225

Arg Tyr Pro Pro Gly Asp Pro Ser Lys Arg Ala Phe Ala Tyr Phe Val
1 5 10 15

Leu Ser Gly Gly Arg Phe Ile Tyr Ala Ser Leu Leu Arg Leu Leu Val
20 25 30

Leu Lys Phe Val Leu Ser Met Ser Ala Ser Lys Asp Val Leu Ala Leu
35 40 45

Ala Ser Leu Glu Val Asp Leu Ser Ser Ile Glu Pro Gly Thr Thr Val

50

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Thr Val Lys Trp Arg Gly Lys Pro Val Phe Ile Arg Arg Arg Thr Glu
65 70 75 80

Asp Asp Ile Lys Leu Ala Asn Ser Val Asp Val Ala Ser Leu Arg His
85 90 95

Pro Glu Gln Asp Ala
100

<210> 2226

<211> 151

<212> PRT

<213> Zea mays

<400> 2226

Val Asp Asp Thr Lys Cys Leu Leu Thr Leu Tyr Asn Ala Ala Tyr Leu
1 5 10 15

Arg Thr His Gly Glu Lys Val Leu Asp Glu Ala Ile Thr Phe Thr Arg
20 25 30

Arg Gln Leu Glu Ala Ser Leu Leu Asp Pro Leu Glu Pro Ala Leu Leu
35 40 45

Ala Asp Glu Val Ser Leu Thr Leu Gln Thr Pro Leu Phe Arg Arg Leu
50 55 60

Arg Ile Leu Glu Ala Ile Asn Tyr Ile Pro Ile Tyr Gly Lys Glu Ala
65 70 75 80

Gly Arg Asn Glu Ala Ile Leu Glu Leu Ala Lys Leu Asn Phe Asn Leu
85 90 95

Ala Gln Leu Ile Tyr Cys Glu Glu Leu Lys Glu Val Thr Leu Trp Trp
100 105 110

Lys Gln Leu Asn Val Glu Thr Asn Leu Ser Phe Ile Arg Asp Arg Ile
115 120 125

Val Glu Cys His Phe Trp Met Thr Gly Ala Cys Cys Glu Pro Gln Tyr
130 135 140

Ser Leu Ser Arg Val Ile Ala
145 150

<210> 2227

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2227

Pro Cys Ala Lys Leu Ile Glu Cys Ile Arg Leu Val Val Asp Lys Ser
1 5 10 15

Gly Gln Ser Phe Leu Ser Ser Asp Asp Arg Asp Asp Gly Ser Ser Leu
20 25 30

Leu Ala Lys Ser Glu Gly Leu Asp Leu Pro Lys Val Gly Gln Lys Arg
35 40 45

Ile Ala Leu Asp Glu Glu Asn Ser Phe Pro Lys Arg Leu Lys Met Thr
50 55 60

Glu Pro Arg Phe Ser Ser Gly Ser Phe Met Val Asp Glu Leu Ser Ala
65 70 75 80

Gly Val Gly Gln Glu Leu Glu Lys Asp His Gly Cys Asp Phe Arg Val
85 90 95

Gln Leu Tyr Ser Leu Ile Asn Cys Leu Ser Pro Asp Asn His Met Ala
100 105 110

Tyr Pro Leu Glu Pro Ala Ile Ser Ile Gln Val Leu Ser Leu Leu Cys
115 120 125

Leu Ser Leu Ser Val Tyr Pro Lys Thr Asn Leu Phe Ser Arg Ile Ser
130 135 140

Lys Gln Val Leu Ser Trp Ile
145 150

<210> 2228

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 2228

Met Glu Thr Val Asp Ser Thr Arg Ala Phe Val Lys Asn Val Lys Arg
1 5 10 15

Leu Ile Val Lys Val Gly Thr Ala Val Val Thr Arg Ala Asp Gly Arg
20 25 30

Leu Ala Leu Gly Arg Leu Gly Ala Leu Cys Glu Gln Leu Gln Glu Leu
35 40 45

Asn Ser Gln Gly Tyr Glu Val Ile Leu Val Thr Ser Gly Ala Val Gly
50 55 60

Val Gly Arg Gln Arg Leu Arg Tyr Arg Lys Leu Leu Asn Ser Ser Phe
65 70 75 80

Leu Asp Leu Gln Lys Pro Gln Thr Glu Leu Asp Gly Lys Ala Cys Ala
85 90 95

Ala Val Gly Gln Asn Gly Leu Met Ala Leu Tyr Asp Ser Leu Phe Ser
100 105 110

Gln Leu Asp Val Thr Ser Ala Gln Leu Leu Val Thr Asp Asn Asp Phe

115 120 125
 Arg Asp Pro Asp Phe Arg Arg Gln Leu Asn Asp Thr Val Asn Ser Leu
 130 135 140
 Leu Ser Leu Lys Val Ile Pro Ile Phe Asn Glu Asn Asp Ala Ile Ser
 145 150 155 160
 Thr Arg Arg Ala Pro Tyr Glu Asp Ser Ser Gly Ile Phe Trp Asp Asn
 165 170 175
 Asp Ser Leu Ala Ala Leu Leu Ala Leu Glu Leu Lys Ala Asp Leu Leu
 180 185 190
 Val Leu Leu Ser Asp Val Asp Gly Leu Tyr Ser Gly Pro Pro Arg Asp
 195 200 205
 Pro Asp Ser Lys Leu Ile Tyr Thr Tyr Ile Lys Glu Ile His Glu Arg
 210 215 220
 Val Ile
 225
 <210> 2229
 <211> 151
 <212> PRT
 <213> Solanum lycopersicum
 <400> 2229
 Arg Asp Val Asp Leu Glu Asn Ile Glu Asp Gly Ser Leu Thr Leu Glu
 1 5 10 15
 Lys Glu Asp Phe Phe Leu Gly Ser Val Ile Asp Ala Val Val Ser Gln
 20 25 30
 Val Met Leu Leu Leu Arg Glu Lys Gly Val Gln Leu Ile Arg Asp Ile
 35 40 45
 Pro Glu Glu Ile Lys Thr Leu Thr Val His Gly Asp Gln Val Arg Ile
 50 55 60
 Gln Gln Val Leu Ala Asp Phe Leu Leu Asn Met Val Arg Tyr Ala Pro
 65 70 75 80
 Ser Pro Asp Gly Trp Val Glu Ile Gln Leu Arg Pro Ser Met Met Pro
 85 90 95
 Ile Ser Asp Gly Ala Thr Val Val His Ile Glu Leu Arg Ile Ile Cys
 100 105 110
 Pro Gly Glu Gly Leu Pro Pro Glu Leu Val Gln Asp Met Phe His Ser
 115 120 125
 Ser Arg Trp Val Thr Gln Glu Gly Leu Gly Leu Ser Met Cys Arg Lys
 130 135 140

Met Leu Lys Leu Met Asn Gly
145 150

<210> 2230
<211> 151
<212> PRT
<213> Zea mays

<400> 2230
Ala Leu Ala Val Ala Ser Trp Gly Val Asp Tyr Val Val Leu Thr Ser
1 5 10 15

Val Asp Arg Asp Asp Leu Pro Asp Gly Gly Ser Ser His Phe Ala Gln
20 25 30

Thr Val Lys Ala Leu Lys Glu Leu Lys Pro Gly Ile Leu Val Glu Cys
35 40 45

Leu Thr Ser Asp Phe Arg Gly Asp Leu Glu Ala Ile Ser Ser Leu Ala
50 55 60

Ser Ser Gly Leu Asp Val Tyr Ala His Asn Ile Glu Thr Val Arg Ser
65 70 75 80

Leu Gln Arg Ile Val Arg Asp Pro Arg Ala Gly Tyr Asp Gln Ser Leu
85 90 95

Ala Val Leu Lys His Ala Lys Ala Cys Arg Glu Gly Met Val Thr Lys
100 105 110

Ser Ser Ile Met Leu Gly Leu Gly Glu Thr Asp Glu Glu Val Lys Gln
115 120 125

Ala Met Met Asp Leu Arg Ala Ile Gly Val Asp Ile Leu Thr Leu Gly
130 135 140

Gln Tyr Leu Gln Pro Thr Glu
145 150

<210> 2231
<211> 251
<212> PRT
<213> Solanum lycopersicum

<400> 2231
Ala Gly Asp Glu Pro Leu Tyr Tyr Ile Val Ser Pro Lys Asp Val Val
1 5 10 15

Ile Ala Lys Pro Arg Asp Ala Glu Asp His Ile Asn Trp Leu Leu Gln
20 25 30

His Gly Trp His Glu Lys Ala Leu Glu Ala Val Glu Ala Asn Gln Gly
35 40 45

Gln Ser Glu Leu Leu Asp Glu Val Gly Ser Arg Tyr Leu Asp His Leu
Page 1310

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Ile Val Glu Arg Lys Tyr Ala Glu Ala Ala Ser Leu Cys Pro Lys Leu
65 70 75 80

Leu Arg Gly Ser Ala Ser Ala Trp Glu Arg Trp Val Phe His Phe Ala
85 90 95

His Leu Arg Gln Leu Pro Val Leu Val Pro Tyr Ile Pro Thr Glu Asn
100 105 110

Pro Arg Leu Arg Asp Thr Ala Tyr Glu Val Ala Leu Val Ala Leu Ala
115 120 125

Thr Asn Pro Ser Phe His Lys Asp Leu Leu Ser Thr Val Lys Ser Trp
130 135 140

Pro Pro Arg Ile Tyr Ser Thr Thr Pro Val Phe Ser Ala Ile Glu Pro
145 150 155 160

Gln Ile Asn Thr Ser Ser Met Thr Asp Pro Leu Lys Glu Ala Leu Ala
165 170 175

Glu Leu Tyr Val Ile Asp Gly Gln His Asp Lys Ala Phe Ala Leu Tyr
180 185 190

Ala Asp Leu Met Lys Pro Asp Leu Phe Asp Phe Ile Glu Lys His Asn
195 200 205

Leu His Asp Ala Val Arg Glu Lys Val Leu Gln Leu Met Met Ile Asp
210 215 220

Cys Lys Arg Ala Val Leu Leu Leu Ile Gln Gln Arg Asp Leu Ile Pro
225 230 235 240

Pro Ser Glu Val Val Ser Gln Leu Ile Ala Ala
245 250

<210> 2232

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 2232

Leu Gly Gly Met Leu Thr Asn Trp Ser Thr Thr Glu Thr Arg Leu His
1 5 10 15

Lys Phe Arg Asp Leu Arg Met Glu Gln Lys Thr Gly Arg Leu Asn Arg
20 25 30

Leu Pro Lys Arg Asp Ala Ala Met Leu Lys Arg Gln Leu Ser Arg Leu
35 40 45

Gln Thr Tyr Leu Gly Gly Ile Lys Tyr Met Thr Gly Val Pro Asp Ile
50 55 60

Val Ile Ile Val Asp Gln His Glu Glu Tyr Thr Ala Leu Arg Glu Cys
65 70 75 80

Ile Thr Leu Gly Ile Pro Thr Ile Cys Leu Thr Asp Thr Asn Cys Asp
85 90 95

Pro Asp Leu Ala Asp Ile Ser Ile Pro Ala Asn Asp Asp Ala Ile Ser
100 105 110

Ser Ile Arg Leu Ile Leu Asn Lys Leu Val Phe Ala Ile Cys
115 120 125

<210> 2233

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2233

Lys Leu Arg Phe Glu Ala Ile Val Cys Leu Leu Asp Arg Ile Pro Ile
1 5 10 15

Thr Leu Gln Gln Ile Asp Met Phe Gly Gln Asp Val Ala Phe Arg Thr
20 25 30

Lys Arg Ile Gly Asn Ile Glu Ala Leu Leu Asp Phe Leu Lys Gly Ser
35 40 45

Ala Ala Ala Thr Trp Gly Ala Arg Ala Gly Ala Gly Glu Pro Ile Asp
50 55 60

Ala Ser Ser Pro Glu Leu His Arg Leu Val Glu Asp Ala Glu Thr Ala
65 70 75 80

Tyr Arg Asp Val Arg Gly Leu Gln Pro Arg Met Val Val Gln Met Pro
85 90 95

Arg Val Phe His Lys Val Cys Leu Pro Lys Leu His Gln Leu Leu Val
100 105 110

Ile Ala Arg Arg Leu Leu Ala Gln Asn Val Ala Leu Arg Arg
115 120 125

<210> 2234

<211> 76

<212> PRT

<213> Zea mays

<400> 2234

Asp Leu Lys Ala Glu Asp Lys Thr Lys Ser Trp Arg Lys Leu Val Asn
1 5 10 15

Val Ala Val Ser Gly Ala Ala Gly Met Ile Ser Asn His Leu Leu Phe
20 25 30

Lys Leu Ala Ser Gly Glu Val Phe Gly Gln Asp Gln Pro Ile Ala Leu
Page 1312

35

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Lys Leu Leu Gly Ser Glu Arg Ser Phe Gln Ala Leu Glu Gly Val Ala
50 55 60

Met Glu Leu Glu Asp Ser Leu Tyr Pro Leu Leu Arg
65 70 75

<210> 2235

<211> 226

<212> PRT

<213> Oryza sativa

<400> 2235

Asp Leu Val Thr Ile Ala Ser Asp Thr Ser Phe Tyr Ile Leu Lys Tyr
1 5 10 15

Asn Arg Asp Val Val Ser Ser His Leu Asp Gly Gly Gly Ser Val Gly
20 25 30

Glu Glu Gly Val Glu Asp Ala Phe Glu Leu Leu His Glu Ile Asn Glu
35 40 45

Arg Ile Arg Thr Gly Leu Trp Val Gly Asp Cys Phe Ile Tyr Asn Asn
50 55 60

Ser Ser Ser Arg Leu Asn Tyr Cys Val Gly Gly Glu Val Thr Thr Leu
65 70 75 80

Phe His Leu Asp Arg Gln Met Tyr Leu Leu Gly Tyr Leu Ala Asn Gln
85 90 95

Ser Arg Val Tyr Leu Ile Asp Lys Gln Phe Asn Val Val Gly Tyr Thr
100 105 110

Leu Leu Leu Thr Met Ile Glu Tyr Lys Thr Leu Val Met Arg Gly Asp
115 120 125

Phe Asp Arg Ala Asn Ala Leu Leu Pro Ser Ile Pro Lys Glu Gln His
130 135 140

Asp Ser Val Ala Arg Phe Leu Glu Ser Arg Gly Met Leu Glu Glu Ala
145 150 155 160

Leu Glu Ile Ala Thr Asp Ser Asn Tyr Arg Phe Asp Leu Ala Val Gln
165 170 175

Leu Gly Arg Leu Glu Val Ala Lys Ala Ile Ala Ile Glu Ala Gln Ser
180 185 190

Glu Ser Lys Trp Arg Gln Leu Gly Glu Leu Ala Met Ser Thr Gly Lys
195 200 205

Leu Asp Met Ala Glu Glu Cys Leu Leu His Ala Met Asp Leu Ser Gly
210 215 220

Leu Leu
225

<210> 2236
<211> 126
<212> PRT
<213> Oryza sativa

<400> 2236
Thr Tyr Leu Asp Arg Phe Leu Ala Arg Arg Cys Val Asp Arg Asp Lys
1 5 10 15

Glu Trp Ala Leu Gln Leu Leu Ser Val Ala Cys Leu Ser Leu Ala Ala
20 25 30

Lys Val Glu Glu Arg Arg Pro Pro Arg Leu Pro Glu Phe Lys Leu Asp
35 40 45

Met Tyr Asp Cys Ala Ser Leu Met Arg Met Glu Leu Leu Val Leu Thr
50 55 60

Thr Leu Lys Trp Gln Met Ile Thr Glu Thr Pro Phe Ser Tyr Leu Asn
65 70 75 80

Cys Phe Thr Ala Lys Phe Arg His Asp Glu Arg Lys Ala Ile Val Leu
85 90 95

Arg Ala Ile Glu Cys Ile Phe Ala Ser Ile Lys Val Ile Ser Ser Val
100 105 110

Gly Tyr Gln Pro Ser Thr Ile Ala Leu Ala Ala Ile Leu Ile
115 120 125

<210> 2237
<211> 176
<212> PRT
<213> Zea mays

<400> 2237
Val Leu Asp Gly Trp Gly Glu Ala Asn Pro Asp Gln Tyr Asn Cys Ile
1 5 10 15

His Val Ala Gln Thr Pro Val Met Asp Ser Leu Lys Asn Gly Ala Pro
20 25 30

Glu Lys Trp Arg Leu Val Lys Ala His Gly Thr Ala Val Gly Leu Pro
35 40 45

Ser Asp Asp Asp Met Gly Asn Ser Glu Val Gly His Asn Ala Leu Gly
50 55 60

Ala Gly Arg Ile Phe Ala Gln Gly Ala Lys Leu Val Asp Gln Ala Leu
65 70 75 80

Ala Ser Gly Lys Ile Tyr Asp Gly Asp Gly Phe Asn Tyr Ile Lys Glu
Page 1314

Ser Phe Glu Ser Gly Thr Leu His Leu Ile Gly Leu Leu Ser Asp Gly
100 105 110

Gly Val His Ser Arg Leu Asp Gln Leu Gln Leu Leu Lys Gly Val
115 120 125

Ser Glu Arg Gly Ala Lys Lys Ile Arg Val His Ile Leu Thr Asp Gly
130 135 140

Arg Asp Val Leu Asp Gly Ser Ser Ile Gly Phe Val Glu Thr Leu Glu
145 150 155 160

Asn Asp Leu Leu Glu Leu Arg Ala Lys Gly Val Asp Ala Gln Ile Ala
165 170 175

<210> 2238

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2238

Phe Gly Glu Asp Ala Leu Lys Ile Pro Pro Ser Glu Ser Tyr Cys Leu
1 5 10 15

Ser His Pro Ile Arg Arg Gly His Phe Asn Ile Ser Gln Asp Tyr Ser
20 25 30

Leu His Gln Val Leu Glu Asp Leu Arg Thr Ile Trp Asn Trp Ile Leu
35 40 45

Thr Glu Lys Leu His Ile Asn Pro Arg Asp Arg His Leu Tyr Ser Ala
50 55 60

Ile Leu Val Leu Gly Glu Thr Phe Asp Asn Arg Glu Ile Lys Glu Met
65 70 75 80

Leu Ser Ile Val Leu Cys Asp Leu Gly Phe Ser Thr Ala Val Ile His
85 90 95

Gln Glu Ala Leu Ala
100

<210> 2239

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2239

Thr Tyr Leu Thr Leu Lys Glu Val Phe Glu Ser Leu Asp Leu Thr Gly
1 5 10 15

Tyr Asp Leu Asn Val Asp Leu Leu Asp Val His Ala Asp Lys Ser Thr
20 25 30

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Phe His Arg Phe Asp Lys Phe Asn Leu Lys Tyr Asn Pro Cys Gly Gln
35 40 45

Ser Arg Leu Arg Glu Ile Phe Leu Lys Gln Asp Asn Leu Ile Gln Gly
50 55 60

Arg Phe Leu Ala Glu Leu Thr Lys Glu Val Phe Ser Asp Leu Glu Ala
65 70 75 80

Ser Lys Tyr Gln Met Ala Glu Tyr Arg Ile Ser Ile Tyr Gly Arg Lys
85 90 95

Lys Ser Glu Trp Asp Gln Met Ala Ser Trp Ile Val Asn Asn Glu Leu
100 105 110

Tyr Ser Glu Asn Val Val Trp Leu Ile Gln Ile Pro Arg Ile Tyr Asn
115 120 125

Val Tyr Arg Glu Met Gly Thr Ile Asn Ser Phe Gln Asn Leu Leu Asp
130 135 140

Asn Ile Phe Leu Pro Leu Phe Glu Val Thr Val Asp Pro Ala Ser His
145 150 155 160

Pro Gln Leu His Val Phe Leu Gln Gln Val Val Gly Leu Asp Leu Val
165 170 175

<210> 2240

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2240

Ser Arg Val Leu Pro Glu Lys Leu Arg Arg Lys Arg Val Thr Phe Gln
1 5 10 15

Asn Ser Leu Phe Gly Val Ile Ser Ser Ser Gln Ala Gln Arg Glu Thr
20 25 30

Asp His Pro Leu Ser Arg Gly Gly Leu Ala Ala Thr Gly Ser Pro Asn
35 40 45

Pro Ser Ser Gly Ser Arg Asn Ala Val Ile Arg Val Thr Ile Ser Cys
50 55 60

Pro Glu Lys Gly Asn Thr Ala Gly Lys Leu Val Leu Leu Pro Gln Thr
65 70 75 80

Leu Asp Met Leu Leu Glu Leu Gly Ala Lys Lys Phe Asp Phe Ala Pro
85 90 95

Thr Lys Val Leu Thr Val Glu Gly Ala Glu Val Asp Glu Val Glu Leu
100 105 110

Ile Arg Asp Gly Asp His Leu Val Leu Val Ser Asn Glu Trp

<210> 2241

<211> 201

<212> PRT

<213> Oryza sativa

<400> 2241

Glu Asp Pro Gln Leu Cys Ala Thr Leu Ala Phe Asp Ile Tyr Lys His
1 5 10 15Leu Arg Val Ala Glu Thr Lys Lys Arg Pro Ser Thr Asp Phe Val Glu
20 25 30Thr Ile Gln Lys Asn Ile Asp Thr Ser Met Arg Ala Val Leu Ile Asp
35 40 45Trp Leu Val Glu Val Thr Glu Glu Tyr Arg Leu Val Pro Glu Thr Leu
50 55 60Tyr Leu Thr Val Asn Tyr Ile Asp Arg Tyr Leu Ser Ser Lys Val Ile
65 70 75 80Asn Arg Arg Lys Met Gln Leu Leu Gly Val Ala Cys Leu Leu Ile Ala
85 90 95Ser Lys Tyr Glu Glu Ile Cys Pro Pro Gln Val Glu Glu Leu Cys Tyr
100 105 110Ile Ser Asp Asn Thr Tyr Thr Lys Asp Glu Val Leu Lys Met Glu Ala
115 120 125Ser Val Leu Lys Tyr Leu Lys Phe Glu Met Thr Ala Pro Thr Thr Lys
130 135 140Cys Phe Leu Arg Arg Phe Leu Arg Ala Ala Gln Val Cys His Glu Ala
145 150 155 160Pro Val Leu His Leu Glu Phe Leu Ala Asn Tyr Ile Ala Glu Leu Ser
165 170 175Leu Leu Glu Tyr Ser Leu Ile Cys Tyr Val Pro Ser Leu Ile Ala Ala
180 185 190Ser Ser Ile Phe Leu Ala Lys Phe Ile
195 200

<210> 2242

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 2242

Ile Pro Val Val Arg Lys Ile Lys Asn Gln Ile Asn Asp Ile Arg Glu
1 5 10 15

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Gln Gly Ala Leu Thr Asp Cys Leu Glu Leu Leu Asp Leu Ser Val Asp
20 25 30

Leu Val Cys Asp Ser Ile Ala Ala Ile Asp Lys Arg Ser Arg Ser Glu
35 40 45

His Ala Asn Ala Gln Ser Trp Leu Ser Gly Val Leu Thr Asn His Val
50 55 60

Thr Cys Leu Asp Glu Leu Asp Ser Phe Thr Lys Ala Met Ile Asn Gly
65 70 75 80

Thr Asn Leu Asp Glu Leu Ile Ser Arg Ala Lys Val Ala Leu Ala Met
85 90 95

Leu Ala Ser Val Thr
100

<210> 2243

<211> 276

<212> PRT

<213> Oryza sativa

<400> 2243

Val Ile Gln Val Ala Thr Ser Gly Glu Val Val Gly Glu Ile Gly Val
1 5 10 15

Leu Cys Tyr Arg Pro Gln Leu Phe Thr Val Arg Thr Arg Ser Leu Cys
20 25 30

Gln Leu Leu Arg Leu Asn Arg Thr Ala Phe Leu Ser Ile Val Gln Ser
35 40 45

Asn Val Gly Asp Gly Thr Ile Ile Met Asn Asn Leu Ile Gln Phe Leu
50 55 60

Lys Glu Gln Lys Glu Asn Ser Val Met Ala Gly Val Val Lys Glu Ile
65 70 75 80

Glu Ser Met Leu Ala Arg Gly Asn Leu Asp Leu Pro Ile Thr Leu Cys
85 90 95

Phe Ala Val Thr Arg Gly Asp Asp Phe Leu Leu His Gln Leu Leu Lys
100 105 110

Arg Gly Met Asp Pro Asn Glu Ser Asp Asn Asp Gly His Thr Ala Leu
115 120 125

His Ile Ala Ala Ser Lys Gly Asn Glu Gln Cys Val Arg Leu Leu Leu
130 135 140

Glu Tyr Gly Ala Asp Pro Asn Ala Arg Asp Ser Glu Gly Lys Val Pro
145 150 155 160

Leu Trp Glu Ala Leu Cys Glu Lys His Ala Ala Val Val Gln Leu Leu

165

170

175

Val Glu Gly Gly Ala Asp Leu Ser Ser Gly Asp Thr Gly Leu Tyr Ala
180 185 190

Cys Ile Ala Val Glu Glu Ser Asp Thr Glu Leu Leu Asn Asp Ile Ile
195 200 205

His Tyr Gly Gly Asp Val Asn Arg Ala Arg Arg Asp Gly Thr Thr Ala
210 215 220

Leu His Arg Ala Val Cys Asp Gly Asn Val Gln Met Ala Glu Leu Leu
225 230 235 240

Leu Glu His Gly Ala Asp Ile Asp Lys Gln Asp Gly Asn Gly Trp Thr
245 250 255

Pro Arg Ala Leu Ala Glu Gln Gln Gly His Asp Asp Ile Gln Leu Leu
260 265 270

Phe Arg Ser Arg
275

<210> 2244

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 2244

Val Phe Val Gln Met Gln Gln Lys Lys Asp Met Asp Gln Gln Ser Lys
1 5 10 15

Leu Ser Asp Glu Leu Arg Gln Ile Ser Ala Gly Gln Thr Val Leu Asp
20 25 30

Leu Val Val Ile Gly Cys Gly Pro Ala Gly Leu Ala Leu Ala Ala Glu
35 40 45

Ser Ala Lys Leu Gly Leu Asn Val Gly Leu Val Gly Pro Asp Leu Pro
50 55 60

Phe Thr Asn Asn Tyr Gly Val Trp Glu Asp Glu Phe Lys Asp Leu Gly
65 70 75 80

Leu Gln Ala Cys Ile Glu His Val Trp Arg Asp Thr Ile Val Tyr Leu
85 90 95

Asp Asp Asp Glu Pro
100

<210> 2245

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 2245

1005_005_PCT_SL17083606

Ile Gly Thr Leu Phe His Cys Asp Ala Asn Lys Trp Ala Ser Ile Gly
1 5 10 15

Glu Thr Asp Ala Arg Glu Met Ala Val Ala Ala Arg Ala Cys Ser Arg
20 25 30

Arg Leu Gln Ala Leu Ser Ser Gln Glu Arg Ser Lys Ile Leu Gln Asp
35 40 45

Ile Ala Asp Ala Leu Glu Ala Asn Glu Lys Ala Ile Leu Ala Glu Asn
50 55 60

Glu Ala Asp Val Val Ala Ala Gln Gln Ala Gly Tyr Glu Lys Ser Leu
65 70 75 80

Ile Ser Arg Leu Ala Leu Asn Pro Gly Lys Ile Ser Ser Leu Ala Asn
85 90 95

Ser Val Arg Val Leu Ser Asn Met Asp Glu Pro Leu Gly His Thr Leu
100 105 110

Lys Arg Thr Glu Ile Ala Asp Gly Phe Ile Leu Glu Lys Ser Ser Ser
115 120 125

Pro Leu Gly Val Val Leu Ile Ile Phe Glu Ser Arg Pro Asp Ala Leu
130 135 140

Val Gln Ile Ala Ser Leu Ala Val Arg Ser Gly Asn Gly Leu Met Leu
145 150 155 160

Lys Gly Gly Lys Glu Ala Lys Arg Ser Asn Ala Ile Leu His Lys Val
165 170 175

Ile Thr Ser Ala Ile Pro Val Ser Val Gly Glu Arg Leu Ile Gly Leu
180 185 190

Val Thr Ser Arg Glu Glu Ile Pro Glu Leu Leu Lys Leu Asp Asp Val
195 200 205

Ile Asp Leu Val Ile Pro Arg Gly Ser Asn Lys Leu Val Ser Gln Ile
210 215 220

Lys Ala
225

<210> 2246
<211> 176
<212> PRT
<213> Zea mays

<400> 2246
Pro Lys Lys Ile Ser Ile Tyr Asn Glu Glu Met Ile Val Ala Arg Cys
1 5 10 15

Phe Ile Gly Phe Leu Ile Leu Ser Trp Lys Ser Leu Gly Lys Thr Phe
Page 1320

20

25

30

Lys Glu Thr Leu Asp Gly Arg Ile Glu Ser Ile Gln Glu Ser Leu Gln
 35 40 45

Gln Phe Phe Asn Pro Asn Glu Val Ile Leu Glu Glu Ser Asn Glu Gln
 50 55 60

Gln Arg Leu Leu Asn Leu Trp Ile Ser Leu Arg Ile Cys Ser Thr Val
 65 70 75 80

Lys Val Val Glu Ser Leu Pro Ala Ala Arg Cys Ala Pro Lys Cys Glu
 85 90 95

Lys Thr Val Gln Ala Leu Leu Cys Arg Asn Leu Asn Val Lys Ser Ala
 100 105 110

Thr Leu Leu Asn Ala Thr Ser Ser Arg Arg Ile Arg Leu Gln Asp Asp
 115 120 125

Ile Val Thr Gly Phe His Phe Ser Val Ser Glu Arg Leu Val Ser Gly
 130 135 140

Ser Thr Thr Leu Val Glu Ala Ser Thr Val Glu Gln Ile Arg Glu Ala
 145 150 155 160

Phe Leu Leu Glu Pro Arg Asp Leu Ile Arg Glu Gly Phe Ile Val Leu
 165 170 175

<210> 2247

<211> 276

<212> PRT

<213> Oryza sativa

<400> 2247

Ala Asp Leu Ile Ser Glu Lys Glu Leu Val Tyr Glu Glu Leu Lys Ser
 1 5 10 15

Thr Gln Glu Lys Met Gln Gln Glu Met Arg His Arg Gln Gly Leu Glu
 20 25 30

Asp Glu Ile Leu Arg Leu Lys Gln Ser Leu Ala Asp Asn Cys Ser Glu
 35 40 45

Glu Ser Lys Ala Leu Cys Gly Met Val Arg Ser Gly Ser Gly Leu Gly
 50 55 60

Ser Val Pro Phe Met Ser Lys Ser Gly Lys Ser Arg Glu Leu Leu Ser
 65 70 75 80

Ser Gln Arg Ser Asn Ile Ser Lys Ile Phe Glu Glu Val Gly Leu Pro
 85 90 95

Asn Val Leu Ala Leu Leu Lys Ser Asp Glu Leu Glu Val Gln Ile His
 100 105 110

Ala Val Lys Val Val Ala Asn Leu Ala Ala Glu Asp Val Asn Gln Glu
115 120 125

Lys Ile Val Glu Glu Gly Gly Leu Asp Ala Leu Leu Ser Leu Leu Glu
130 135 140

Thr Ser Glu Asn Thr Thr Ile His Arg Val Thr Ala Gly Ala Ile Ala
145 150 155 160

Asn Leu Ala Met Asn Gly Ser Asn Gln Gly Leu Ile Met Asn Lys Gly
165 170 175

Gly Ala Arg Leu Leu Ala Asn Ile Ala Ser Lys Thr Asn Asp Pro Gln
180 185 190

Thr Leu Arg Met Val Ala Gly Ala Leu Ala Asn Leu Cys Gly Asn Glu
195 200 205

Lys Leu His Val Met Leu Lys Gln Asp Gly Gly Ile Lys Ala Leu Leu
210 215 220

Gly Met Phe Arg Thr Gly His Asn Glu Val Ile Ala Gln Ile Ala Arg
225 230 235 240

Gly Met Ala Asn Phe Ala Lys Cys Glu Ser Arg Val Ile Ser Gln Gly
245 250 255

His Arg Lys Gly Arg Ser Leu Leu Ile Glu Glu Gly Val Leu Asn Trp
260 265 270

Met Val Ala Asn
275

<210> 2248
<211> 276
<212> PRT
<213> Solanum lycopersicum

<400> 2248
Thr Glu Asn Arg Ile Asp Gln Ile Leu Leu Ser Leu Thr His Ser Asp
1 5 10 15

His Leu Ser Lys Asn Asp Ser Gly Tyr Gln Met Ile Glu Gln Pro Gly
20 25 30

Ala Ile Tyr Leu Arg Tyr Leu Val Asp Ile His Lys Lys His Leu Met
35 40 45

Asn Tyr Glu Phe Asn Pro Ser Cys Leu Ala Glu Arg Arg Ile Phe Leu
50 55 60

Ala His Tyr Gln Thr Ile Thr Tyr Ser Gln Thr Ser Cys Gly Glu Asn
65 70 75 80

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Ser Phe His Phe Pro Ser His Gly Lys Pro Phe Ser Leu Arg Leu Ala
85 90 95

Leu Ser Pro Ser Arg Gly Ile Leu Val Ile Gly Ser Ile Gly Thr Gly
100 105 110

Arg Ser Tyr Leu Val Lys Tyr Leu Ala Thr Asn Ser Tyr Val Pro Phe
115 120 125

Ile Thr Val Phe Leu Asn Lys Phe Leu Asp Asn Lys Ser Lys Gly Phe
130 135 140

Leu Leu Asp Glu Ile Asp Ile Asp Asp Ser Asp Asp Ile Asp Asp Ser
145 150 155 160

Asp Asn Leu Asp Ala Ser Asp Asp Ile Asp Arg Asp Leu Asp Thr Glu
165 170 175

Leu Glu Leu Leu Thr Arg Met Asn Gly Leu Thr Val Asp Met Met Pro
180 185 190

Glu Ile Asp Arg Phe Tyr Ile Thr Leu Gln Phe Glu Leu Ala Lys Ala
195 200 205

Met Ser Pro Cys Ile Ile Trp Ile Pro Asn Ile His Asp Leu Asp Val
210 215 220

Asn Glu Ser Asn Asp Leu Ser Leu Gly Leu Leu Val Asn His Leu Ser
225 230 235 240

Arg Asp Cys Glu Arg Cys Ser Thr Arg Asn Ile Leu Val Ile Ala Ser
245 250 255

Thr His Ile Pro Gln Lys Val Asp Pro Ala Leu Ile Ala Pro Asn Lys
260 265 270

Leu Asn Thr Cys
275

<210> 2249

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2249

Gly Arg Arg Val Ile Tyr Gly Thr Pro Glu Ser Ala Thr Ala Ala Arg
1 5 10 15

Lys Leu Leu Asp Arg Gln Met Ser Ile Asn Ser Val Pro Lys Lys Val
20 25 30

Ile Ala Ser Leu Leu Lys Pro Arg Gly Trp Lys Pro Pro Val Arg Arg
35 40 45

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Gln Phe Phe Leu Asp Cys Asn Glu Ile Ala Asp Leu Cys Asp Ser Ala
50 55 60

Glu Arg Ile Phe Ser Ser Glu Pro Ser Val Leu Gln Leu Lys Ala Pro
65 70 75 80

Ile Lys Ile Phe Gly Asp Leu His Gly Gln Phe Gly Asp Leu Met Arg
85 90 95

Leu Phe Asp Glu Tyr Gly Ala Pro Ser Thr Ala Gly Asp Ile Ala Tyr
100 105 110

Ile Asp Tyr Leu Phe Leu Gly Asp Tyr Val Asp Arg Gly Gln His Ser
115 120 125

Leu Glu Thr Ile Thr Leu Leu Leu Ala Leu Lys Val Glu Tyr Pro Leu
130 135 140

Asn Val His Leu Ile Arg Gly
145 150

<210> 2250

<211> 226

<212> PRT

<213> Oryza sativa

<400> 2250

Asp Leu Val Thr Ile Ala Ser Asp Thr Ser Phe Tyr Ile Leu Lys Tyr
1 5 10 15

Asn Arg Asp Val Val Ser Ser His Leu Asp Gly Gly Gly Ser Val Gly
20 25 30

Glu Glu Gly Val Glu Asp Ala Phe Glu Leu Leu His Glu Ile Asn Glu
35 40 45

Arg Ile Arg Thr Gly Leu Trp Val Gly Asp Cys Phe Ile Tyr Asn Asn
50 55 60

Ser Ser Ser Arg Leu Asn Tyr Cys Val Gly Gly Glu Val Thr Thr Leu
65 70 75 80

Phe His Leu Asp Arg Gln Met Tyr Leu Leu Gly Tyr Leu Ala Asn Gln
85 90 95

Ser Arg Val Tyr Leu Ile Asp Lys Gln Phe Asn Val Val Gly Tyr Thr
100 105 110

Leu Leu Leu Thr Met Ile Glu Tyr Lys Thr Leu Val Met Arg Gly Asp
115 120 125

Phe Asp Arg Ala Asn Ala Leu Leu Pro Ser Ile Pro Lys Glu Gln His
130 135 140

Asp Ser Val Ala Arg Phe Leu Glu Ser Gln Gly Met Leu Glu Glu Ala

145 150 155 160
 Leu Glu Ile Ala Thr Asp Ser Asn Tyr Arg Phe Asp Leu Ala Val Gln
 165 170 175
 Leu Gly Arg Leu Glu Val Ala Lys Ala Ile Ala Ile Glu Ala Gln Ser
 180 185 190
 Glu Ser Lys Trp Arg Gln Leu Gly Glu Leu Ala Met Ser Thr Gly Lys
 195 200 205
 Leu Asp Met Ala Glu Glu Cys Leu Leu His Ala Met Asp Leu Ser Gly
 210 215 220
 Leu Leu
 225

 <210> 2251
 <211> 151
 <212> PRT
 <213> Oryza sativa

 <400> 2251
 Val Leu Gly Arg Ala Gly Ser Gly Ala Tyr Ala Asp Val Tyr Arg Gly
 1 5 10 15

 Arg Arg Arg Ser Asp Gly Ala Pro Val Ala Leu Lys Glu Val His Asp
 20 25 30

 Ala Val Ser Ala Arg Arg Glu Ala Asp Ala Leu Leu Ala Ala Ala Pro
 35 40 45

 Ser Arg His Val Val Ala Leu Leu Asp His Phe Pro Gly Gly Asp His
 50 55 60

 Asp Asp Asp Val Leu Val Leu Glu Trp Leu Pro Leu Asp Leu Ser Ala
 65 70 75 80

 Val Val Arg Ala Ala Ala Ala Ala Arg Pro Ser Ala Leu Pro Ala Ala
 85 90 95

 Gln Arg Lys Arg Trp Met Leu Gln Val Leu Glu Gly Val Ala Ala Cys
 100 105 110

 His Ser Ala Gly Val Val His Arg Asp Leu Lys Pro Ala Asn Leu Leu
 115 120 125

 Ile Ser Glu Asp Gly Val Leu Lys Val Ala Asp Leu Gly Gln Ala Arg
 130 135 140

 Ile Leu Gln Glu Thr Gly Thr
 145 150

<210> 2252
 <211> 151

<212> PRT

<213> Zea mays

<400> 2252

Val Asp Asp Thr Lys Cys Leu Leu Ser Leu Tyr Asn Ala Ala Tyr Phe
1 5 10 15

Arg Thr His Gly Glu Lys Val Leu Asp Glu Ala Ile Ala Phe Thr Arg
20 25 30

Arg Gln Leu Glu Ala Ser Leu Leu Asp Pro Leu Glu Pro Ala Leu Ala
35 40 45

Asp Glu Val His Leu Thr Leu Gln Thr Pro Leu Phe Arg Arg Leu Arg
50 55 60

Ile Leu Glu Ala Ile Asn Tyr Ile Pro Ile Tyr Gly Lys Glu Ala Gly
65 70 75 80

Arg Asn Glu Ala Ile Leu Glu Leu Ala Lys Leu Asn Phe Asn Leu Ala
85 90 95

Gln Leu Ile Tyr Cys Gly Glu Leu Lys Glu Val Thr Leu Trp Trp Lys
100 105 110

Gln Leu Asn Val Glu Thr Asn Leu Ser Phe Ile Arg Asp Arg Ile Val
115 120 125

Glu Cys His Phe Trp Met Thr Gly Ala Cys Cys Glu Pro Gln Tyr Ser
130 135 140

Leu Ser Arg Val Ile Ala Thr
145 150

<210> 2253

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2253

Val Leu Ala Cys Val Lys Gln Phe Met Met Lys Lys Asn Asp Leu Arg
1 5 10 15

Leu Ile Leu Met Ser Ala Thr Ala Asp Ile Thr Arg Tyr Lys Asp Tyr
20 25 30

Phe Arg Asp Leu Gly Arg Gly Glu Arg Val Glu Val Ile Ala Ile Pro
35 40 45

Ser Ser Pro Arg Ser Ser Ile Phe Gln Arg Lys Val Leu Tyr Leu Glu
50 55 60

Gln Ile Val Asp Ile Leu Lys Met Asp Ser Glu Ser Leu Ser Thr Lys
65 70 75 80

Tyr Cys Ser Gly Pro Asn Thr Ala Ala Asp Ala Gly Leu Lys Pro Asp
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Val Tyr Glu Leu Ile His Arg Leu Leu Leu His Ile His Gln Asn Glu
 100 105 110

Pro Asp Ile Gly Lys Ser Ile Leu Val Phe Leu Pro Thr Tyr Tyr Ala
 115 120 125

Leu Glu Gln Gln Trp Ile Arg Leu Leu Ser Ala Ser Ser Met Phe Lys
 130 135 140

Val His Ile Leu His Arg Ser
 145 150

<210> 2254

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2254

Asp Val Asn Pro Ser Met Arg Ala Ile Leu Ile Asp Trp Leu Val Glu
 1 5 10 15

Val Ala Glu Glu Tyr Arg Leu Val Pro Asp Thr Leu Tyr Leu Thr Val
 20 25 30

Asn Tyr Ile Asp Arg Tyr Leu Ser Gly Asn Glu Ile Asn Arg Gln Arg
 35 40 45

Leu Gln Leu Leu Gly Val Ala Cys Met Leu Ile Ala Ala Lys Tyr Lys
 50 55 60

Glu Ile Cys Ala Pro Gln Val Glu Glu Phe Cys Tyr Ile Thr Asp Asn
 65 70 75 80

Thr Tyr Phe Arg Asp Glu Val Leu Glu Met Glu Ala Ser Val Leu Asn
 85 90 95

Tyr Leu Lys Phe Glu Met Thr Ala Pro Thr Ala Lys Cys Phe Leu Arg
 100 105 110

Arg Phe Val Arg Val Ala Gln Val Ser Asp Glu Asp Pro Ala Leu His
 115 120 125

Leu Glu Phe Leu Ala Asn Tyr Val Ala Glu Leu Ser Leu Leu Glu Tyr
 130 135 140

Asn Leu Leu Ser Tyr Pro Pro
 145 150

<210> 2255

<211> 151

<212> PRT

<213> Zea mays

<400> 2255

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Asn Leu Met Thr Thr Ser Ala Asp Glu Gly Gln Phe Leu Asn Met Leu
1 5 10 15

Ile Lys Leu Ile Gly Ala Lys Lys Thr Met Glu Ile Gly Val Tyr Thr
20 25 30

Gly Tyr Ser Leu Leu Ala Thr Ala Leu Ala Leu Pro Glu Asp Gly Thr
35 40 45

Ile Leu Ala Met Asp Ile Asn Arg Glu Asn Tyr Glu Leu Gly Leu Pro
50 55 60

Cys Ile Asn Lys Ala Gly Val Gly His Lys Ile Asp Phe Arg Glu Gly
65 70 75 80

Pro Ala Leu Pro Val Leu Asp Asp Leu Val Ala Asp Lys Glu Gln His
85 90 95

Gly Ser Phe Asp Phe Ala Phe Val Asp Ala Asp Lys Asp Asn Tyr Leu
100 105 110

Asn Tyr His Glu Arg Leu Leu Lys Leu Val Arg Pro Gly Gly Leu Ile
115 120 125

Gly Tyr Asp Asn Thr Leu Trp Asn Gly Ser Val Val Leu Pro Asp Asp
130 135 140

Ala Pro Met Arg Lys Tyr Ile
145 150

<210> 2256

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 2256

Gly Pro Gln Glu Leu Asn Leu Ile Ile Ala Lys Cys Thr Arg Ile Glu
1 5 10 15

Ile His Leu Leu Thr Pro Gln Gly Leu Gln Pro Met Leu Asp Val Pro
20 25 30

Ile Tyr Gly Arg Ile Ala Thr Leu Glu Leu Phe Arg Pro His Gly Glu
35 40 45

Thr Gln Asp Leu Leu Phe Ile Ala Thr Glu Arg Tyr Lys Phe Cys Val
50 55 60

Leu Gln Trp Asp Thr Glu Ala Ser Glu Val Ile Thr Arg Ala Met Gly
65 70 75 80

Asp Val Ser Asp Arg Ile Gly Arg Pro Thr Asp Asn Gly Gln Ile Gly
85 90 95

Ile Ile Asp Pro Asp Cys Arg Leu Ile Gly Leu His Leu Tyr Asp Gly

100

105

110

Leu Phe Lys Val Ile Pro Phe Asp Asn Lys Gly Gln Leu Lys Glu Ala
 115 120 125

Phe Asn Ile Arg Leu Glu Glu Leu Gln Val Leu Asp Ile Lys Phe Leu
 130 135 140

Tyr Gly Cys Pro Lys Pro Thr Ile Val Val Leu Tyr Gln Asp Asn Lys
 145 150 155 160

Asp Ala Arg His Val Lys Thr Tyr Glu Val Ser Leu Lys Asp Lys Asp
 165 170 175

Phe Ile Glu Gly Pro Trp Ala Gln Asn Asn Leu Asp Asn Gly Ala Ser
 180 185 190

Leu Leu Ile Pro Val Pro Pro Pro Leu Cys Gly Val Leu Ile Ile Gly
 195 200 205

Glu Glu Thr Ile Val Tyr Cys Ser Ala Ser Ala Phe Lys Ala Ile Pro
 210 215 220

Ile Arg Pro Ser Ile Thr Arg Ala Tyr Gly Arg Val Asp Ala Asp Gly
 225 230 235 240

Ser Arg Tyr Leu Leu Gly Asp His Asn Gly Leu Leu His Leu Leu Val
 245 250 255

Ile Thr His Glu Lys Glu Lys Val Thr Gly Leu Lys Ile Glu Leu Leu
 260 265 270

Gly Glu Thr Ser
 275

<210> 2257

<211> 251

<212> PRT

<213> Solanum lycopersicum

<400> 2257

Ile Leu Gln Ser Pro Gly Ile Tyr Tyr Arg Ser Glu Leu Asp His Asn
 1 5 10 15

Gly Ile Ser Val Tyr Thr Gly Thr Ile Ile Ser Asp Trp Gly Gly Arg
 20 25 30

Ser Glu Leu Glu Ile Asp Arg Lys Ala Arg Ile Trp Ala Arg Val Ser
 35 40 45

Arg Lys Gln Lys Ile Ser Ile Leu Val Leu Ser Ser Ala Met Gly Leu
 50 55 60

Asn Leu Arg Glu Ile Leu Glu Asn Val Cys Tyr Pro Glu Ile Phe Leu
 65 70 75 80

Ser Phe Leu Asn Asp Lys Glu Arg Lys Lys Ile Gly Ser Lys Glu Asn
85 90 95

Ser Ile Leu Glu Phe Tyr Gln Gln Phe Ala Cys Val Gly Gly Asp Pro
100 105 110

Val Phe Ser Glu Ser Leu Cys Lys Glu Leu Gln Lys Lys Phe Phe Gln
115 120 125

Gln Arg Cys Glu Leu Gly Arg Ile Gly Arg Arg Asn Met Asn Arg Lys
130 135 140

Leu Asn Leu Asp Ile Pro Gln Asn Asn Thr Phe Leu Leu Pro Arg Asp
145 150 155 160

Ile Leu Ala Ala Ala Asp His Leu Ile Gly Leu Lys Phe Gly Met Gly
165 170 175

Ala Leu Asp Asp Met Asn His Leu Lys Asn Lys Arg Ile Arg Ser Val
180 185 190

Ala Asp Leu Leu Gln Asp Gln Phe Gly Leu Ala Leu Val Arg Leu Glu
195 200 205

Asn Val Val Arg Gly Thr Ile Cys Gly Ala Ile Arg His Lys Leu Ile
210 215 220

Pro Thr Pro Gln Asn Leu Val Thr Ser Pro Pro Leu Thr Thr Thr Tyr
225 230 235 240

Glu Ser Phe Phe Gly Leu His Pro Leu Ser Gln
245 250

<210> 2258
<211> 101
<212> PRT
<213> Zea mays

<400> 2258
Ile Cys Leu Leu Leu Ala Tyr Lys Val Lys Tyr Pro Glu Asn Phe Phe
1 5 10 15

Leu Leu Arg Gly Asn His Glu Cys Ala Ser Val Asn Arg Ile Tyr Gly
20 25 30

Phe Tyr Asp Glu Cys Lys Arg Arg Phe Ser Val Lys Leu Trp Lys Thr
35 40 45

Phe Thr Asp Cys Phe Asn Cys Leu Pro Val Ser Ala Leu Ile Asp Glu
50 55 60

Lys Ile Leu Cys Met His Gly Gly Leu Ser Pro Glu Leu Asn Lys Leu
65 70 75 80

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Glu Gln Ile Leu Asn Leu Asn Arg Pro Thr Asp Val Pro Asp Thr Gly
85 90 95

Leu Leu Cys Asp Leu
100

<210> 2259
<211> 176
<212> PRT
<213> Zea mays

<400> 2259
Ile Pro Trp Ala Glu Ala Arg Lys Val Glu Ala Ser Lys Leu Tyr Tyr
1 5 10 15

Arg Val Leu Glu Ala Ile Cys Arg Ala Glu Leu Gln Asn Ser Asn Val
20 25 30

Asn Asn Leu Thr Pro Leu Leu Ser Asn Glu Arg Phe His Arg Cys Leu
35 40 45

Ile Ala Cys Ser Ala Asp Leu Val Leu Ala Thr His Lys Thr Val Ile
50 55 60

Met Met Phe Pro Ala Val Leu Glu Ser Thr Gly Leu Thr Ala Phe Asp
65 70 75 80

Leu Ser Lys Ile Ile Glu Asn Phe Val Arg His Glu Glu Thr Leu Pro
85 90 95

Arg Glu Leu Lys Arg His Leu Asn Ser Leu Glu Glu Gln Leu Leu Glu
100 105 110

Ser Met Ala Trp Glu Lys Gly Ser Ser Leu Tyr Asn Ser Leu Ile Val
115 120 125

Ala Arg Pro Ser Val Ala Ser Glu Ile Asn Arg Leu Gly Leu Leu Ala
130 135 140

Glu Pro Met Pro Ser Leu Asp Asp Leu Val Ser Arg Gln Asn Val Arg
145 150 155 160

Ile Glu Gly Leu Pro Ala Thr Pro Ser Lys Lys Arg Ala Ala Gly Pro
165 170 175

<210> 2260
<211> 101
<212> PRT
<213> Solanum lycopersicum

<400> 2260
Lys Ile Lys Asn Gln Ile Asn Asp Ile Arg Gln Gln Gly Ala Leu Thr
1 5 10 15

Asp Cys Leu Glu Leu Leu Asp Gln Ser Val Asp Leu Val Ser Asp Ser
20 25 30

Ile Ala Ala Ile Asp Lys Arg Ser Arg Ser Glu His Ala Asn Ala Gln
35 40 45

Ser Trp Leu Ser Gly Val Leu Thr Asn His Val Thr Cys Leu Asp Glu
50 55 60

Leu Thr Ser Phe Ser Leu Ser Thr Lys Asn Gly Thr Val Leu Asp Glu
65 70 75 80

Leu Ile Thr Arg Ala Lys Val Ala Leu Ala Met Leu Ala Ser Val Thr
85 90 95

Thr Pro Asn Asp Glu
100

<210> 2261
<211> 76
<212> PRT
<213> Oryza sativa

<400> 2261
Lys Ser Trp Ala Cys Val Asn Leu Cys Glu Gly Leu Asp Asn Arg Val
1 5 10 15

Val Glu Ala Phe Cys Leu Gln Leu Val Arg Thr Ser Lys Ile Thr Gly
20 25 30

Leu Asp Phe Ala Asn Val Ser Leu Pro Ile Leu Lys Ala Asp Pro His
35 40 45

Asn Val Lys Thr Asp Leu Pro Met Arg Tyr Gln Glu Ala Cys Ser Trp
50 55 60

Ser Arg Asp Asn Lys Ile Asp Leu Leu Leu Val Val
65 70 75

<210> 2262
<211> 76
<212> PRT
<213> Zea mays

<400> 2262
Asn Asp Ala Glu Lys Leu Val Thr Ile Gly Ser His Val Leu Arg Glu
1 5 10 15

Gly Glu Trp Leu Ser Leu Asn Gly Ser Thr Gly Glu Val Ile Leu Gly
20 25 30

Lys Gln Pro Leu Ser Pro Pro Ala Leu Ser Gly Asp Leu Gly Thr Phe
35 40 45

Met Ala Trp Val Asp Asp Val Arg Lys Leu Lys Val Leu Ala Asn Ala
50 55 60

Asp Thr Pro Asp Asp Ala Leu Thr Ala Arg Asn Asn

65 70 75 1005_005_PCT_SL17083606
 <210> 2263
 <211> 126
 <212> PRT
 <213> Solanum lycopersicum
 <400> 2263
 Ser Asp Pro Leu Pro Glu Val Glu Arg Pro Leu Phe Glu Leu Val Ser
 1 5 10 15
 Ala Ala Gln Thr Leu Leu Pro Asp Ser Glu Gly Ala Ile Asp Gly His
 20 25 30
 Leu Arg Glu Val Gly Leu Thr Phe His Leu Leu Lys Asp Val Pro Gly
 35 40 45
 Leu Ile Ser Lys Asn Ile Glu Lys Ser Leu Ile Glu Ala Phe Gln Pro
 50 55 60
 Leu Gly Ile Ser Asp Trp Asn Ser Ile Phe Trp Ile Ala His Pro Gly
 65 70 75 80
 Gly Pro Ala Ile Leu Asp Gln Val Glu Leu Lys Leu Ser Leu Lys Pro
 85 90 95
 Glu Lys Leu Arg Ala Thr Arg Gln Val Leu Ser Asp Tyr Gly Asn Met
 100 105 110
 Ser Ser Ala Cys Val Leu Phe Ile Leu Asp Glu Met Arg Lys
 115 120 125
 <210> 2264
 <211> 176
 <212> PRT
 <213> Zea mays
 <400> 2264
 Val Leu Gly Gly Lys Cys Asn Arg Gly Leu Ser Val Val Asp Ser Tyr
 1 5 10 15
 Lys Leu Leu Lys Gly Ala Asp Ala Leu Gly Glu Glu Glu Thr Phe Leu
 20 25 30
 Ala Cys Thr Leu Gly Trp Cys Ile Glu Trp Leu Gln Ala Phe Phe Leu
 35 40 45
 Val Leu Asp Asp Ile Met Asp Asp Ser His Thr Arg Arg Gly Gln Pro
 50 55 60
 Cys Trp Phe Arg Val Pro Gln Val Gly Leu Ile Ala Ala Asn Asp Gly
 65 70 75 80
 Ile Ile Leu Arg Asn His Ile Ser Arg Ile Leu Arg Arg His Phe Lys
 85 90 95

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Gly Lys Pro Tyr Tyr Ala Asp Leu Leu Asp Leu Phe Asn Glu Val Glu
100 105 110

Phe Lys Thr Ala Ser Gly Gln Leu Leu Asp Leu Ile Thr Thr His Glu
115 120 125

Gly Glu Lys Asp Leu Thr Lys Tyr Asn Ile Thr Val His Gly Arg Ile
130 135 140

Val Gln Tyr Lys Thr Ala Tyr Tyr Ser Phe Tyr Leu Pro Val Ala Cys
145 150 155 160

Ala Leu Leu Leu Ser Gly Glu Asn Leu Asp Asn Tyr Gly Asp Val Glu
165 170 175

<210> 2265

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2265

Ser Pro Glu Lys Thr Leu Glu Gln Leu Gly Leu Ala Gly Gly Lys Leu
1 5 10 15

Gly Tyr Val Val Val Val Gly Lys Lys Gly Val Glu Cys Leu Pro Leu
20 25 30

Ala Gly Gly Arg Leu Ser Ser Gly Ile Ala Ala Met Ser Val Glu Met
35 40 45

Ser Glu Val Ala Pro Pro Leu Leu Leu Val Glu Leu Arg Leu Glu Val
50 55 60

Ala Ala Gly Asp Val Asp Gly Gly Asp Gly Glu Val Lys Gly Phe Gly
65 70 75 80

Trp Glu Gln Leu Arg Met Glu Leu Gly Asp Val Val Arg Ala Trp His
85 90 95

Ser Cys Glu Asp Leu
100

<210> 2266

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2266

Glu Leu Ala Met Ser Thr Gly Lys Leu Asp Met Ala Glu Glu Cys Leu
1 5 10 15

Val Gln Ala Lys Asp Leu Ser Gly Leu Leu Leu Leu Tyr Ser Ser Leu
20 25 30

Gly Asp Ala Glu Gly Ile Glu Lys Leu Ala Ser Gln Ala Lys Glu His
35 40 45

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Gly Lys Asn Asn Val Ala Phe Leu Cys Leu Phe Met Leu Gly Lys Leu
50 55 60

Glu Asp Cys Ile Gln Leu Leu Ile Asp Ser Asn Arg Ile Pro Glu Ala
65 70 75 80

Ala Leu Met Ala Arg Ser Tyr Leu Pro Ser Lys Val Ser Glu Ile Val
85 90 95

Ala Ile Trp Arg Asn
100

<210> 2267

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 2267

Ser Lys Asn Ile Glu Lys Ser Leu Leu Glu Ala Phe Gln Pro Leu Gly
1 5 10 15

Ile Ser Asp Trp Asn Ser Leu Phe Trp Ile Ala His Pro Gly Gly Pro
20 25 30

Ala Ile Leu Asp Gln Val Glu Leu Lys Leu Gly Leu Lys Pro Glu Lys
35 40 45

Leu Arg Ala Thr Arg Glu Val Leu Ser Asn Tyr Gly Asn Met Ser Ser
50 55 60

Ala Cys Val Leu Phe Ile Leu Asp Glu Met Arg Lys
65 70 75

<210> 2268

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2268

Arg Pro Ser Thr Asp Phe Met Glu Thr Ile Gln Lys Asp Val Asn Pro
1 5 10 15

Ser Met Arg Ala Ile Leu Ile Asp Trp Leu Val Glu Val Ala Glu Glu
20 25 30

Tyr Arg Leu Val Pro Asp Thr Leu Tyr Leu Thr Val Asn Tyr Ile Asp
35 40 45

Arg Tyr Leu Ser Gly Asn Glu Ile Asn Arg Gln Arg Leu Gln Leu Leu
50 55 60

Gly Val Ala Cys Met Leu Ile Ala Ala Lys Tyr Glu Glu Ile Cys Ala
65 70 75 80

Pro Gln Val Glu Glu Phe Cys Tyr Ile Thr Asp Asn Thr Tyr Phe Arg
85 90 95

Asp Glu Val Leu Glu Met Glu Ala Ser Val Leu Asn Tyr Leu Lys Phe
100 105 110

Glu Val Thr Ala Pro Thr Ala Lys Cys Phe Leu Arg Arg Phe Val Arg
115 120 125

Val Ala Gln Val Ser Asp Glu Asp Pro Ala Leu His Leu Glu Phe Leu
130 135 140

Ala Asn Tyr Val Ala Glu Leu Ser Leu Leu Glu Tyr Asn Leu Leu Ser
145 150 155 160

Tyr Pro Pro Ser Leu Val Ala Ala Ser Ala Ile Phe Leu Ala Lys Phe
165 170 175

<210> 2269

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2269

Leu Glu Thr Leu Ala Glu Arg Leu Leu Asp Leu Leu Cys Glu Asn Leu
1 5 10 15

Gly Leu Glu Lys Gly Tyr Leu Thr Lys Ala Phe Arg Gly Pro Ala Gly
20 25 30

Ala Pro Thr Phe Gly Thr Lys Val Ser Ser Tyr Pro Pro Cys Pro Arg
35 40 45

Pro Asp Leu Val Glu Gly Leu Arg Ala His Thr Asp Ala Gly Gly Ile
50 55 60

Ile Leu Leu Phe Gln Asp Asp Arg Val Gly Gly Leu Gln Leu Leu Lys
65 70 75 80

Asp Gly Glu Trp Val Asp Val Pro Pro Met Arg His Ser Ile Val Val
85 90 95

Asn Leu Gly Asp Gln
100

<210> 2270

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2270

Tyr Gly Ala Pro Ser Thr Ala Gly Asp Ile Ala Tyr Ile Asp Tyr Leu
1 5 10 15

Phe Leu Gly Asp Tyr Val Asp Arg Gly Gln His Ser Leu Glu Thr Ile
20 25 30

Thr Leu Leu Leu Ala Leu Lys Val Glu Tyr Pro Leu Asn Val His Leu

35

40

45

Ile Arg Gly Asn His Glu Ala Ala Asp Ile Asn Ala Leu Phe Gly Phe
50 55 60

Arg Ile Glu Cys Ile Glu Arg Met Gly Glu Arg Asp Gly Ile Trp Thr
65 70 75 80

Trp His Arg Met Asn Arg Leu Phe Asn Trp Leu Pro Leu Ala Ala Leu
85 90 95

Ile Glu Lys Lys Ile
100

<210> 2271

<211> 201

<212> PRT

<213> Oryza sativa

<400> 2271

Met Ala Pro Ser Phe Asp Phe Ala Ala Ser Ile Leu Leu Cys Ala Glu
1 5 10 15

Asp Asn Thr Ala Ile Leu Asp Leu Gly Glu Glu Ser Glu Glu Ile Ser
20 25 30

Trp Val Val Gly Val Asp Ala Ser Leu Gly Asp Leu Ser Met Asp Phe
35 40 45

Pro Leu Gln Ser Asp Asp Cys Ile Glu Ala Leu Leu Gly Arg Glu Glu
50 55 60

Gln Gln His Ile Pro Met Glu Gly Tyr Leu Gln Arg Leu Leu Leu Gln
65 70 75 80

Pro Asp Gly Leu Asp Leu Val Ala Val Arg Ser Asp Ala Ile Asp Trp
85 90 95

Ile Trp Lys Val His Glu Leu Tyr Lys Phe Gly Pro Leu Thr Ala Val
100 105 110

Leu Ser Val Asn Tyr Leu Asp Arg Phe Leu Ser Val Phe Asp Leu Pro
115 120 125

Gln Glu Glu Ala Cys Met Thr Gln Leu Leu Ala Val Ala Ser Leu Ser
130 135 140

Leu Ala Ala Lys Met Glu Glu Thr Val Val Pro His Pro Leu Asp Leu
145 150 155 160

Gln Val Cys Asp Ala Lys Tyr Val Phe Glu Thr Arg Thr Ile Lys Arg
165 170 175

Met Glu Leu Ala Val Leu Asn Ala Leu Lys Trp Arg Met Gln Ala Val
180 185 190

Thr Ala Cys Ser Phe Ile Asp Tyr Tyr
 195 200

<210> 2272
 <211> 101
 <212> PRT
 <213> Oryza sativa

<400> 2272
 Leu Lys Pro Leu Ser Val Lys Ser Leu Lys Ala Leu Gly Asp Arg Ile
 1 5 10 15

Ile Ala Asp Gln His Phe Thr Cys Arg Asp Phe Ala Asn Ala Glu Leu
 20 25 30

Val Phe Met Glu Val Val Glu Tyr Asn Ile Gly Ser Leu Asn Ile Ala
 35 40 45

Phe Thr Tyr Leu Glu Glu Leu Leu Val Gln Phe Arg Glu Ile Ser Lys
 50 55 60

Ile Gly Asp Leu Leu Asn Met Asp Val Cys Met Glu Ile Leu Asp Ile
 65 70 75 80

Leu Tyr Glu Thr Glu Asp Ser Ser Trp Leu Phe Asn Ser Pro Cys Gln
 85 90 95

Leu Ala Ala Ser Ala
 100

<210> 2273
 <211> 126
 <212> PRT
 <213> Oryza sativa

<400> 2273
 Leu Leu Leu Asp Glu Glu Gly Arg Leu Lys Val Thr Asp Phe Gly Leu
 1 5 10 15

Ala Ala Leu Pro Glu Gln Leu Arg Gln Asp Gly Leu Leu His Thr Gln
 20 25 30

Cys Gly Thr Pro Ala Tyr Val Ala Pro Glu Val Leu Arg Lys Arg Gly
 35 40 45

Tyr Asp Gly Ala Arg Ala Asp Leu Trp Ser Cys Gly Val Val Leu Tyr
 50 55 60

Val Leu Leu Cys Gly Phe Leu Pro Phe Gln His Glu Asn Tyr Ala Lys
 65 70 75 80

Met Tyr Gln Lys Ile Phe Lys Ala Glu Tyr Gln Val Pro Pro Trp Val
 85 90 95

Ser Gly Asp Ala Arg Arg Leu Ile Val Arg Leu Leu Val Val Asp Pro
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100

105

110

Ala Lys Arg Ile Ser Ile Pro Glu Ile Met Arg Thr Pro Trp
 115 120 125

<210> 2274

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2274

Asn Phe Ser Ala Arg Cys Asp Val Arg Asn Leu Ile Arg Asp Leu Ile
 1 5 10 15

Arg Asn Ala Ser Ala Lys Gly Ile Gln Met Ala Glu Pro Phe Asp Val
 20 25 30

Phe Glu Glu Ser Pro Ser Leu Arg Arg Ala Pro Val Ser Arg Arg Val
 35 40 45

Asp Asp Met Phe Glu Gln Ile Lys Ser Lys Leu Pro Gly Ala Pro Lys
 50 55 60

Phe Leu Leu Cys Leu Leu Pro Glu Arg Lys Asn Cys Glu Val Tyr Gly
 65 70 75 80

Pro Trp Lys Arg Lys Cys Leu Ala Glu Phe Gly Ile Val Thr Gln Cys
 85 90 95

Leu Ala Pro Gln Arg Val Asn Asp Gln Tyr Leu Leu Asn Leu Leu Leu
 100 105 110

Lys Ile Asn Ala Lys Leu Gly Gly Ile Asn Ser Leu Leu Gln Ile Glu
 115 120 125

Ala Ser Pro Ser Ile Pro Leu Val Ser Lys Thr Pro Thr Ile Ile Leu
 130 135 140

Gly Met Asp Val Ser His Gly
 145 150

<210> 2275

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2275

Glu Ile Val Ala Glu Arg Arg Ala Arg Gly Gly Gly Gly Gly Gly Gly
 1 5 10 15

Gly Asp Asp Leu Leu Gly Gly Leu Met Arg Ser Arg Asp Asp Gly Thr
 20 25 30

Ala Gly Ala Val Ala Leu Leu Thr Asp Asp Gln Ile Ala Asp Asn Val
 35 40 45

Val Gly Val Leu Phe Ala Ala Gln Asp Thr Thr Ala Ser Val Leu Thr
 50 55 60

Trp Ile Leu Lys Tyr Leu His Asp Ser Pro Lys Leu
 65 70 75

<210> 2276

<211> 251

<212> PRT

<213> Zea mays

<400> 2276

Leu Asn Phe Leu Lys Ala His Asn Tyr Lys Gly Thr Thr Met Met Leu
 1 5 10 15

Asn Asp Arg Ile Gln Ser Leu Arg Gly Leu Gln Ser Ser Leu Arg Lys
 20 25 30

Ala Glu Glu Tyr Leu Leu Ser Val Pro Gln Asp Thr Pro Tyr Ser Glu
 35 40 45

Phe Asn His Arg Phe Gln Glu Leu Gly Leu Glu Lys Gly Trp Gly Asp
 50 55 60

Thr Ala Lys Arg Val Leu Asp Thr Leu His Leu Leu Leu Asp Leu Leu
 65 70 75 80

Glu Ala Pro Asp Pro Ala Asn Leu Glu Lys Phe Leu Gly Thr Ile Pro
 85 90 95

Met Met Phe Asn Val Val Ile Leu Ser Pro His Gly Tyr Phe Ala Gln
 100 105 110

Ser Asn Val Leu Gly Tyr Pro Asp Thr Gly Gly Gln Val Val Tyr Ile
 115 120 125

Leu Asp Gln Val Arg Ala Leu Glu Asn Glu Met Leu Leu Arg Ile Lys
 130 135 140

Gln Gln Gly Leu Asp Ile Thr Pro Lys Ile Leu Ile Val Thr Arg Leu
 145 150 155 160

Leu Pro Asp Ala Ala Gly Thr Thr Cys Gly Gln Arg Leu Glu Lys Val
 165 170 175

Ile Gly Thr Glu His Thr Asp Ile Ile Arg Val Pro Phe Arg Asn Glu
 180 185 190

Asn Gly Ile Leu Arg Lys Trp Ile Ser Arg Phe Asp Val Trp Pro Tyr
 195 200 205

Leu Glu Thr Tyr Thr Glu Asp Val Ser Ser Glu Ile Met Lys Glu Met
 210 215 220

Gln Ala Lys Pro Asp Leu Ile Ile Gly Asn Tyr Ser Asp Gly Asn Leu

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Asn Trp Val Leu His Arg Asp Leu Lys Thr Ser Asn Leu Leu Asn
35 40 45

Asn Arg Gly Glu Leu Lys Ile Cys Asp Phe Gly Leu Ser Arg Gln Tyr
50 55 60

Gly Ser Pro Leu Lys Pro Tyr Thr Gln Leu Val Val
65 70 75

<210> 2279

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 2279

Leu Ser Asn Ser Leu Asn Phe Tyr Ser Pro Thr Arg Phe Leu Glu Pro
1 5 10 15

His Leu Leu Lys Ser Ser Lys Ile Phe Ile Pro Lys Ser Pro Leu Lys
20 25 30

Cys Ala Lys Val Pro Glu Met Gln Thr Gln Leu Glu Asp Ser Ala Lys
35 40 45

Pro Ile Val Asp Pro His Asp Ile Asp Ser Lys Leu Val Gln Lys Leu
50 55 60

Ala Asn Asp Ala Leu Val Trp Cys Pro Leu Arg Gly Leu Leu Val Gly
65 70 75 80

Asp Arg Asn Ser Glu Arg Ser Gly Thr Ile Pro Gly Val Asp Met Val
85 90 95

His Ala Pro Val Ala
100

<210> 2280

<211> 251

<212> PRT

<213> Oryza sativa

<400> 2280

Pro Cys Ala Lys Leu Ile Glu Cys Ile Arg Leu Val Val Asp Lys Ser
1 5 10 15

Gly Gln Ser Phe Leu Ser Ser Asp Asp Arg Asp Asp Gly Ser Ser Leu
20 25 30

Leu Ala Lys Ser Glu Gly Leu Asp Leu Pro Lys Val Gly Gln Lys Arg
35 40 45

Ile Ala Leu Asp Glu Glu Asn Ser Phe Pro Lys Arg Leu Lys Met Thr
50 55 60

Glu Pro Arg Phe Ser Ser Gly Ser Phe Met Val Asp Glu Leu Ser Ala
65 70 75 80

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Gly Val Gly Gln Glu Leu Glu Lys Asp His Gly Cys Asp Phe Arg Val
85 90 95

Gln Leu Tyr Ser Leu Ile Asn Cys Leu Ser Pro Asp Asn His Met Ala
100 105 110

Tyr Pro Leu Glu Pro Ala Ile Ser Ile Gln Val Leu Ser Leu Leu Cys
115 120 125

Leu Ser Leu Ser Val Tyr Pro Lys Thr Asn Leu Phe Ser Arg Ile Ser
130 135 140

Lys Gln Val Leu Ser Trp Ile Pro Trp Ile Cys Lys Gln Thr Thr Lys
145 150 155 160

Ile Cys Met Phe Ser Phe Asp Val Ser Leu Tyr Phe Glu Ala Val Gln
165 170 175

Thr Val Met Leu Leu Gln Ser Phe Leu Pro Gly His Thr Lys Leu Phe
180 185 190

Glu Asp Glu Pro Leu Leu Ile Gly Asn Gly Cys Thr Asp Phe Glu Tyr
195 200 205

Pro Arg Tyr Ala Asp Leu Ile Asn Leu Leu Lys Leu Val Ser Asp Asp
210 215 220

Gly Tyr Leu Thr Ser Gln Thr Cys Ser Glu Lys Leu Lys Cys Leu Ala
225 230 235 240

Val Gln Ile Ile Ala Lys Ile Gly Ser Arg Gln
245 250

<210> 2281

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 2281

Glu Ile Ser Ser Lys Cys Leu His Asn Leu Leu Leu Ser Glu Glu Met
1 5 10 15

Ile His Arg Asn Asn Glu Ser Pro Leu Ile Ser Thr His Leu Arg Ser
20 25 30

Pro Asn Ala Arg Glu Phe Leu Tyr Ser Ile Leu Phe Leu Leu Val
35 40 45

Ala Gly Tyr Leu Val Arg Thr His Leu Leu Phe Val Ser Arg Ala Ser
50 55 60

Ser Glu Leu Gln Thr Glu Phe Glu Arg Val Lys Ser Leu Met Thr Pro
65 70 75 80

1005_005_PCT_SL17083606

Ser Ser Met Ile Glu Leu Arg Lys Leu Leu Asp Arg Tyr Pro Thr Ser
85 90 95

Glu Pro Asn Ser Phe Trp Leu Lys Asn Leu Phe Leu Val Ala Leu Glu
100 105 110

Gln Leu Gly Asp Ser Leu Glu Glu Ile Arg Gly Ser Ala Ser
115 120 125

<210> 2282

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 2282

Tyr Arg Asn Asn Thr Leu Thr Asp Leu Leu Thr Thr Ser Arg Ser Thr
1 5 10 15

Pro Gly Glu Leu Val Met Cys Gln Glu Lys Leu Val Gln Glu Ala Val
20 25 30

Asp Thr Leu Leu Asp Asn Gly Ile Arg Gly Gln Pro Met Arg Asp Gly
35 40 45

His Asn Lys Val Tyr Lys Ser Phe Ser Asp Val Ile Glu Gly Lys Glu
50 55 60

Gly Arg Phe Arg Glu Thr Leu Leu Gly Lys Arg Val Asp Tyr Ser Gly
65 70 75 80

Arg Ser Val Ile Val Val Gly Pro Ser Leu Ser Leu His Arg Cys Gly
85 90 95

Leu Pro Arg Glu Ile Ala Ile Glu Leu Phe Gln Thr Phe Val Ile Arg
100 105 110

Gly Leu Ile Arg Gln His Leu Ala Ser Asn Ile Gly Val Ala Lys Ser
115 120 125

Lys Ile Arg Glu Lys Glu Pro Ile Val Trp Glu Ile Leu Gln Glu Val
130 135 140

Met Gln Gly His Pro Val Leu Leu Asn Arg Ala Pro Thr Leu His Arg
145 150 155 160

Leu Gly Ile Gln Ala Phe Gln Pro Val Leu Val Glu Gly Arg Ala Ile
165 170 175

Cys Leu His Pro Leu Val Cys Lys Gly Phe Asn Ala Asp Phe Asp Gly
180 185 190

Asp Gln Met Ala Val His Val Pro Leu Ser Leu Glu Ala Gln Val Glu
195 200 205

Ala Arg Leu Leu Met Phe Ser His Met Asn Leu Leu Ser Pro Ala Ile

1005_005_PCT_SL17083606
 210 215 220
 Gly Asp
 225
 <210> 2283
 <211> 76
 <212> PRT
 <213> Solanum lycopersicum
 <400> 2283
 Gly Lys Gly Val Ala Ile Val Trp Phe Arg Asn Asp Leu Arg Val Leu
 1 5 10 15
 Asp Asn Glu Ala Leu Leu Arg Ala Trp Val Ser Ser Glu Ala Ile Leu
 20 25 30
 Pro Val Tyr Cys Val Asp Pro Arg Leu Phe Gly Thr Thr His Tyr Phe
 35 40 45
 Gly Met Pro Lys Thr Gly Ala Leu Arg Ala Gln Phe Ile Ile Glu Cys
 50 55 60
 Leu Asn Asp Leu Lys Arg Asn Leu Val Lys Arg Gly
 65 70 75
 <210> 2284
 <211> 126
 <212> PRT
 <213> Oryza sativa
 <400> 2284
 Gly Glu Gly Thr Tyr Gly Leu Val Phe Leu Ala Arg Leu Lys Gln Ser
 1 5 10 15
 His Pro His Ala Ala Ala Gly Val Gly Arg Arg Gly Ser Pro Ile Ala
 20 25 30
 Ile Lys Lys Phe Lys Gln Ser Lys Glu Gly Asp Gly Val Ser Pro Thr
 35 40 45
 Ala Ile Arg Glu Ile Met Leu Leu Arg Glu Ile Asn His Glu Asn Val
 50 55 60
 Val Lys Leu Val Asn Val His Ile Asn His Ala Asp Met Ser Leu Tyr
 65 70 75 80
 Leu Ala Phe Asp Tyr Ala Glu His Asp Leu Tyr Glu Ile Ile Arg His
 85 90 95
 His Arg Glu Lys Leu Asn Leu Pro Ile Asn Pro Tyr Thr Val Lys Ser
 100 105 110
 Leu Leu Trp Gln Leu Leu Asn Gly Leu Asn Tyr Leu His Ser
 115 120 125

<210> 2285

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2285

Val Phe Asn Ser Tyr Gly Gly Phe Lys Leu Leu Leu Pro Gln Ile Leu
1 5 10 15

Ser Arg Val Ala Gln Ala Gly Glu Lys Leu His Glu Arg Leu Ala Ala
20 25 30

Glu Ile Arg Ser Ala Val Ala Asp Ala Gly Gly Asn Val Thr Leu Ala
35 40 45

Ala Leu Glu Lys Met Glu Leu Thr Arg Ser Val Val Trp Glu Ala Leu
50 55 60

Arg Leu Asp Pro Pro Val Arg Phe Gln Tyr Gly Arg
65 70 75

<210> 2286

<211> 276

<212> PRT

<213> Oryza sativa

<400> 2286

Pro Gly Ser Phe Gly Trp Pro Val Val Gly Glu Thr Leu Glu Phe Val
1 5 10 15

Ser Cys Ala Tyr Ser Pro Arg Pro Glu Ala Phe Val Asp Lys Arg Arg
20 25 30

Lys Leu His Gly Ser Ala Val Phe Arg Ser His Leu Phe Gly Ser Ala
35 40 45

Thr Val Val Thr Ala Asp Ala Glu Val Ser Arg Phe Val Leu Gln Ser
50 55 60

Asp Ala Arg Ala Phe Val Pro Trp Tyr Pro Arg Ser Leu Thr Glu Leu
65 70 75 80

Met Gly Lys Ser Ser Ile Leu Leu Ile Asn Gly Ala Leu Gln Arg Arg
85 90 95

Val His Gly Leu Val Gly Ala Phe Phe Lys Ser Ser His Leu Lys Ser
100 105 110

Gln Leu Thr Ala Asp Met Arg Arg Arg Leu Ser Pro Ala Leu Ser Ser
115 120 125

Phe Pro Asp Ser Ser Leu Leu His Val Gln His Leu Ala Lys Ser Val
130 135 140

Val Phe Glu Ile Leu Val Arg Gly Leu Ile Gly Leu Glu Ala Gly Glu
145 150 155 160

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Glu Met Gln Gln Leu Lys Gln Gln Phe Gln Glu Phe Ile Val Gly Leu
165 170 175

Met Ser Leu Pro Ile Lys Leu Pro Gly Thr Arg Leu Tyr Arg Ser Leu
180 185 190

Gln Ala Lys Lys Lys Met Ala Arg Leu Ile Gln Arg Ile Ile Arg Glu
195 200 205

Lys Arg Ala Arg Arg Ala Ala Ala Ser Pro Pro Arg Asp Ala Ile Asp
210 215 220

Val Leu Ile Gly Asp Gly Ser Asp Glu Leu Thr Asp Glu Leu Ile Ser
225 230 235 240

Asp Asn Met Ile Asp Leu Met Ile Pro Ala Glu Asp Ser Val Pro Val
245 250 255

Leu Ile Thr Leu Ala Val Lys Phe Leu Ser Glu Cys Pro Leu Ala Leu
260 265 270

His Gln Leu Glu
275

<210> 2287
<211> 251
<212> PRT
<213> Zea mays

<400> 2287
Asp Arg Ile Arg Ser Leu Ser Ala Leu Gln Gly Ala Leu Arg Lys Ala
1 5 10 15

Glu Glu His Leu Ser Thr Leu Gln Ala Asp Thr Pro Tyr Ser Glu Phe
20 25 30

His His Arg Phe Gln Glu Leu Gly Leu Glu Lys Gly Trp Gly Asp Cys
35 40 45

Ala Lys Arg Ala Gln Glu Thr Ile His Leu Leu Leu Asp Leu Leu Glu
50 55 60

Ala Pro Asp Pro Ser Thr Leu Glu Lys Phe Leu Gly Thr Ile Pro Met
65 70 75 80

Val Phe Asn Val Val Ile Leu Ser Pro His Gly Tyr Phe Ala Gln Ala
85 90 95

Asn Val Leu Gly Tyr Pro Asp Thr Gly Gly Gln Val Val Tyr Ile Leu
100 105 110

Asp Gln Val Arg Ala Met Glu Asn Glu Met Leu Leu Arg Ile Lys Gln
115 120 125

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Cys Gly Leu Asp Ile Thr Pro Lys Ile Leu Ile Val Thr Arg Leu Leu
130 135 140

Pro Asp Ala Thr Gly Thr Thr Cys Gly Gln Arg Leu Glu Lys Val Leu
145 150 155 160

Gly Thr Glu His Cys His Ile Leu Arg Val Pro Phe Arg Thr Glu Asn
165 170 175

Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp Pro Tyr Leu
180 185 190

Glu Thr Tyr Thr Asp Asp Val Ala His Glu Ile Ala Gly Glu Leu Gln
195 200 205

Ala Asn Pro Asp Leu Ile Ile Gly Asn Tyr Ser Asp Gly Asn Leu Val
210 215 220

Ala Cys Leu Leu Ala His Lys Met Gly Val Thr His Cys Thr Ile Ala
225 230 235 240

His Ala Leu Glu Lys Thr Lys Tyr Pro Asn Ser
245 250

<210> 2288

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2288

Glu Val Trp Thr Val Asp Val Val Ala Glu Leu Ile Gly Gly Glu Ala
1 5 10 15

Glu Arg Ser His Ser Pro Arg Ala Asp Tyr Pro Gly Arg Leu Arg Ser
20 25 30

Gly Arg Pro Ala Asp Leu Ala Ala Arg Ala Asp Ser Val Ala Trp Ile
35 40 45

Leu Lys Val Arg Glu Leu Tyr Gly Met Leu Pro Val Thr Ala Tyr Leu
50 55 60

Ala Val Ser Tyr Met Asp Arg Phe Leu Ser Leu His Arg Leu Pro Gly
65 70 75 80

Asn Gly Trp Ala Met Gln Leu Leu Ala Val Thr Cys Leu Ser Leu Ala
85 90 95

Ala Lys Met Glu Glu Thr Leu Val Pro Ser Ile Leu Asp Leu Gln Met
100 105 110

Glu Asp Ala Arg Tyr Ile Phe Glu His Arg Thr Ile Phe Arg Met Glu
115 120 125

Leu Leu Val Leu Asp Ala Leu Asp Trp Arg Leu Arg Ser Ile Thr Pro
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130 135 140

Phe Thr Phe Met Tyr Leu Phe
145 150

<210> 2289
<211> 76
<212> PRT
<213> Oryza sativa

<400> 2289
Ile Arg Glu Leu Leu Ile Gly Ile Pro Pro Pro Val Ala Val Asp Arg
1 5 10 15

Leu Pro Ser Met Tyr Phe Glu Lys Tyr Gly Lys Pro Leu Arg Pro Asp
20 25 30

Gly Trp Leu Thr Glu Ser Gln Gln His Gly Arg Thr Gly Cys Ser Leu
35 40 45

Thr Ser Leu Leu Met Gly Leu Asn Thr Ile Arg Val Val Glu Arg Glu
50 55 60

His Gly Gln Tyr His Val Val Leu Val Glu Asp Ala
65 70 75

<210> 2290
<211> 276
<212> PRT
<213> Zea mays

<400> 2290
Ala Leu Lys Leu Tyr Tyr Arg Val Leu Glu Ser Met Cys Arg Ala Glu
1 5 10 15

Ser Gln Ile Leu Ser Gly Asn Asn Leu Thr Ser Leu Leu Ser Asn Glu
20 25 30

Arg Phe His Arg Cys Met Ile Ala Cys Ser Ala Glu Leu Val Leu Ala
35 40 45

Thr His Lys Thr Val Thr Met Met Phe Pro Ala Val Leu Glu Lys Thr
50 55 60

Gly Ile Thr Ala Phe Asp Leu Ser Lys Val Ile Glu Gly Phe Val Arg
65 70 75 80

His Glu Asp Thr Leu Pro Arg Glu Leu Lys Arg His Leu Asn Ser Leu
85 90 95

Glu Glu Arg Leu Leu Glu Ser Met Ala Trp Glu Lys Gly Ser Ser Met
100 105 110

Tyr Asn Ser Leu Ile Val Ala Arg Pro Ala Leu Ser Val Glu Ile Ser
115 120 125

1005_005_PCT_SL17083606

Arg Leu Gly Leu Leu Ala Glu Pro Met Pro Ser Leu Asp Ala Ile Ala
130 135 140

Ala His His Asn Ile Ser Leu Gly Gly Leu Pro Pro Leu Pro Phe Gln
145 150 155 160

Lys Gln Glu Arg Leu Gln Asp Lys Asp Glu Val Arg Ser Pro Lys Arg
165 170 175

Ala Cys Thr Glu Arg Arg Asn Val Leu Val Asp Ser Asn Ser Leu Arg
180 185 190

Ser Pro Val Lys Asp Ile Ile Lys Pro Lys Leu Pro Pro Leu Gln Ser
195 200 205

Ala Phe Ala Ser Pro Thr Arg Pro Asn Pro Ala Ala Gly Gly Glu Thr
210 215 220

Cys Ala Glu Thr Gly Ile Gly Val Phe Phe Ser Lys Ile Ser Lys Leu
225 230 235 240

Ala Ala Ile Arg Ile Arg Ser Leu Cys Glu Arg Leu Gln Leu Pro Gln
245 250 255

Gln Val Leu Glu Arg Val Tyr Ser Leu Val Gln Gln Ile Leu Ser Gln
260 265 270

Gln Thr Gly Leu
275

<210> 2291

<211> 101

<212> PRT

<213> Zea mays

<400> 2291

Thr Arg Pro Cys Phe Pro Leu Met Leu Trp Lys Pro Val Ala Pro Val
1 5 10 15

Tyr Pro Arg Leu Val Thr Lys Val Pro Gly Gly Leu Thr Pro Asp Glu
20 25 30

Ala Thr Glu Met Arg Thr Arg Gly His Gln Leu Pro Pro Ile Cys Lys
35 40 45

Leu Gly Lys Asn Gly Val Tyr Ala Asn Leu Val Asn Gln Val Arg Glu
50 55 60

Ala Phe Glu Ala Cys Asp Leu Val Arg Val Asp Cys Ser Gly Leu Asn
65 70 75 80

Lys Ser Asp Cys Arg Lys Ile Gly Ala Lys Leu Lys Asp Leu Val Pro
85 90 95

Cys Ile Leu Leu Ser

100

<210> 2292

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2292

Glu Leu Trp Val Arg Gly Pro Ala Val Met Thr Gly Tyr Val Gly Asp
 1 5 10 15

Asn Glu Ala Asn Ala Thr Thr Phe Asn Ser Glu Gly Trp Leu Lys Thr
 20 25 30

Gly Asp Leu Cys Tyr Ile Asp Gln Asp Gly Phe Leu Phe Val Val Asp
 35 40 45

Arg Leu Lys Glu Leu Ile Lys Tyr Lys Ala Tyr Gln Val Pro Pro Ala
 50 55 60

Glu Leu Glu Leu Val Leu His Ser Leu Pro Gln Ile
 65 70 75

<210> 2293

<211> 251

<212> PRT

<213> Solanum lycopersicum

<220>

<221> MOD_RES

<222> (9)..(9)

<223> Any amino acid

<400> 2293

Glu Lys Pro His Glu Ile Val Leu Xaa Pro Ile Lys Asp Ile Ser Gly
 1 5 10 15

Thr Val Lys Leu Pro Gly Ser Lys Ser Leu Ser Asn Arg Ile Leu Leu
 20 25 30

Leu Ala Ala Leu Ser Glu Gly Arg Thr Val Val Asp Asn Leu Leu Ser
 35 40 45

Ser Asp Asp Ile His Tyr Met Leu Gly Ala Leu Lys Thr Leu Gly Leu
 50 55 60

His Val Glu Asp Asp Asn Glu Asn Gln Arg Ala Ile Val Glu Gly Cys
 65 70 75 80

Gly Gly Gln Phe Pro Val Gly Lys Lys Ser Glu Glu Glu Ile Gln Leu
 85 90 95

Phe Leu Gly Asn Ala Gly Thr Ala Met Arg Pro Leu Thr Ala Ala Val
 100 105 110

Thr Val Ala Gly Gly His Ser Arg Tyr Val Leu Asp Gly Val Pro Arg
 115 120 125

Met Arg Glu Arg Pro Ile Gly Asp Leu Val Asp Gly Leu Lys Gln Leu
130 135 140

Gly Ala Glu Val Asp Cys Ser Leu Gly Thr Asn Cys Pro Pro Val Arg
145 150 155 160

Ile Val Ser Lys Gly Gly Leu Pro Gly Gly Lys Val Lys Leu Ser Gly
165 170 175

Ser Ile Ser Ser Gln Tyr Leu Thr Ala Leu Leu Met Ala Ala Pro Leu
180 185 190

Ala Leu Gly Asp Val Glu Ile Glu Ile Ile Asp Lys Leu Ile Ser Val
195 200 205

Pro Tyr Val Glu Met Thr Leu Lys Leu Met Glu Arg Phe Gly Val Phe
210 215 220

Val Glu His Ser Ser Gly Trp Asp Arg Phe Leu Val Lys Gly Gly Gln
225 230 235 240

Lys Tyr Lys Ser Pro Gly Lys Ala Phe Val Glu
245 250

<210> 2294
<211> 251
<212> PRT
<213> Zea mays

<400> 2294
Arg Arg Asn Asn Leu Ala Tyr Leu Leu Lys Arg Ser Glu Leu Ala
1 5 10 15

Pro Ala Asp Leu Val Met Cys Gln Glu Lys Leu Val Gln Glu Ala Val
20 25 30

Asp Thr Leu Leu Asp Ser Gly Ser Arg Gly Gln Pro Thr Arg Asp Gly
35 40 45

His Asn Lys Val Tyr Lys Ser Leu Ser Asp Val Ile Glu Gly Lys Glu
50 55 60

Gly Arg Phe Arg Glu Thr Leu Leu Gly Lys Arg Val Asp Tyr Ser Gly
65 70 75 80

Arg Ser Val Ile Val Val Gly Pro Ser Leu Ser Leu His Gln Cys Gly
85 90 95

Leu Pro Leu Glu Ile Ala Ile Lys Leu Phe Gln Leu Phe Val Ile Arg
100 105 110

Asp Leu Ile Thr Lys Arg Ala Thr Ser Asn Val Arg Ile Ala Lys Arg
115 120 125

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Lys Ile Trp Glu Lys Glu Pro Ile Val Trp Glu Ile Leu Gln Glu Val
130 135 140

Met Arg Gly His Pro Val Leu Leu Asn Arg Ala Pro Thr Leu His Arg
145 150 155 160

Leu Gly Ile Gln Ala Phe Gln Pro Thr Leu Val Glu Gly Arg Thr Ile
165 170 175

Cys Leu His Pro Leu Val Cys Lys Gly Phe Asn Ala Asp Phe Asp Gly
180 185 190

Asp Gln Met Ala Val His Leu Pro Leu Ser Leu Glu Ala Gln Ala Glu
195 200 205

Ala Arg Leu Leu Met Phe Ser His Met Asn Leu Leu Ser Pro Ala Ile
210 215 220

Gly Asp Pro Ile Cys Val Pro Thr Gln Asp Met Leu Ile Gly Leu Tyr
225 230 235 240

Val Leu Thr Ile Gly Asn Arg Leu Gly Ile Cys
245 250

<210> 2295

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 2295

Val Ala Val Ala Leu Ser His Ala Ala Ile Leu Glu Glu Ser Met Arg
1 5 10 15

Ala Arg Asp Leu Leu Ile Glu Gln Asn Val Ala Leu Asp Leu Ala Arg
20 25 30

Arg Glu Ala Glu Thr Ala Val Arg Ala Arg Asn Asp Phe Leu Gly Val
35 40 45

Met Asn His Glu Met Arg Thr Pro Met His Ala Val Val Ala Leu Ser
50 55 60

Ser Leu Leu Gln Glu Ser Glu Leu Ile Pro Glu Gln Arg Leu Met Val
65 70 75 80

Glu Thr Ile Leu Lys Ser Ser Asn Leu Leu Ala Thr Leu Ile Asn Asp
85 90 95

Val Leu Asp Leu Ser Arg Leu Glu Asp Gly Ser Leu Gln Leu Asp Val
100 105 110

Gly Thr Phe Asn Leu His Ala Leu Phe Arg Glu Val Leu Asn Leu Ile
115 120 125

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Lys Pro Val Ala Ala Val Lys Lys Leu Phe Val Thr Leu Ser Leu Ser
130 135 140

Ser Asp Phe Pro Glu Val Ala Ile Gly Asp Glu Lys Arg Leu Met Gln
145 150 155 160

Ile Leu Leu Asn Val Val Gly Asn Ala Val Lys Phe Ser Lys Glu Gly
165 170 175

Ser Val Ser Val Ser Ala Val Asn Ala Lys Ser Glu Ser Leu Ile Asp
180 185 190

Pro Arg Ala Pro Glu Phe Phe Pro Val Gln Ser Glu Asn His Phe Tyr
195 200 205

Leu Arg Val Gln Val Lys Asp Thr Gly Ser Gly Ile Asn Pro Gln Asp
210 215 220

Phe Pro Lys Leu Phe Cys Lys Phe Ala Gln Asn Gln Glu Pro Ala Thr
225 230 235 240

Lys Asn Ser Ala Gly Thr Gly Leu Gly Leu Ala Ile Cys Lys Arg Phe
245 250 255

Val Asn Leu Met Glu Gly His Ile Trp Ile Glu Ser Glu Gly Val Gly
260 265 270

Lys Gly Ser Thr
275

<210> 2296

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2296

Met Pro Leu Gly Gln Arg Ala Gly Asp Lys Ser Glu Ser Arg Tyr Cys
1 5 10 15

Gly Val Glu Val Leu Asp Phe Pro Ala Gly Glu Glu Leu Pro Ala Val
20 25 30

Leu Ser His Ser Leu Ser Ser Ser Phe Asp Phe Leu Leu Ala Pro Leu
35 40 45

Val Asp Pro Asp Tyr Arg Pro Thr Pro Gly Ser Val Leu Pro Val Ala
50 55 60

Ala Ser Asp Leu Val Leu Gly Pro Ala Gln Trp Ser Ser His Ile Val
65 70 75 80

Gly Lys Ile Ser Glu Trp Ile Asp Leu Asp Ala Glu Asp Glu Gln Leu
85 90 95

Arg Leu Asp Ser Glu Ile Thr Leu Lys Gln Glu Ile Ala Trp Ala Ser

100

105

110

His Leu Ser Leu Gln Ala Cys Val Leu Pro Pro Pro Lys Arg
 115 120 125

<210> 2297

<211> 251

<212> PRT

<213> Oryza sativa

<400> 2297

Ile Ile Arg Ser Ile Met Cys Ile Leu Ser Gln Asp Val Asn Gly Leu
 1 5 10 15

Ser Asp Ile Arg Asp Ala Asp Tyr Asp Phe Ser Met Gly Ala Cys Leu
 20 25 30

His Ala Leu His Ser Ser Cys Pro Gly Tyr Ile Val Ala Ile Thr Ala
 35 40 45

Ser Asp Ile Val Asn Val Phe Gln Arg Ala Val His Thr Ser Arg Ser
 50 55 60

Ser Glu Leu Gln Val Ala Met Cys Asn Ala Tyr Lys Arg Ile Val Glu
 65 70 75 80

Leu Cys Ser Pro Arg Val Trp Lys Pro Glu Ile Leu Leu Lys Leu Leu
 85 90 95

Cys Leu Pro Lys Pro Cys Ala Lys Leu Ile Glu Cys Ile Arg Leu Val
 100 105 110

Val Asp Lys Ser Gly Gln Ser Phe Leu Ser Ser Asp Asp Arg Asp Asp
 115 120 125

Gly Ser Ser Leu Leu Ala Lys Ser Glu Gly Leu Asp Leu Pro Lys Val
 130 135 140

Gly Gln Lys Arg Ile Ala Leu Asp Glu Glu Asn Ser Phe Pro Lys Arg
 145 150 155 160

Leu Lys Met Thr Glu Pro Arg Phe Ser Ser Gly Ser Phe Met Val Asp
 165 170 175

Glu Leu Ser Ala Gly Val Gly Gln Glu Leu Glu Lys Asp His Gly Cys
 180 185 190

Asp Phe Arg Val Gln Leu Tyr Ser Leu Ile Asn Cys Leu Ser Pro Asp
 195 200 205

Asn His Met Ala Tyr Pro Leu Glu Pro Ala Ile Ser Ile Gln Val Leu
 210 215 220

Ser Leu Leu Cys Leu Ser Leu Ser Val Tyr Pro Lys Thr Asn Leu Phe
 225 230 235 240

Ser Arg Ile Ser Lys Gln Val Leu Ser Trp Ile
245 250

<210> 2298
<211> 151
<212> PRT
<213> Zea mays

<400> 2298
Glu Met Leu Leu Val Val Lys Lys Ala Thr Gln Glu Ala Gly Ser Lys
1 5 10 15

Phe Glu Leu Leu Gly Phe Ala Ala Val His Asn Phe Tyr His Tyr Pro
20 25 30

Glu Ser Ile Arg Leu Arg Ile Ser Gln Ile Leu Val Leu Pro Pro Tyr
35 40 45

Gln Gly Glu Gly His Gly Leu Gly Leu Leu Glu Ala Ile Asn Tyr Ile
50 55 60

Ala Gln Ser Glu Asn Ile Tyr Asp Val Thr Ile Glu Ser Pro Ser Asp
65 70 75 80

Tyr Leu Gln Tyr Val Arg Ser Ser Ile Asp Cys Leu Arg Leu Leu Met
85 90 95

Phe Asp Pro Ile Lys Pro Ala Leu Gly Ala Ile Val Leu Ser Leu Lys
100 105 110

Glu Thr Asn Leu Ser Lys Arg Ala Gln Ser Leu Arg Met Val Pro Pro
115 120 125

Ala Asp Leu Met Glu Thr Val Arg Gln Lys Leu Lys Ile Asn Lys Lys
130 135 140

Gln Phe Leu Arg Cys Trp Glu
145 150

<210> 2299
<211> 176
<212> PRT
<213> Zea mays

<400> 2299
Asp Leu Lys Ala Glu Asp Lys Thr Lys Ser Trp Arg Lys Leu Val Asn
1 5 10 15

Val Ala Val Ser Gly Ala Ala Gly Met Ile Ser Asn His Leu Leu Phe
20 25 30

Lys Leu Ala Ser Gly Glu Val Phe Gly Gln Asp Gln Pro Ile Ala Leu
35 40 45

Lys Leu Leu Gly Ser Glu Arg Ser Phe Gln Ala Leu Glu Gly Val Ala
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50 55 60
 Met Glu Leu Glu Asp Ser Leu Tyr Pro Leu Leu Arg Glu Val Ser Ile
 65 70 75 80
 Gly Ile Asp Pro Tyr Val Val Phe Gln Asp Val Asp Trp Ala Leu Leu
 85 90 95
 Ile Gly Ala Lys Pro Arg Gly Pro Gly Met Glu Arg Ala Ala Leu Leu
 100 105 110
 Asp Ile Asn Gly Gln Ile Phe Ala Asp Gln Gly Lys Ala Leu Asn Ala
 115 120 125
 Val Ala Ser Arg Asn Asp Glu Val Leu Val Val Gly Asn Pro Cys Asn
 130 135 140
 Thr Asn Ala Leu Ile Cys Leu Lys Asn Ala Pro Asn Ile Pro Ala Lys
 145 150 155 160
 Asn Phe His Ala Leu Thr Arg Leu Asp Glu Asn Arg Ala Lys Cys Gln
 165 170 175
 <210> 2300
 <211> 201
 <212> PRT
 <213> Oryza sativa
 <400> 2300
 Ile Ala Lys Leu Phe Glu Gln Val Gly Leu Gln Lys Ile Leu Ser Leu
 1 5 10 15
 Leu Glu Ser Glu Glu Pro Asp Val Arg Val His Ala Val Lys Val Val
 20 25 30
 Ala Asn Leu Ala Ala Glu Glu Ala Asn Gln Glu Lys Ile Val Glu Ala
 35 40 45
 Gly Gly Leu Thr Ser Leu Leu Met Leu Leu Arg Ser Ser Glu Asp Glu
 50 55 60
 Thr Ile Arg Arg Val Ala Ala Gly Ala Ile Ala Asn Leu Ala Met Asn
 65 70 75 80
 Glu Thr Asn Gln Asp Leu Ile Met Ala Gln Gly Gly Val Ser Leu Leu
 85 90 95
 Ser Met Thr Ala Ser Asp Ala Glu Asp Pro Gln Thr Leu Arg Met Val
 100 105 110
 Ala Gly Ala Ile Ala Asn Leu Cys Gly Asn Asp Lys Leu Gln Thr Arg
 115 120 125
 Leu Arg Gly Glu Gly Gly Ile Lys Ala Leu Leu Gly Met Val Lys Cys
 130 135 140

Gly His Pro Asp Val Leu Ala Gln Val Ala Arg Gly Ile Ala Asn Phe
145 150 155 160

Ala Lys Cys Glu Ser Arg Ala Ala Thr Gln Gly Asn Lys Val Gly Lys
165 170 175

Ser Leu Leu Ile Asp Asp Gly Ala Leu Pro Trp Ile Val Lys Asn Ala
180 185 190

Asn Asn Glu Ala Ala Pro Ile Arg Arg
195 200

<210> 2301
<211> 101
<212> PRT
<213> Zea mays

<400> 2301
Gln Gln Leu Gln Leu Val Asp Val Leu Glu Asn Met Gly Ile Ser Arg
1 5 10 15

His Phe Ala Ala Glu Ile Lys Cys Ile Leu Asp Arg Thr Tyr Arg Ser
20 25 30

Trp Leu Gln Arg His Glu Glu Ile Met Leu Asp Thr Met Thr Cys Ala
35 40 45

Met Ala Phe Arg Ile Leu Arg Leu Asn Gly Tyr Asn Val Ser Ser Asp
50 55 60

Glu Leu Tyr His Val Val Glu Ala Ser Gly Leu His Asn Ser Leu Gly
65 70 75 80

Gly Tyr Leu Asn Asp Thr Arg Thr Leu Leu Glu Leu His Lys Ala Ser
85 90 95

Thr Val Ser Ile Ser
100

<210> 2302
<211> 151
<212> PRT
<213> Zea mays

<400> 2302
Asp Arg Ile Arg Ser Leu Ser Ala Leu Gln Gly Ala Leu Arg Lys Ala
1 5 10 15

Glu Glu His Leu Ser Thr Leu Gln Ala Asp Thr Pro Tyr Ser Glu Phe
20 25 30

His His Arg Phe Gln Glu Leu Gly Leu Glu Lys Gly Trp Gly Asp Cys
35 40 45

Ala Lys Arg Ala Gln Glu Thr Ile His Leu Leu Leu Asp Leu Leu Glu
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50

55

60

Ala Pro Asp Pro Ser Thr Leu Glu Lys Phe Leu Gly Thr Ile Pro Met
65 70 75 80

Val Phe Asn Val Val Ile Leu Ser Pro His Gly Tyr Phe Ala Gln Ala
85 90 95

Asn Val Leu Gly Tyr Pro Asp Thr Gly Gly Gln Val Val Tyr Ile Leu
100 105 110

Asp Gln Val Arg Ala Met Glu Asn Glu Met Leu Leu Arg Ile Lys Gln
115 120 125

Cys Gly Leu Asp Ile Thr Pro Lys Ile Leu Ile Val Thr Arg Leu Leu
130 135 140

Pro Asp Ala Thr Gly Thr Thr
145 150

<210> 2303

<211> 151

<212> PRT

<213> Zea mays

<400> 2303

Ala Leu Lys Leu Tyr Tyr Arg Val Leu Glu Ser Met Cys Arg Ala Glu
1 5 10 15

Ser Gln Ile Leu Ser Gly Asn Asn Leu Thr Ser Leu Leu Ser Asn Glu
20 25 30

Arg Phe His Arg Cys Met Ile Ala Cys Ser Ala Glu Leu Val Leu Ala
35 40 45

Thr His Lys Thr Val Thr Met Met Phe Pro Ala Val Leu Glu Lys Thr
50 55 60

Gly Ile Thr Ala Phe Asp Leu Ser Lys Val Ile Glu Gly Phe Val Arg
65 70 75 80

His Glu Asp Thr Leu Pro Arg Glu Leu Lys Arg His Leu Asn Ser Leu
85 90 95

Glu Glu Arg Leu Leu Glu Ser Met Ala Trp Glu Lys Gly Ser Ser Met
100 105 110

Tyr Asn Ser Leu Ile Val Ala Arg Pro Ala Leu Ser Val Glu Ile Ser
115 120 125

Arg Leu Gly Leu Leu Ala Glu Pro Met Pro Ser Leu Asp Ala Ile Ala
130 135 140

Ala His His Asn Ile Ser Leu
145 150

<210> 2304

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 2304

His Leu Glu Lys Lys Met Phe His Thr Asn Gly Phe Gly Ser Ile Thr
 1 5 10 15

Met Gly Ser Asn Ala Arg Asp Leu Val Ala Leu Thr Asn Glu Val Leu
 20 25 30

Ser Ile Ser Ile Thr Gln Lys Lys Ser Ile Ile Asp Thr Asn Thr Ile
 35 40 45

Arg Ser Ala Leu His Arg Gln Thr Trp Asp Leu Arg Ser Gln Val Arg
 50 55 60

Ser Val Gln Asp His Gly Ile Leu Phe Tyr Gln Ile Gly Arg Ala Val
 65 70 75 80

Ala Gln Asn Val Leu Leu Ser Asn Cys Pro Ile Asp Pro Ile Ser Ile
 85 90 95

Tyr Met Lys Lys Lys Ser Cys Asn Glu Gly Asp Ser Tyr Leu Tyr Lys
 100 105 110

Trp Tyr Phe Glu Leu Gly Thr Ser Met Lys Arg Leu Thr Ile Leu Leu
 115 120 125

Tyr Leu Leu Ser Cys Ser Ala Gly Ser Val Ala Gln Asp Leu Trp Ser
 130 135 140

Leu Ser Val Pro Asp Glu Lys Asn Gly Ile Thr Ser Tyr Gly Leu Val
 145 150 155 160

Glu Asn Asp Ser Asp Leu Val His Gly Leu Leu Glu Val Glu Gly Ala
 165 170 175

Leu Val Gly Ser Ser Arg Thr Glu Lys Asp Cys Ser Gln Phe Asp Asn
 180 185 190

Asp Arg Val Thr Leu Leu Leu Arg Pro
 195 200

<210> 2305

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2305

Cys Gly Val Glu Leu Gln Glu Gln Phe Leu Thr Ala Leu Asp Val Gly
 1 5 10 15

Leu Lys Phe Ser Gly Gly Phe Cys Phe Gly Asp Leu Phe Pro Ser Leu
 Page 1360

20

25

30

Arg Phe Ile Asp Ala Met Thr Gly Leu Arg Ser Arg Leu Trp Arg Ala
 35 40 45

Arg Gly Gln Leu Asp Ser Val Phe Asp Lys Ile Ile Ala Gln Cys Glu
 50 55 60

Glu His Gln Gly Asp Ser Leu Val Asn Val Leu Leu
 65 70 75

<210> 2306

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2306

Ala Gln Ala Leu Cys His Pro Trp Ile Arg Gly Thr Glu Glu Val Lys
 1 5 10 15

Leu Pro Leu Asp Met Ile Ile Tyr Arg Leu Met Arg Ala Tyr Ile Ser
 20 25 30

Ser Ser Ser Leu Arg Arg Ala Ala Leu Arg Ala Leu Ala Lys Thr Leu
 35 40 45

Thr Thr Asp Gln Ile Tyr Tyr Leu Arg Glu Gln Phe Glu Leu Ile Gly
 50 55 60

Pro Asn Lys Ser Asp Leu Ile Thr Leu Gln Asn Leu
 65 70 75

<210> 2307

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2307

Trp Val Ser Gln Pro Ala Arg Arg Leu Val Ser Arg Leu Leu Asp Pro
 1 5 10 15

Asn Pro Asp Thr Arg Val Ala Val Glu Ser Leu Ala Ala His His Pro
 20 25 30

Trp Phe Lys Arg Ser Leu Ser Val Asp Ser Gln Leu Asp Gly Leu Leu
 35 40 45

Asn Gly Glu Pro Glu Arg Ala Val Ala Phe Gln Ala Ala Pro Pro Pro
 50 55 60

Pro Leu Asn Ala Phe Asp Ile Ile Ser Met Ser Pro Gly Leu Asp Leu
 65 70 75 80

Ser Gly Leu Phe Gly Glu His Asp Lys Ser Leu Arg Glu Lys Arg Phe
 85 90 95

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Thr Thr Thr Ala Ser Pro Glu Lys Thr Leu Glu Gln Leu Gly Leu Ala
100 105 110

Gly Gly Lys Leu Gly Tyr Val Val Val Val Gly Lys Lys Gly Val Glu
115 120 125

Cys Leu Pro Leu Ala Gly Gly Arg Leu Ser Ser Gly Ile Ala Ala Met
130 135 140

Ser Val Glu Met Ser Glu Val Ala Pro Pro Leu Leu Leu Val Glu Leu
145 150 155 160

Arg Leu Glu Val Ala Ala Gly Asp Val Asp Gly Gly Asp Gly Glu Val
165 170 175

<210> 2308

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 2308

Leu Pro Val Leu Val Pro Tyr Ile Pro Thr Glu Asn Pro Arg Leu Arg
1 5 10 15

Asp Thr Ala Tyr Glu Val Ala Leu Val Ala Leu Ala Thr Asn Pro Ser
20 25 30

Phe His Lys Asp Leu Leu Ser Thr Val Lys Ser Trp Pro Pro Arg Ile
35 40 45

Tyr Ser Thr Thr Pro Val Phe Ser Ala Ile Glu Pro Gln Ile Asn Thr
50 55 60

Ser Ser Met Thr Asp Pro Leu Lys Glu Ala Leu Ala Glu Leu Tyr Val
65 70 75 80

Ile Asp Gly Gln His Asp Lys Ala Phe Ala Leu Tyr Ala Asp Leu Met
85 90 95

Lys Pro Asp Leu Phe Asp Phe Ile Glu Lys His Asn Leu His Asp Ala
100 105 110

Val Arg Glu Lys Val Leu Gln Leu Met Met Ile Asp Cys Lys Arg Ala
115 120 125

Val Leu Leu Leu Ile Gln Gln Arg Asp Leu Ile Pro Pro Ser Glu Val
130 135 140

Val Ser Gln Leu Ile Ala Ala
145 150

<210> 2309

<211> 176

<212> PRT

<213> Zea mays

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<400> 2309

Leu Gly Pro Pro Arg Phe Asp Asp Arg Glu Ala Ala Asp Arg Val Ala
 1 5 10 15

Ser Pro Gly Val Ser Val Gly Leu Val Trp Thr Ser Val Gly Gly Glu
 20 25 30

Val Gln Phe Val Glu Ala Thr Ala Met Val Gly Lys Gly Asp Leu His
 35 40 45

Leu Thr Gly Gln Leu Gly Asp Val Ile Lys Glu Ser Ala Gln Leu Ala
 50 55 60

Leu Thr Trp Val Arg Ala Arg Ala Ala Asp Leu Asn Leu Ser Pro Thr
 65 70 75 80

Ser Asp Ile Asn Leu Leu Glu Ser Arg Asp Ile His Ile His Phe Pro
 85 90 95

Ala Gly Ala Val Pro Lys Asp Gly Pro Ser Ala Gly Val Thr Leu Val
 100 105 110

Thr Ala Leu Val Ser Leu Phe Ser Asn Arg Lys Val Arg Ala Asp Thr
 115 120 125

Ala Met Thr Gly Glu Met Thr Leu Arg Gly Leu Val Leu Pro Val Gly
 130 135 140

Gly Val Lys Asp Lys Val Leu Ala Ala His Arg Tyr Gly Ile Lys Arg
 145 150 155 160

Val Ile Leu Pro Glu Arg Asn Leu Lys Asp Leu Ser Glu Val Pro Leu
 165 170 175

<210> 2310

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 2310

Pro Ser Leu Asp Lys Ser Glu Ile Leu Thr Val Gly Thr Asp Val Arg
 1 5 10 15

Thr Leu Phe Thr Pro Ser Ser Ser Val Leu Leu Glu Arg Ala Phe Gly
 20 25 30

Ala Arg Glu Ile Thr Leu Leu Asn Pro Ile Trp Ile His Ser Lys Asn
 35 40 45

Ser Gly Lys Pro Phe Tyr Ala Ile Leu His Arg Val Asp Val Gly Ile
 50 55 60

Val Ile Asp Leu Glu Pro Ala Arg Thr Glu Asp Pro Ala Leu Ser Ile
 65 70 75 80

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Ala Gly Ala Val Gln Ser Gln Lys Leu Ala Val Arg Ala Ile Ser His
85 90 95

Leu Gln Ser Leu Pro Gly Gly Asp Ile Lys Leu Leu Cys Asp Thr Val
100 105 110

Val Glu Ser Val Arg Glu Leu Thr Gly Tyr Asp Arg Val Met
115 120 125

<210> 2311

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2311

Asn Phe Arg Ser Arg His Glu Ile Ile Phe Asp Thr Val Trp Ser Leu
1 5 10 15

Leu Ser Leu Leu Arg Thr Gly Asp Arg Glu Ala Tyr Arg Gln Phe Phe
20 25 30

Leu Asp Val Met Val Ala Val Gln Asp Val Leu Tyr Val Val Ala Ser
35 40 45

Met His Gly Asp Arg Pro Ser Gly Val Leu Thr Glu Arg Tyr Leu Val
50 55 60

Lys Cys Leu Cys Gly Ser Phe Ser Asp Ile Leu Asp Ser Pro Gly Ile
65 70 75 80

Phe Ser Asp Leu Pro Asp Ser Cys Gln Pro Lys Asn Gly Pro Gly Val
85 90 95

Leu Val Asp Leu Thr
100

<210> 2312

<211> 226

<212> PRT

<213> Zea mays

<400> 2312

Ser Asp Gly Gly Lys Gly Ile Thr Asp Leu Lys Pro Val Leu Gln Asn
1 5 10 15

Ile Phe Gly Glu Asn Leu Val Glu Lys Glu Glu Phe Leu His Thr Phe
20 25 30

Ser Lys Glu Cys Glu Tyr Ile Arg Thr Ala Val Thr Asn Gly Ser Ala
35 40 45

Ile Lys His Asp Gly Ser Tyr Glu Ser Asp Pro Ala Val Glu Ile Val
50 55 60

Arg Val Glu Leu Gln Gly Ala Ala Ala Phe Leu Tyr Ser Arg Leu Val
65 70 75 80

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Pro Leu Val Leu Leu Leu Val Glu Gly Ser Thr Pro Ile Asp Ile Gly
85 90 95

Glu His Gly Trp Glu Met Leu Leu Val Val Lys Lys Ala Thr Gln Glu
100 105 110

Ala Gly Ser Lys Phe Glu Leu Leu Gly Phe Ala Ala Val His Asn Phe
115 120 125

Tyr His Tyr Pro Glu Ser Ile Arg Leu Arg Ile Ser Gln Ile Leu Val
130 135 140

Leu Pro Pro Tyr Gln Gly Glu Gly His Gly Leu Gly Leu Leu Glu Ala
145 150 155 160

Ile Asn Tyr Ile Ala Gln Ser Glu Asn Ile Tyr Asp Val Thr Ile Glu
165 170 175

Ser Pro Ser Asp Tyr Leu Gln Tyr Val Arg Ser Ser Ile Asp Cys Leu
180 185 190

Arg Leu Leu Met Phe Asp Pro Ile Lys Pro Ala Leu Gly Ala Ile Val
195 200 205

Leu Ser Leu Lys Glu Thr Asn Leu Ser Lys Arg Ala Gln Ser Leu Arg
210 215 220

Met Val
225

<210> 2313
<211> 101
<212> PRT
<213> Zea mays

<400> 2313
Glu Asp Met Glu Ser Asp Pro Ala Ala Ala Arg Glu Lys Glu Leu Glu
1 5 10 15

Leu Glu Arg Val Gln Ser Trp Arg Glu Gln Val Thr Leu Arg Gly Val
20 25 30

Val Ala Ala Leu Leu Ile Gly Phe Met Tyr Ser Val Ile Val Met Lys
35 40 45

Ile Ala Leu Thr Thr Gly Leu Val Pro Thr Leu Asn Val Ser Ala Ala
50 55 60

Leu Met Ala Phe Leu Ala Leu Arg Gly Trp Thr Arg Val Leu Glu Arg
65 70 75 80

Leu Gly Val Ala His Arg Pro Phe Thr Arg Gln Glu Asn Cys Val Ile
85 90 95

Glu Thr Cys Ala Val
100

<210> 2314
<211> 151
<212> PRT
<213> Oryza sativa

<400> 2314
Gly Ile Val Ala Gly Gly Ala Pro Asp Pro Asp Asp Tyr Asp Ala Asp
1 5 10 15

Val Pro Leu Asn Asp Glu Ala Arg Gln Pro Leu Ser Arg Lys Val Ser
20 25 30

Ile Ala Ser Ser Lys Val Asn Pro Tyr Arg Met Val Ile Ile Leu Arg
35 40 45

Leu Val Val Leu Gly Phe Phe Leu Arg Tyr Arg Ile Leu His Pro Val
50 55 60

Pro Asp Ala Ile Pro Leu Trp Leu Thr Ser Ile Ile Cys Glu Ile Trp
65 70 75 80

Phe Ala Val Ser Trp Ile Leu Asp Gln Phe Pro Lys Trp Tyr Pro Ile
85 90 95

Asp Arg Glu Thr Tyr Leu Asp Arg Leu Ser Leu Arg Tyr Glu Arg Glu
100 105 110

Gly Glu Pro Ser Leu Leu Ser Ala Val Asp Leu Phe Val Ser Thr Val
115 120 125

Asp Pro Leu Lys Glu Pro Pro Leu Val Thr Ala Asn Thr Val Leu Ser
130 135 140

Ile Leu Ala Val Asp Tyr Pro
145 150

<210> 2315
<211> 176
<212> PRT
<213> Oryza sativa

<400> 2315
Val Ile Gln Val Ala Thr Ser Gly Glu Val Val Gly Glu Ile Gly Val
1 5 10 15

Leu Cys Tyr Arg Pro Gln Leu Phe Thr Val Arg Thr Arg Ser Leu Cys
20 25 30

Gln Leu Leu Arg Leu Asn Arg Thr Ala Phe Leu Ser Ile Val Gln Ser
35 40 45

Asn Val Gly Asp Gly Thr Ile Ile Met Asn Asn Leu Ile Gln Phe Leu
50 55 60

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Lys Glu Gln Lys Glu Asn Ser Val Met Ala Gly Val Val Lys Glu Ile
65 70 75 80

Glu Ser Met Leu Ala Arg Gly Asn Leu Asp Leu Pro Ile Thr Leu Cys
85 90 95

Phe Ala Val Thr Arg Gly Asp Asp Phe Leu Leu His Gln Leu Leu Lys
100 105 110

Arg Gly Met Asp Pro Asn Glu Ser Asp Asn Asp Gly His Thr Ala Leu
115 120 125

His Ile Ala Ala Ser Lys Gly Asn Glu Gln Cys Val Arg Leu Leu Leu
130 135 140

Glu Tyr Gly Ala Asp Pro Asn Ala Arg Asp Ser Glu Gly Lys Val Pro
145 150 155 160

Leu Trp Glu Ala Leu Cys Glu Lys His Ala Ala Val Val Gln Leu Leu
165 170 175

<210> 2316

<211> 251

<212> PRT

<213> Oryza sativa

<400> 2316

Thr Lys Cys Ser Arg Ala Ser Asp Gly Val Ile Ser Pro Lys Lys Glu
1 5 10 15

Leu Ile Tyr Asp Ile Asp Ala Ser Asp Ser His Asn Glu Leu Ala Val
20 25 30

Val Asp Tyr Val Glu Asp Ile Tyr Arg Phe Tyr Arg Asn Thr Glu Asn
35 40 45

Thr Tyr Arg Pro Leu Cys Thr Tyr Met Val Ser Gln Thr Glu Ile Asn
50 55 60

Glu Arg Met Arg Ala Ile Leu Thr Asp Trp Leu Ile Glu Val His Tyr
65 70 75 80

Arg Leu Met Leu Met Pro Glu Thr Leu Tyr Leu Thr Val Tyr Ile Ile
85 90 95

Asp Gln Tyr Leu Ser Leu Glu Asn Val Pro Arg Lys Glu Leu Gln Leu
100 105 110

Val Gly Val Ser Ala Met Leu Ile Ala Cys Lys Tyr Glu Glu Thr Trp
115 120 125

Ala Pro Leu Val Lys Asp Phe Leu Val Ile Ser Asp Asn Ser Phe Ser
130 135 140

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Arg Gln Gln Val Leu Ser Thr Glu Lys Ser Ile Leu Asn Lys Leu Gln
145 150 155 160

Trp Asn Leu Thr Val Pro Thr Met Tyr Met Phe Ile Leu Arg Tyr Leu
165 170 175

Lys Ala Ala Leu Gly Asp Glu Glu Leu Glu His Met Thr Phe Phe Tyr
180 185 190

Ala Glu Leu Ala Leu Val Gln Tyr Ser Met Leu Phe Phe Ala Pro Ser
195 200 205

Val Ile Ala Ala Ala Ala Val Tyr Ala Ala Arg Cys Thr Leu Gly Leu
210 215 220

Ser Pro Leu Trp Ser Asp Leu Leu Glu Tyr His Thr Gly Leu Ala Glu
225 230 235 240

Pro Gln Leu Leu Glu Cys Ala Arg Arg Leu Val
245 250

<210> 2317

<211> 151

<212> PRT

<213> Zea mays

<400> 2317

Leu Asn Phe Leu Lys Ala His Asn Tyr Lys Gly Thr Thr Met Met Leu
1 5 10 15

Asn Asp Arg Ile Gln Ser Leu Arg Gly Leu Gln Ser Ser Leu Arg Lys
20 25 30

Ala Glu Glu Tyr Leu Leu Ser Val Pro Gln Asp Thr Pro Tyr Ser Glu
35 40 45

Phe Asn His Arg Phe Gln Glu Leu Gly Leu Glu Lys Gly Trp Gly Asp
50 55 60

Thr Ala Lys Arg Val Leu Asp Thr Leu His Leu Leu Leu Asp Leu Leu
65 70 75 80

Glu Ala Pro Asp Pro Ala Asn Leu Glu Lys Phe Leu Gly Thr Ile Pro
85 90 95

Met Met Phe Asn Val Val Ile Leu Ser Pro His Gly Tyr Phe Ala Gln
100 105 110

Ser Asn Val Leu Gly Tyr Pro Asp Thr Gly Gly Gln Val Val Tyr Ile
115 120 125

Leu Asp Gln Val Arg Ala Leu Glu Asn Glu Met Leu Leu Arg Ile Lys
130 135 140

Gln Gln Gly Leu Asp Ile Thr

145

150

<210> 2318

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 2318

Lys Ser Cys Asn Glu Gly Asp Ser Tyr Leu Tyr Lys Trp Tyr Phe Glu
 1 5 10 15

Leu Gly Thr Ser Met Lys Arg Leu Thr Ile Leu Leu Tyr Leu Leu Ser
 20 25 30

Cys Ser Ala Gly Ser Val Ala Gln Asp Leu Trp Ser Leu Ser Val Pro
 35 40 45

Asp Glu Lys Asn Gly Ile Thr Ser Tyr Gly Leu Val Glu Asn Asp Ser
 50 55 60

Asp Leu Val His Gly Leu Leu Glu Val Glu Gly Ala
 65 70 75

<210> 2319

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2319

Phe Ala Ala Lys Ile Ser Leu Trp Thr Leu Arg Lys Phe Arg Gly Gly
 1 5 10 15

Lys Pro Asn Arg Glu Ser Arg Ala Ala Leu Arg Ala Leu Asp Val Val
 20 25 30

Leu Lys Glu Leu Pro Thr Ala Arg Tyr Thr Gln Phe Ala Gly Ser Phe
 35 40 45

Tyr Ser Pro Asn Leu Gly Glu Cys Arg Gln Leu Cys Lys Val Leu Glu
 50 55 60

Ser Trp Arg Gly Phe His Gln Arg Ile Gln Ala Thr Gln Met Gly Leu
 65 70 75 80

Gln Leu Asn Ile Asp Val Ser Ser Ser Val Phe Ile Lys Pro Val Pro
 85 90 95

Val Val Asp Tyr Val Ala Gln Leu Leu Asn Glu Asp Ile Leu Leu Asp
 100 105 110

Arg Pro Leu Cys Ser Thr Glu Phe Leu Lys Ile Lys Glu Ala Leu Glu
 115 120 125

Gly Leu Lys Val Gln Ile Asn Gly Ile Leu Phe Asn Thr Tyr His Val
 130 135 140

Gln Asp Leu Val His Gln Ala
145 150

<210> 2320
<211> 201
<212> PRT
<213> Oryza sativa

<400> 2320
Ser Tyr Ala Ser Glu Ile Tyr Thr Asn Leu Met Ala Ser Glu Leu Ile
1 5 10 15

Arg Arg Pro Arg Ser Asn Tyr Met Glu Ala Leu Gln Arg Asp Ile Thr
20 25 30

Lys Gly Met Arg Gly Ile Leu Ile Asp Trp Leu Val Glu Val Ser Glu
35 40 45

Glu Tyr Lys Leu Val Pro Asp Thr Leu Tyr Leu Thr Ile Asn Leu Ile
50 55 60

Asp Arg Phe Leu Ser Gln His Tyr Ile Glu Arg Gln Lys Leu Gln Leu
65 70 75 80

Leu Gly Ile Thr Ser Met Leu Ile Ala Ser Lys Tyr Glu Glu Ile Cys
85 90 95

Ala Pro Arg Val Glu Glu Phe Cys Phe Ile Thr Asp Asn Thr Tyr Thr
100 105 110

Lys Ala Glu Val Leu Lys Met Glu Gly Leu Val Leu Asn Asp Met Gly
115 120 125

Phe His Leu Ser Val Pro Thr Thr Lys Thr Phe Leu Arg Arg Phe Leu
130 135 140

Arg Ala Ala Gln Ala Ser Arg Asn Val Pro Ser Ile Thr Leu Gly Tyr
145 150 155 160

Leu Ala Asn Tyr Leu Ala Glu Leu Thr Leu Ile Asp Tyr Ser Phe Leu
165 170 175

Lys Phe Leu Pro Ser Val Val Ala Ala Ser Ala Val Phe Leu Ala Arg
180 185 190

Trp Thr Leu Asp Gln Ser Asp Ile Pro
195 200

<210> 2321
<211> 276
<212> PRT
<213> Oryza sativa

<400> 2321
His Ile Ser Leu Lys Tyr Arg Thr Asp Ser Glu Gly Leu Gln Gln Gln
1 5 10 15

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Glu Ile Leu Asp Ser Leu Pro Lys Ala Ile Lys Ser Ser Ile Ser Gln
20 25 30

Tyr Leu Phe Phe His Leu Val Gln Asn Val Tyr Leu Phe Gln Gly Val
35 40 45

Ser Asn Asp Leu Ile Phe Gln Leu Val Ser Glu Met Lys Ala Glu Tyr
50 55 60

Phe Pro Pro Arg Glu Asp Val Ile Leu Gln Asn Glu Ala Pro Thr Asp
65 70 75 80

Phe Tyr Ile Leu Val Ser Gly Ser Val Glu Leu Val Glu Gln Gln Asn
85 90 95

Gly Ala Asp Gln Val Ile Gln Val Ala Thr Ser Gly Glu Val Val Gly
100 105 110

Glu Ile Gly Val Leu Cys Tyr Arg Pro Gln Leu Phe Thr Val Arg Thr
115 120 125

Arg Ser Leu Cys Gln Leu Leu Arg Leu Asn Arg Thr Ala Phe Leu Ser
130 135 140

Ile Val Gln Ser Asn Val Gly Asp Gly Thr Ile Ile Met Asn Asn Leu
145 150 155 160

Ile Gln Phe Leu Lys Glu Gln Lys Glu Asn Ser Val Met Ala Gly Val
165 170 175

Val Lys Glu Ile Glu Ser Met Leu Ala Arg Gly Asn Leu Asp Leu Pro
180 185 190

Ile Thr Leu Cys Phe Ala Val Thr Arg Gly Asp Asp Phe Leu Leu His
195 200 205

Gln Leu Leu Lys Arg Gly Met Asp Pro Asn Glu Ser Asp Asn Asp Gly
210 215 220

His Thr Ala Leu His Ile Ala Ala Ser Lys Gly Asn Glu Gln Cys Val
225 230 235 240

Arg Leu Leu Leu Glu Tyr Gly Ala Asp Pro Asn Ala Arg Asp Ser Glu
245 250 255

Gly Lys Val Pro Leu Trp Glu Ala Leu Cys Glu Lys His Ala Ala Val
260 265 270

Val Gln Leu Leu
275

<210> 2322

<211> 101

<212> PRT

<213> Zea mays

<400> 2322

Met Ser Asn Val Phe Leu Pro Gly Glu Leu Ile Gly Leu Leu Arg Ala
 1 5 10 15

Glu Arg Ala Gly Arg Ala Leu Asp Glu Ser Ile Tyr Tyr Arg Ala Ile
 20 25 30

Leu Leu Gly Ile Thr Arg Ala Ser Leu Asn Thr Gln Ser Phe Ile Ser
 35 40 45

Glu Ala Ser Phe Gln Glu Thr Ala Arg Val Leu Ala Lys Ala Ala Leu
 50 55 60

Arg Gly Arg Ile Asp Trp Leu Lys Gly Leu Lys Glu Asn Val Val Leu
 65 70 75 80

Gly Gly Ile Ile Pro Val Gly Thr Gly Phe Gln Lys Phe Val His Arg
 85 90 95

Ser Pro Gln Asp Lys
 100

<210> 2323

<211> 251

<212> PRT

<213> Zea mays

<400> 2323

Val Leu Pro Pro Trp Val Ala Leu Ala Ile Arg Pro Arg Pro Gly Val
 1 5 10 15

Trp Asp Tyr Ile Arg Val Asn Val Ser Glu Leu Ala Val Glu Glu Leu
 20 25 30

Ser Val Ser Glu Tyr Leu Ala Phe Lys Glu Gln Leu Val Asp Gly Gln
 35 40 45

Ser Asn Ser Asn Phe Val Leu Glu Leu Asp Phe Glu Pro Phe Asn Ala
 50 55 60

Ser Phe Pro Arg Pro Ser Met Ser Lys Ser Ile Gly Asn Gly Val Gln
 65 70 75 80

Phe Leu Asn Arg His Leu Ser Ser Lys Leu Phe Gln Asp Lys Glu Ser
 85 90 95

Leu Tyr Pro Leu Leu Asn Phe Leu Lys Ala His Asn Tyr Lys Gly Thr
 100 105 110

Thr Met Met Leu Asn Asp Arg Ile Gln Ser Leu Arg Gly Leu Gln Ser
 115 120 125

Ser Leu Arg Lys Ala Glu Glu Tyr Leu Leu Ser Val Pro Gln Asp Thr

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130				135				140							
Pro 145	Tyr	Ser	Glu	Phe	Asn 150	His	Arg	Phe	Gln	Glu 155	Leu	Gly	Leu	Glu	Lys 160
Gly	Trp	Gly	Asp	Thr 165	Ala	Lys	Arg	Val	Leu 170	Asp	Thr	Leu	His	Leu 175	Leu
Leu	Asp	Leu	Leu 180	Glu	Ala	Pro	Asp	Pro 185	Ala	Asn	Leu	Glu	Lys 190	Phe	Leu
Gly	Thr	Ile 195	Pro	Met	Met	Phe	Asn 200	Val	Val	Ile	Leu	Ser 205	Pro	His	Gly
Tyr	Phe 210	Ala	Gln	Ser	Asn	Val 215	Leu	Gly	Tyr	Pro	Asp 220	Thr	Gly	Gly	Gln
Val 225	Val	Tyr	Ile	Leu	Asp 230	Gln	Val	Arg	Ala	Leu 235	Glu	Asn	Glu	Met	Leu 240
Leu	Arg	Ile	Lys	Gln 245	Gln	Gly	Leu	Asp	Ile 250	Thr					

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<210> 2325
<211> 126
<212> PRT
<213> Oryza sativa
<400> 2325
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Val Arg Glu Tyr Ala Ala Arg Asn Phe Cys Tyr Asp Leu Gly Phe Met
1 5 10 15

Cys Arg Glu Ser Gly Met Val Phe Ser Val Lys Pro Val Leu Pro Leu
20 25 30

Val Ile Ala Lys Pro Gly Cys Val Glu Ser Ala Leu Arg Thr Leu His
35 40 45

Asp Asp Val Met Asp Ile Leu Arg Pro Gln Gly Arg Lys Leu Asp Leu
50 55 60

Leu Ile Val Ile Leu Pro Asn Asn Asn Gly Ser Leu Tyr Gly Asp Val
65 70 75 80

Lys Arg Ile Cys Glu Thr Asp Ile Gly Leu Ile Ser Gln Cys Cys Leu
85 90 95

Ala Lys His Val Leu Lys Met Asn Lys Trp Tyr Leu Ala Ser Val Ala
100 105 110

Leu Lys Ile Asn Ala Lys Met Gly Gly Arg Asn Thr Val Leu
115 120 125

<210> 2326

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2326

Asp Leu Val Thr Ile Ala Ser Asp Thr Ser Phe Tyr Ile Leu Lys Tyr
1 5 10 15

Asn Arg Asp Val Val Ser Ser His Leu Asp Gly Gly Gly Ser Val Gly
20 25 30

Glu Glu Gly Val Glu Asp Ala Phe Glu Leu Leu His Glu Ile Asn Glu
35 40 45

Arg Ile Arg Thr Gly Leu Trp Val Gly Asp Cys Phe Ile Tyr Asn Asn
50 55 60

Ser Ser Ser Arg Leu Asn Tyr Cys Val Gly Gly Glu Val Thr Thr Leu
65 70 75 80

Phe His Leu Asp Arg Gln Met Tyr Leu Leu Gly Tyr Leu Ala Asn Gln
85 90 95

Ser Arg Val Tyr Leu Ile Asp Lys Gln Phe Asn Val Val Gly Tyr Thr
100 105 110

Leu Leu Leu Thr Met Ile Glu Tyr Lys Thr Leu Val Met Arg
115 120 125

<210> 2327

<211> 126

<212> PRT

<213> *Oryza sativa*

<400> 2327

Asp Leu Val Thr Ile Ala Ser Asp Thr Ser Phe Tyr Ile Leu Lys Tyr
 1 5 10 15

Asn Arg Asp Val Val Ser Ser His Leu Asp Gly Gly Gly Ser Val Gly
 20 25 30

Glu Glu Gly Val Glu Asp Ala Phe Glu Leu Leu His Glu Ile Asn Glu
 35 40 45

Arg Ile Arg Thr Gly Leu Trp Val Gly Asp Cys Phe Ile Tyr Asn Asn
 50 55 60

Ser Ser Ser Arg Leu Asn Tyr Cys Val Gly Gly Glu Val Thr Thr Leu
 65 70 75 80

Phe His Leu Asp Arg Gln Met Tyr Leu Leu Gly Tyr Leu Ala Asn Gln
 85 90 95

Ser Arg Val Tyr Leu Ile Asp Lys Gln Phe Asn Val Val Gly Tyr Thr
 100 105 110

Leu Leu Leu Thr Met Ile Glu Tyr Lys Thr Leu Val Met Arg
 115 120 125

<210> 2328

<211> 76

<212> PRT

<213> *Zea mays*

<400> 2328

Ala Trp Leu Gly Gly Gln Leu Phe Ser Ala Met Val Val Arg Arg Pro
 1 5 10 15

Ala His Leu Phe Leu Asp Glu Leu Gly Val Gly Tyr Asp Glu Ala Glu
 20 25 30

Asp Tyr Val Val Val Lys His Ala Ala Leu Phe Thr Ser Thr Val Met
 35 40 45

Ser Arg Leu Leu Ala Arg Pro Asn Val Lys Leu Phe Asn Ala Val Ala
 50 55 60

Val Glu Asp Leu Ile Val Arg Arg Gly Arg Val Gly
 65 70 75

<210> 2329

<211> 101

<212> PRT

<213> *Solanum lycopersicum*

<400> 2329

Leu Gln Lys Cys Ile Ala Leu Thr Glu Glu Thr Thr Lys Gly Asn Lys
 1 5 10 15

Gly Leu His Leu Val Ile Ala Leu Asn Tyr Gly Gly Tyr Tyr Asp Ile
20 25 30
Leu Gln Ala Thr Lys Ser Ile Val Asn Lys Ala Met Asn Gly Leu Leu
35 40 45
Asp Val Glu Asp Ile Asn Lys Asn Leu Phe Asp Gln Glu Leu Glu Ser
50 55 60
Lys Cys Pro Asn Pro Asp Leu Leu Ile Arg Thr Gly Gly Glu Gln Arg
65 70 75 80
Val Ser Asn Phe Leu Leu Trp Gln Leu Ala Tyr Thr Glu Phe Tyr Phe
85 90 95
Thr Asn Thr Leu Phe
100

<210> 2330
<211> 76
<212> PRT
<213> Zea mays

<400> 2330
Gln Val Ala Ile Arg Glu Val Leu Arg Pro Lys Met Phe Lys Leu Trp
1 5 10 15
Lys Ser Ala Val Asp Ser Ser Leu Ala Leu Leu Leu Asp Asp Ala Glu
20 25 30
Ala Asn Asn Leu Thr Pro Asp Ser Leu Leu Thr Leu Val Glu Glu Phe
35 40 45
Ser Val Thr Ser Gln Ala Val Glu His Ser Phe Pro Ala Leu Leu Val
50 55 60
Thr Asn Gly Asp Ala Ser Thr Asp Ser Leu Ser Ala
65 70 75

<210> 2331
<211> 101
<212> PRT
<213> Oryza sativa

<400> 2331
Met Asp Glu Ala Trp Glu Arg Ala Val Glu Ala Ala Leu Gln Ala Ala
1 5 10 15
Gly Glu Gly Ser Ser Ser Pro Ala Arg Ser Leu Thr Leu Asp Gly Ala
20 25 30
Val Lys Cys Leu His Gly Arg Leu Pro Ala Ala Glu Ile Leu Glu Arg
35 40 45
Tyr Gln Ser Leu Glu His Leu Ser Ile Ala Gly Val Gly Val Ala Ser

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Glu Ile Thr Ala Val Thr Phe Arg Gly Pro Ser Glu Ser His Leu Asp
20 25 30

Ser Leu Val Gly Gln Ala Leu Phe Gly Asp Gly Ala Ala Ala Ile Ile
35 40 45

Ile Gly Ser Asp Pro Ile Ile Gly Val Glu Arg Pro Leu Phe Glu Leu
50 55 60

Val Ser Ala Ala Gln Thr Leu Val Pro Asp Ser Glu Gly Ala Ile Asp
65 70 75 80

Gly His Leu Arg Glu Val Gly Leu Thr Phe His Leu Leu Lys Asp Val
85 90 95

Pro Gly Leu Ile Ser Lys Asn Ile Glu Lys Ser Leu Leu Glu Ala Phe
100 105 110

Gln Pro Leu Gly Ile Ser Asp Trp Asn Ser Leu Phe Trp Ile Ala His
115 120 125

Pro Gly Gly Pro Ala Ile Leu Asp Gln Val Glu Leu Lys Leu Gly Leu
130 135 140

Lys Pro Glu Lys Leu Arg Ala Thr Arg Glu Val Leu Ser Asn Tyr Gly
145 150 155 160

Asn Met Ser Ser Ala Cys Val Leu Phe Ile Leu Asp Glu Met Arg Lys
165 170 175

<210> 2334

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 2334

Leu Glu Asp Asp Ile Tyr Asn Asn Ser Ala Trp Asn Gln Arg Tyr Phe
1 5 10 15

Val Val Thr Arg Ser Pro Leu Leu Gly Gly Leu Val Ala Met Arg Glu
20 25 30

Leu Glu Val Asn Tyr Thr Val Gln Ala Ile Arg Ala Ser Pro Glu Asn
35 40 45

Glu Ser Pro Trp Arg Tyr Leu Arg Gly Leu Tyr Lys Asn Asp Thr Gln
50 55 60

Ser Leu Val Gln Asp Ser Gln Val Ala Ser Val Leu Trp Asp Val Leu
65 70 75 80

Thr Ser Gln Asn Ser His Val His Ala Leu Arg Phe Leu Leu Asp Leu
85 90 95

Leu Cys His Asp Leu

100

<210> 2335

<211> 151

<212> PRT

<213> Solanum lycopersicum

<400> 2335

Asp Ser Val Arg Gln Arg Phe Leu Ser Ile Leu Glu Gln Leu Gly Leu
 1 5 10 15

Glu Pro Gln Arg Val Asp Leu Leu Pro Leu Ile Leu Leu Asn His Asp
 20 25 30

His Met Gln Ala Tyr Ser Leu Met Asp Ile Ser Leu Asp Thr Phe Pro
 35 40 45

Tyr Ala Gly Thr Thr Thr Thr Cys Glu Ser Leu Tyr Met Gly Val Pro
 50 55 60

Cys Val Thr Met Gly Gly Ser Val His Ala His Asn Val Gly Val Ser
 65 70 75 80

Leu Leu Lys Thr Val Gly Leu Glu Asn Leu Val Ala Arg Asn Glu Asp
 85 90 95

Glu Tyr Val Glu Ser Ala Ile Gln Leu Ala Ser Asp Val Thr Ser Leu
 100 105 110

Ser Asn Leu Arg Met Ser Leu Arg Glu Leu Met Ser Lys Ser Pro Leu
 115 120 125

Cys Asp Gly Ala Lys Phe Thr Arg Asn Ile Glu Ser Ile Tyr Arg Ser
 130 135 140

Met Trp Arg Arg Tyr Cys Asp
 145 150

<210> 2336

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2336

Pro Ser Ala Gly Ile Ser Asp Phe Arg Asp Leu Leu Met Asp Ser Ile
 1 5 10 15

Ser Pro Asp Asn Phe Glu Gly Leu Ile Leu Ile Tyr Pro Leu Leu Arg
 20 25 30

His Lys Trp Asp Thr Asn Thr Ser Val Val Leu Pro Asp Ser Gly Ser
 35 40 45

Thr Asp Gln Val Met Tyr Ala Val Gly Ile Leu Arg Ser Ala Asn Pro
 50 55 60

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Asp Asp Gly Cys Ser His His Cys Leu Gln Glu Leu
65 70 75

<210> 2337

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2337

Leu Pro Leu Ser Gln Leu Leu Glu Gln Arg Pro Gly Pro Arg Asp Val
1 5 10 15

Met Gln Gly Leu Asp Val Ile Val Arg Glu Ala Ser Ser Phe Gly Lys
20 25 30

Ile Val Leu Gly Gln Gly Phe Tyr Pro Gln Ser Gly Ser Glu Ala Ile
35 40 45

Ser Asp Ser Asn Ile Val Ala Leu Lys Gly Thr Gln Gln Ser Leu Lys
50 55 60

Cys Thr Gln Lys Gly Leu Ile Leu Cys Val Asp Tyr Ser Val Leu Pro
65 70 75 80

Cys Trp Lys Ala Gly Ser Val Leu Asp Leu Val Lys Thr Met Lys Phe
85 90 95

Met Glu Tyr Pro Leu Leu Glu Asp Gln Leu Lys Lys Leu Asn Asn Ala
100 105 110

Leu Lys Gly Leu Cys Val Thr Val Ser His Arg Lys Thr Glu
115 120 125

<210> 2338

<211> 176

<212> PRT

<213> Zea mays

<400> 2338

Leu Glu Ser Met Ala Trp Glu Lys Gly Ser Ser Met Tyr Asn Ser Leu
1 5 10 15

Ile Val Ala Arg Pro Ala Leu Ser Val Glu Ile Ser Arg Leu Gly Leu
20 25 30

Leu Ala Glu Pro Met Pro Ser Leu Asp Ala Ile Ala Ala His His Asn
35 40 45

Ile Ser Leu Gly Gly Leu Pro Pro Leu Pro Phe Gln Lys Gln Glu Arg
50 55 60

Leu Gln Asp Lys Asp Glu Val Arg Ser Pro Lys Arg Ala Cys Thr Glu
65 70 75 80

Arg Arg Asn Val Leu Val Asp Ser Asn Ser Leu Arg Ser Pro Val Lys
85 90 95

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Asp Ile Ile Lys Pro Lys Leu Pro Pro Leu Gln Ser Ala Phe Ala Ser
100 105 110

Pro Thr Arg Pro Asn Pro Ala Ala Gly Gly Glu Thr Cys Ala Glu Thr
115 120 125

Gly Ile Gly Val Phe Phe Ser Lys Ile Ser Lys Leu Ala Ala Ile Arg
130 135 140

Ile Arg Ser Leu Cys Glu Arg Leu Gln Leu Pro Gln Gln Val Leu Glu
145 150 155 160

Arg Val Tyr Ser Leu Val Gln Gln Ile Leu Ser Gln Gln Thr Gly Leu
165 170 175

<210> 2339

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2339

Arg Val Gln Arg Trp Val Val Val Asn Phe Ser Ala Gln Cys Asn Ala
1 5 10 15

His His Leu Ala Gln Arg Leu Ile His Cys Gly Asn Leu Lys Gly Leu
20 25 30

Pro Val Asp Pro Glu Asp His Val Phe Gln Glu Arg Ser His Met Gly
35 40 45

Arg Glu Arg Ala Glu Thr Arg Val Asn Asp Met Phe Gln Gln Leu Leu
50 55 60

Ser Gly Asp Lys Pro Ser Phe Val Leu Cys Val Leu Pro Glu Arg Lys
65 70 75 80

Asn Cys Asp Ile Tyr Gly Pro Trp Lys Arg Met Cys Leu Val Lys Tyr
85 90 95

Gly Ile Val Thr Gln Cys Leu Ala Pro Thr Lys Ile Asn Asp Gln Tyr
100 105 110

Leu Thr Asn Val Leu Leu Lys Ile Asn Ala Lys Leu Gly Gly Leu Asn
115 120 125

Ser Leu Leu Gln Ile Glu Arg Asn Gln Ala Ile Pro Leu Leu Ser Lys
130 135 140

Thr Pro Thr Ile Ile Leu Gly
145 150

<210> 2340

<211> 101

<212> PRT

<213> Zea mays

<400> 2340

Ala Thr Gly Cys Val Met Ala Arg Ile Cys His Thr Asn Asn Cys Pro
 1 5 10 15

Val Gly Val Ala Ser Gln Arg Glu Glu Leu Arg Ala Arg Phe Pro Gly
 20 25 30

Val Pro Gly Asp Leu Val Asn Tyr Phe Leu Phe Val Ala Glu Glu Val
 35 40 45

Arg Ala Ala Leu Ala Gln Leu Gly Tyr Glu Lys Leu Asp Asp Ile Ile
 50 55 60

Gly Arg Thr Asp Leu Leu Lys Pro Lys His Ile Ser Leu Val Lys Thr
 65 70 75 80

Gln His Ile Asp Leu Gly Tyr Leu Leu Ser Asn Ala Gly Leu Pro Glu
 85 90 95

Trp Ser Ser Ser Gln
 100

<210> 2341

<211> 251

<212> PRT

<213> Solanum lycopersicum

<400> 2341

Ile Leu Lys Glu Asn Pro Asn Met Cys Ala Tyr Met Ala Pro Ser Leu
 1 5 10 15

Asp Ala Arg Gln Asp Ile Val Val Val Glu Val Pro Lys Leu Gly Lys
 20 25 30

Arg Gly Thr Gln Lys Ala Ile Lys Glu Trp Gly Gln Pro Lys Ser Lys
 35 40 45

Ile Thr His Leu Val Phe Cys Thr Thr Ser Gly Val Asp Met Pro Ala
 50 55 60

Cys Asp Tyr Gln Leu Ala Lys Leu Leu Pro Val Arg Pro Ser Val Lys
 65 70 75 80

Arg Leu Met Met Tyr Gln Gln Gly Cys Phe Ala Gly Gly Thr Val Leu
 85 90 95

Arg Leu Ala Lys Asp Leu Ala Glu Asn Asn Lys Gly Ala Arg Val Leu
 100 105 110

Val Val Cys Ser Glu Ile Thr Ala Val Thr Phe Arg Gly Pro Ser Glu
 115 120 125

Ser His Leu Asp Ser Leu Val Gly Gln Ala Leu Phe Gly Asp Gly Ala
 130 135 140

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Ala Ala Ile Ile Ile Gly Ser Asp Pro Ile Ile Gly Val Glu Arg Pro
145 150 155 160

Leu Phe Glu Leu Val Ser Ala Ala Gln Thr Leu Val Pro Asp Ser Glu
165 170 175

Gly Ala Ile Asp Gly His Leu Arg Glu Val Gly Leu Thr Phe His Leu
180 185 190

Leu Lys Asp Val Pro Gly Leu Ile Ser Lys Asn Ile Glu Lys Ser Leu
195 200 205

Leu Glu Ala Phe Gln Pro Leu Gly Ile Ser Asp Trp Asn Ser Leu Phe
210 215 220

Trp Ile Ala His Pro Gly Gly Pro Ala Ile Leu Asp Gln Val Glu Leu
225 230 235 240

Lys Leu Gly Leu Lys Pro Glu Lys Leu Arg Ala
245 250

<210> 2342

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2342

Gly Gly Gly Asp Val Asp Leu Arg Val Arg Ser Glu Ala Ile Gly Trp
1 5 10 15

Ile Trp Glu Val Tyr Thr Tyr Tyr Asn Phe Ser Ser Val Thr Ala Tyr
20 25 30

Leu Ala Val Asn Tyr Leu Asp Arg Phe Leu Ser Gln Tyr Glu Leu Pro
35 40 45

Glu Gly Arg Asp Trp Met Thr Gln Leu Leu Ser Val Ala Cys Leu Ser
50 55 60

Ile Ala Ala Lys Met Glu Glu Thr Val Val Pro Gln Cys Leu Asp Leu
65 70 75 80

Gln Ile Gly Glu Pro Arg Phe Leu Phe Glu Val Glu Thr Ile His Arg
85 90 95

Met Glu Leu Leu Val Leu Thr Asn Leu Asn Trp Arg Met Gln Ala Val
100 105 110

Thr Pro Phe Ser Tyr Ile Asp Tyr Phe Leu Arg Lys Leu Asn
115 120 125

<210> 2343

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 2343

Arg Thr Gly Leu Glu Leu Gln Leu Ser Tyr Thr Leu Arg His Gln Asn
 1 5 10 15

Pro Val Gly Leu Thr Val Pro Ile Gln Leu Pro Val Ile Asn Gln Val
 20 25 30

Phe Gly Thr Asn His Val Val Lys Ile Ser Pro Asn Ser Pro Val Ala
 35 40 45

Arg Leu Arg Pro Ala Gly Lys Tyr Met Pro Gly Glu Val Val Ala Val
 50 55 60

Arg Val Pro Leu Leu His Leu Ser Asn Phe Gln Ile Asn Asp Trp Pro
 65 70 75 80

Glu Leu Ser Thr Lys Arg Tyr Ala Leu Met Val Leu Met Leu Pro Ser
 85 90 95

Asp Ser Ala Arg Gln Trp His Val His Glu Leu Glu Leu Val Glu Val
 100 105 110

Val Ala Asp Gln Val Ala Val Ala Leu Ser His Ala Ala Ile Leu Glu
 115 120 125

Glu Ser Met Arg Ala Arg Asp Leu Leu Met Glu Gln Asn Val Ala Leu
 130 135 140

Asp Leu Ala Arg Arg Glu Ala Glu Met Ala Val Arg Ala Arg Asn Asp
 145 150 155 160

Phe Leu Ala Val Met Asn His Glu Met Arg Thr Pro Met His Ala Ile
 165 170 175

Ile Ala Leu Ser Ser Leu Leu Gln Glu Thr Asp Leu Thr Pro Glu Gln
 180 185 190

Arg Leu Met Val Glu Thr Ile Leu Lys
 195 200

<210> 2344

<211> 201

<212> PRT

<213> Zea mays

<400> 2344

Glu Glu Ala Ala Ala Ala Ser Glu Glu Leu Pro Val Met Pro Trp Ala
 1 5 10 15

Thr Ser Val Ala Ser Gly Tyr Thr Leu Leu Arg Asp Pro His His Asn
 20 25 30

Lys Gly Leu Ala Phe Thr Glu Glu Glu Arg Asp Gly His Tyr Leu Arg
 35 40 45

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Gly Leu Leu Pro Pro Ala Val Leu Ser Gln Glu Leu Gln Ile Lys Lys
50 55 60

Phe Met Asn Thr Leu Arg Gln Tyr Gln Thr Pro Leu Gln Arg Tyr Ile
65 70 75 80

Ala Met Met Asn Leu Gln Glu Thr Asp Glu Arg Leu Phe Tyr Lys Leu
85 90 95

Leu Ile Asp Asn Val Val Glu Leu Leu Pro Phe Val Tyr Thr Pro Thr
100 105 110

Val Gly Glu Ala Cys Gln Lys Tyr Gly Ser Ile Phe Gly Arg Pro Gln
115 120 125

Gly Leu Tyr Val Ser Leu Lys Asp Lys Gly Lys Val Leu Glu Val Leu
130 135 140

Arg Asn Trp Pro His Arg Asn Ile Gln Val Ile Cys Val Thr Asp Gly
145 150 155 160

Glu Arg Ile Leu Gly Leu Gly Asp Leu Gly Cys Gln Gly Met Gly Ile
165 170 175

Pro Val Gly Lys Leu Ala Leu Tyr Thr Ala Leu Gly Gly Val Asp Pro
180 185 190

Ser Val Cys Leu Pro Ile Thr Ile Asp
195 200

<210> 2345
<211> 101
<212> PRT
<213> Oryza sativa

<400> 2345
Phe Val Leu Thr Asn Glu Arg Phe Leu Val Pro Glu Met Leu Phe His
1 5 10 15

Pro Ile Asp Leu Gly Met Asn Gln Ala Gly Leu Ala Glu Cys Ile Val
20 25 30

Arg Ala Ile Gln Ala Cys His Pro His Leu Gln Pro Val Leu Phe Glu
35 40 45

Arg Ile Ile Leu Thr Gly Gly Ser Thr Leu Phe Pro Arg Phe Thr Glu
50 55 60

Arg Leu Glu Lys Glu Leu Arg Pro Leu Val Pro Asp Asp Tyr Gln Val
65 70 75 80

Lys Ile Ile Ala Gln Glu Asp Pro Ile Leu Gly Ala Trp Arg Gly Gly
85 90 95

Ser Leu Leu Ala His
100

<210> 2346
<211> 151
<212> PRT
<213> Zea mays

<400> 2346
Ala Leu Gly Leu Arg Pro Ser Val Asn Arg Leu Met Met Tyr Gln Gln
1 5 10 15

Gly Cys Phe Ala Gly Gly Thr Val Leu Arg Val Ala Lys Asp Leu Ala
20 25 30

Glu Asn Asn Arg Gly Ala Arg Val Leu Val Val Cys Ser Glu Ile Thr
35 40 45

Ala Val Thr Phe Arg Gly Pro Ser Glu Ser His Leu Asp Ser Leu Val
50 55 60

Gly Gln Ala Leu Phe Gly Asp Gly Ala Ala Ala Val Val Val Gly Ala
65 70 75 80

Asp Pro Asp Asp Arg Val Glu Arg Pro Leu Phe Gln Leu Val Ser Ala
85 90 95

Ala Gln Thr Ile Leu Pro Asp Ser Glu Gly Ala Ile Asp Gly His Leu
100 105 110

Arg Glu Val Gly Leu Thr Phe His Leu Leu Lys Asp Val Pro Gly Leu
115 120 125

Ile Ser Lys Asn Ile Gly Arg Ala Leu Asp Asp Ala Phe Lys Pro Leu
130 135 140

Gly Ile Ser Asp Trp Asn Ser
145 150

<210> 2347
<211> 176
<212> PRT
<213> Solanum lycopersicum

<400> 2347
Cys Pro Thr Ile Val Ser Met Asp Ser Glu Leu Asn Arg Tyr Ile Leu
1 5 10 15

Val Asn Glu Ala Lys Gly Leu Val Pro Gly Tyr Pro Gln Ser Met Ile
20 25 30

Asp Ile Leu Gly Lys Cys Asn Ile Ala Ala Val Asn Gly Ser Ala His
35 40 45

Lys Tyr Met Arg Gly Ala Leu Leu Ser Leu Ile Ser Pro Thr Met Ile
50 55 60

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Arg Asp Gln Leu Leu Pro Lys Ile Asp Glu Phe Met Arg Ser His Leu
65 70 75 80

Thr Asn Trp Asp Asn Lys Val Ile Asp Ile Gln Glu Lys Thr Asn Lys
85 90 95

Met Ala Phe Leu Ser Ser Leu Lys Gln Ile Ala Gly Ile Glu Ser Thr
100 105 110

Ser Leu Ala Gln Glu Phe Met Ser Glu Phe Phe Asn Leu Val Leu Gly
115 120 125

Thr Leu Ser Leu Pro Ile Asn Leu Pro Asn Thr Asn Tyr His Arg Gly
130 135 140

Phe Gln Ala Arg Lys Ile Ile Val Asn Leu Leu Arg Thr Leu Ile Glu
145 150 155 160

Glu Arg Arg Ala Ser Lys Glu Ile Gln His Asp Met Leu Gly Tyr Leu
165 170 175

<210> 2348

<211> 251

<212> PRT

<213> Zea mays

<400> 2348

Lys Asn Met Leu Thr Val Pro Ser Ser Pro Leu Ser Pro Ala Thr Gly
1 5 10 15

Gly Ser Val Lys Ile Val Gln Met Thr Pro Val Thr Ser Ala Met Thr
20 25 30

Thr Ala Lys Trp Leu Arg Glu Val Ile Ser Ser Leu Pro Asp Lys Pro
35 40 45

Ser Ser Lys Leu Gln Gln Phe Leu Ser Ser Cys Asp Arg Asp Leu Thr
50 55 60

Asn Ala Val Thr Glu Arg Val Ser Ile Val Leu Glu Ala Ile Phe Pro
65 70 75 80

Thr Lys Ser Ser Ala Asn Arg Gly Val Ser Leu Gly Leu Asn Cys Ala
85 90 95

Asn Ala Phe Asp Ile Pro Trp Ala Glu Ala Arg Lys Val Glu Ala Ser
100 105 110

Lys Leu Tyr Tyr Arg Val Leu Glu Ala Ile Cys Arg Ala Glu Leu Gln
115 120 125

Asn Ser Asn Val Asn Asn Leu Thr Pro Leu Leu Ser Asn Glu Arg Phe
130 135 140

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His Arg Cys Leu Ile Ala Cys Ser Ala Asp Leu Val Leu Ala Thr His
145 150 155 160

Lys Thr Val Ile Met Met Phe Pro Ala Val Leu Glu Ser Thr Gly Leu
165 170 175

Thr Ala Phe Asp Leu Ser Lys Ile Ile Glu Asn Phe Val Arg His Glu
180 185 190

Glu Thr Leu Pro Arg Glu Leu Lys Arg His Leu Asn Ser Leu Glu Glu
195 200 205

Gln Leu Leu Glu Ser Met Ala Trp Glu Lys Gly Ser Ser Leu Tyr Asn
210 215 220

Ser Leu Ile Val Ala Arg Pro Ser Val Ala Ser Glu Ile Asn Arg Leu
225 230 235 240

Gly Leu Leu Ala Glu Pro Met Pro Ser Leu Asp
245 250

<210> 2349

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 2349

Leu Gln Phe Glu Leu Ala Lys Ala Met Ser Pro Cys Ile Ile Trp Ile
1 5 10 15

Pro Asn Ile His Asp Leu Asp Val Asn Glu Ser Asn Asp Leu Ser Leu
20 25 30

Gly Leu Leu Val Asn His Leu Ser Arg Asp Cys Glu Arg Cys Ser Thr
35 40 45

Arg Asn Ile Leu Val Ile Ala Ser Thr His Ile Pro Gln Lys Val Asp
50 55 60

Pro Ala Leu Ile Ala Pro Asn Lys Leu Asn Thr Cys Ile Lys Ile Arg
65 70 75 80

Arg Leu Leu Ile Pro Gln Gln Arg Lys His Phe Phe Thr Leu Ser Tyr
85 90 95

Thr Arg Gly Phe His Leu Glu Lys Lys Met Phe His Thr Asn Gly Phe
100 105 110

Gly Ser Ile Thr Met Gly Ser Asn Ala Arg Asp Leu Val Ala Leu Thr
115 120 125

Asn Glu Val Leu Ser Ile Ser Ile Thr Gln Lys Lys Ser Ile Ile Asp
130 135 140

Thr Asn Thr Ile Arg Ser Ala Leu His Arg Gln Thr Trp Asp Leu Arg

<210> 2351

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 2351

Glu Gly Leu Leu Gln Ala Gln Gln Phe Pro Ser Thr Ala Ala Val Ser
1 5 10 15

His Leu Asp Lys Lys Leu Glu Thr Leu Pro Glu Leu Ile Ala Gly Val
20 25 30

Trp Ser Asp Asp Ser Ser Leu Gln Leu Glu Cys Thr Thr Gln Phe Arg
35 40 45

Lys Leu Leu Ser Ile Glu Arg Asn Pro Pro Ile Glu Glu Val Ile Gln
50 55 60

Ser Gly Val Val Pro Arg Phe Val Glu Phe Leu Ala Arg Asp Asp Tyr
65 70 75 80

Pro Gln Leu Gln Phe Glu Ala Ala Trp Ala Leu Thr Asn Ile Ala Ser
85 90 95

Gly Thr Ser Glu Asn Thr Lys Val Val Ile Asp Tyr Gly Ser Val Pro
100 105 110

Ile Phe Ile Arg Leu Leu Ser Ser Pro Ser Asp Asp Val Arg Glu Gln
115 120 125

Ala Val Trp Ala Leu Gly Asn Ile Ala Gly Asp Ser Pro Lys Tyr Arg
130 135 140

Asp Leu Val Leu Gly His Gly Ala Leu Val Ala Leu Leu Ala Gln Phe
145 150 155 160

Asn Glu Gln Ala Lys Leu Ser Met Leu Arg Asn Ala Thr Trp Thr Leu
165 170 175

<210> 2352

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2352

Leu Leu Lys Ser Asp Glu Leu Glu Val Gln Ile His Ala Val Lys Val
1 5 10 15

Val Ala Asn Leu Ala Ala Glu Asp Val Asn Gln Glu Lys Ile Val Glu
20 25 30

Glu Gly Gly Leu Asp Ala Leu Leu Ser Leu Leu Glu Thr Ser Glu Asn
35 40 45

Thr Thr Ile His Arg Val Thr Ala Gly Ala Ile Ala Asn Leu Ala Met
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50 55 60
 Asn Gly Ser Asn Gln Gly Leu Ile Met Asn Lys Gly Gly Ala Arg Leu
 65 70 75 80
 Leu Ala Asn Ile Ala Ser Lys Thr Asn Asp Pro Gln Thr Leu Arg Met
 85 90 95
 Val Ala Gly Ala Leu Ala Asn Leu Cys Gly Asn Glu Lys Leu His Val
 100 105 110
 Met Leu Lys Gln Asp Gly Gly Ile Lys Ala Leu Leu Gly Met Phe Arg
 115 120 125
 Thr Gly His Asn Glu Val Ile Ala Gln Ile Ala Arg Gly Met Ala Asn
 130 135 140
 Phe Ala Lys Cys Glu Ser Arg Val Ile Ser Gln Gly His Arg Lys Gly
 145 150 155 160
 Arg Ser Leu Leu Ile Glu Glu Gly Val Leu Asn Trp Met Val Ala Asn
 165 170 175
 <210> 2353
 <211> 176
 <212> PRT
 <213> Zea mays
 <400> 2353
 Met Lys Lys Ala Thr Ser Leu Ser Glu Leu Gly Phe Asp Ala Gly Asp
 1 5 10 15
 Ala Ser Ser Gly Phe Phe Arg Pro Val Ser Gly Asp Ser Ser Thr Pro
 20 25 30
 Thr Ser Gln His His Arg Arg Arg Leu Thr Lys Val Ser Val Ile Gly
 35 40 45
 Ala Gly Asn Val Gly Met Ala Ile Ala Gln Thr Ile Leu Thr Arg Asp
 50 55 60
 Leu Ala Asp Glu Ile Ala Leu Val Asp Ala Val Pro Asp Lys Leu Arg
 65 70 75 80
 Gly Glu Met Leu Asp Leu Gln His Ala Ala Ala Phe Leu Pro Arg Thr
 85 90 95
 Arg Leu Val Ser Gly Thr Asp Met Ser Val Thr Arg Gly Ser Asp Leu
 100 105 110
 Val Ile Val Thr Ala Gly Ala Arg Gln Ile Gln Gly Glu Thr Arg Leu
 115 120 125
 Asp Leu Leu Gln Arg Asn Val Ala Leu Phe Arg Lys Ile Val Pro Pro
 130 135 140

Leu Ala Glu Gln Ser His Asp Ala Leu Leu Leu Val Val Ser Asn Pro
145 150 155 160

Val Asp Val Leu Thr Tyr Val Ala Trp Lys Leu Ser Gly Phe Pro Ala
165 170 175

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<213> Oryza sativa

<400> 2354

Ser Glu Ser Val Ser Trp Ile Leu Lys Val Arg Ser Val His Gly Phe
1 5 10 15

Gln Pro Ala Thr Ala Tyr Leu Ala Val Ser Tyr Met Asp Arg Phe Met
20 25 30

Ser Ser Arg Ser Leu Pro Asp His Gly Trp Ala Ser Gln Leu Leu Cys
35 40 45

Val Ala Cys Leu Ser Leu Ala Ala Lys Met Glu Glu Ser Ser Ala Pro
50 55 60

Pro Leu Leu Asp Leu Gln Ile Glu Gly Thr Arg Phe Ile Phe Glu Pro
65 70 75 80

Arg Thr Ile Gln Arg Met Glu Leu Ile Val Leu Val Glu Leu Asp Trp
85 90 95

Arg Leu Arg Ser Val
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<400> 2355

Asn Gly Cys Thr Asp Phe Glu Tyr Pro Arg Tyr Ala Asp Leu Ile Asn
1 5 10 15

Leu Leu Lys Leu Val Ser Asp Asp Gly Tyr Leu Thr Ser Gln Thr Cys
20 25 30

Ser Glu Lys Leu Lys Cys Leu Ala Val Gln Ile Ile Ala Lys Ile Gly
35 40 45

Ser Arg Gln Asn Ala Glu Cys Asp Leu Gln Val Leu Glu Leu Ala Ile
50 55 60

Gln Ser Glu Thr Gly Glu Leu Gln Asn Glu Ala Leu Met Ser Leu Pro
65 70 75 80

Ile Ile Val Leu Tyr Ser Gly Pro Arg Met Leu Gly Ala Met Phe Arg

Lys Leu Glu Thr Ile Gly Thr Leu Gly Cys Lys Lys Leu Trp Lys Ser
 100 105 110

Ile Ala Ile Ser Leu Gly Phe Leu Ser Cys Leu Asn Gly Thr Thr Asp
 115 120 125

Cys Thr Asp Lys Val Gly Asn His Cys Lys Leu Phe Leu Ala Lys His
 130 135 140

Cys Glu Gln Pro Ile Leu Thr
 145 150

<210> 2356

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<213> Oryza sativa

<400> 2356

Ala Gly Val Val Ala Ala Leu Arg Ser Ala Lys Leu Gly Gly Ala Ala
 1 5 10 15

Val Gly Val Val Ile Thr Ala Ser His Asn Pro Val Arg Asp Asn Gly
 20 25 30

Val Lys Ile Val Asp Ala Asp Gly Gly Met Leu Ser Gln Asp Trp Glu
 35 40 45

Pro Phe Ala Asp Ala Leu Ala Asn Ala Pro Asn Pro Asp Ala Leu Leu
 50 55 60

Gln Ile Val Leu Gln Phe Ala Lys Asp Glu Asp Ile Lys Leu Gly Gly
 65 70 75 80

Ser His Ser Ala Gln Val Leu Leu Ala Arg Asp Thr Arg Pro Thr Gly
 85 90 95

Glu Tyr Leu Leu Asp
 100

<210> 2357

<211> 226

<212> PRT

<213> Oryza sativa

<400> 2357

Met Thr Gly Gly Ser Gly Val Val Val Leu Asp Asn Gly Gly Gly Leu
 1 5 10 15

Leu Lys Ala Gly Phe Gly Gly Asp Met Asn Pro Thr Ala Val Val Pro
 20 25 30

Asn Cys Met Ala Lys Pro Pro Gly Ser Lys Lys Trp Leu Val Ala Asp
 35 40 45

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Gln Leu Gln Ala Gln Asp Val Asp Val Thr Gly Met Thr Leu Arg Arg
50 55 60

Pro Ile Asp Arg Gly Tyr Leu Ile Asn Gln Glu Val Gln Arg Glu Val
65 70 75 80

Trp Glu Arg Val Ile Arg Asn Leu Leu Gln Val Asp Pro Asn Asn Ser
85 90 95

Ser Leu Leu Leu Val Glu Pro Gln Phe Asn Pro Pro Ala Leu Gln His
100 105 110

Ala Thr Asp Glu Leu Val Phe Glu Glu Leu Gly Phe Lys Ser Leu Cys
115 120 125

Val Ala Asp Ala Pro Ser Leu Val His Leu Tyr Glu Ala Ser Arg Gln
130 135 140

Pro Ser Leu Phe Arg Ala Gln Cys Ser Leu Val Val Asp Cys Gly Phe
145 150 155 160

Ser Phe Thr His Ala Ser Pro Val Leu Gln Asn Phe Thr Leu Asn Tyr
165 170 175

Ala Val Arg Arg Met Asp Leu Gly Gly Lys Ala Leu Thr Asn Tyr Leu
180 185 190

Lys Glu Leu Ile Ser Tyr Arg Ser Leu Asn Val Met Asp Glu Thr Leu
195 200 205

Leu Ile Asp Asp Ala Lys Glu Lys Leu Cys Phe Val Ser Leu Asp Val
210 215 220

Pro Gly
225

<210> 2358

<211> 126

<212> PRT

<213> Zea mays

<400> 2358

Pro Leu Thr Pro Asp Asn Val Val Val Phe Pro Ser Arg Ser Val Ala
1 5 10 15

Ile Glu Asn Ala Leu Gln Leu Phe Ser Pro Ala Leu Ala Ile Val Asp
20 25 30

Glu His Leu Thr Arg His Leu Pro Lys Gln Trp Leu Thr Ser Leu Ala
35 40 45

Ile Glu Gly Arg Ala Asp Cys Asn His Ala Asp Gly Thr Val Thr Val
50 55 60

Ile Glu Ala Pro Arg Gln Ser Asp Leu Leu Ile Glu Leu Ile Arg Lys

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65						70						75						80
Leu	Gln	Pro	Gln	Val 85	Val	Val	Thr	Gly	Met 90	Ala	Gln	Phe	Glu	Ala 95	Ile			
Thr	Ser	Ala	Ala 100	Phe	Glu	Asn	Leu	Leu 105	Asn	Val	Thr	Lys	Asp 110	Val	Gly			
Ser	Arg	Leu 115	Phe	Leu	Asp	Ile	Ser 120	Glu	His	Leu	Glu	Leu 125	Ser					
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<211> 276																		
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<213> Solanum lycopersicum																		
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Glu 1	Gly	Leu	Leu	Gln 5	Ala	Gln	Gln	Phe	Pro 10	Ser	Thr	Ala	Ala	Val 15	Ser			
His	Leu	Asp	Lys 20	Lys	Leu	Glu	Thr	Leu 25	Pro	Glu	Leu	Ile	Ala 30	Gly	Val			
Trp	Ser	Asp 35	Asp	Ser	Ser	Leu	Gln 40	Leu	Glu	Cys	Thr	Thr 45	Gln	Phe	Arg			
Lys	Leu 50	Leu	Ser	Ile	Glu	Arg 55	Asn	Pro	Pro	Ile	Glu 60	Glu	Val	Ile	Gln			
Ser 65	Gly	Val	Val	Pro	Arg 70	Phe	Val	Glu	Phe	Leu 75	Ala	Arg	Asp	Asp	Tyr 80			
Pro	Gln	Leu	Gln	Phe 85	Glu	Ala	Ala	Trp	Ala 90	Leu	Thr	Asn	Ile	Ala 95	Ser			
Gly	Thr	Ser	Glu 100	Asn	Thr	Lys	Val	Val 105	Ile	Asp	Tyr	Gly	Ser 110	Val	Pro			
Ile	Phe	Ile 115	Arg	Leu	Leu	Ser	Ser 120	Pro	Ser	Asp	Asp	Val 125	Arg	Glu	Gln			
Ala	Val 130	Trp	Ala	Leu	Gly	Asn 135	Ile	Ala	Gly	Asp	Ser 140	Pro	Lys	Tyr	Arg			
Asp 145	Leu	Val	Leu	Gly	His 150	Gly	Ala	Leu	Val	Ala 155	Leu	Leu	Ala	Gln	Phe 160			
Asn	Glu	Gln	Ala	Lys 165	Leu	Ser	Met	Leu	Arg 170	Asn	Ala	Thr	Trp	Thr 175	Leu			
Ser	Asn	Phe	Cys 180	Arg	Gly	Lys	Pro	Gln 185	Pro	Leu	Phe	Glu	Gln 190	Thr	Lys			
Ala	Ala	Leu 195	Pro	Thr	Leu	Gly	Arg 200	Leu	Ile	His	Ser	Asn 205	Asp	Glu	Glu			

Val Leu Thr Asp Ala Cys Trp Ala Leu Ser Tyr Leu Ser Asp Gly Thr
210 215 220

Asn Asp Lys Ile Gln Ala Val Ile Glu Ala Gly Val Cys Ser Arg Leu
225 230 235 240

Val Glu Leu Leu Leu His Ser Ser Pro Ser Val Leu Ile Pro Ala Leu
245 250 255

Arg Thr Val Gly Asn Ile Val Thr Gly Asp Asp Ile Gln Thr Gln Val
260 265 270

Met Ile Asp His
275

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<212> PRT

<213> Oryza sativa

<400> 2360

Gln Ile Asp Thr Val Val Val Ser Ser Pro Ala Ala Ala Gln Glu Val
1 5 10 15

Leu Arg Asp Lys Asp Val Met Phe Ala Ser Arg Pro Ser Leu Leu Val
20 25 30

Ser Glu Ile Phe Cys Tyr Asp Asn Leu Asp Val Gly Phe Ala Pro Tyr
35 40 45

Gly Ala Tyr Trp Arg Met Leu Arg Lys Leu Cys Thr Val Glu Leu Leu
50 55 60

Ser Thr Lys Val Val Arg Gln Leu Ala Pro Val Arg Asn Asp Glu Thr
65 70 75 80

Leu Thr Leu Val Arg Asn Ile Lys Ala Ala Ser Ser Gly His Gly Gly
85 90 95

Gly Gly Gly Lys Lys Pro Val Thr Leu Ala Arg Leu Leu Thr Thr Cys
100 105 110

Thr Asn Thr Ile Thr Ala Lys Ala Ala Phe Gly Gln Ala Cys Gly Val
115 120 125

Glu Leu Gln Glu Gln Phe Leu Thr Ala Leu Asp Val Gly Leu Lys Phe
130 135 140

Ser Gly Gly Phe Cys Phe Gly Asp Leu Phe Pro Ser Leu Arg Phe Ile
145 150 155 160

Asp Ala Met Thr Gly Leu Arg Ser Arg Leu Trp Arg Ala Arg Gly Gln
165 170 175

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Leu Asp Ser Val Phe Asp Lys Ile Ile Ala Gln Cys Glu Glu His Gln
180 185 190

Gly Asp Ser Leu Val Asn Val Leu Leu
195 200

<210> 2361
<211> 276
<212> PRT
<213> Zea mays

<400> 2361
Phe Gly Tyr Ser Ser Glu Asp Val Gln Met Val Ile Glu Ser Met Ala
1 5 10 15

Ser Gln Gly Lys Glu Pro Thr Phe Cys Met Gly Asp Asp Ile Pro Leu
20 25 30

Ala Val Leu Ser Gln Arg Pro His Leu Leu Tyr Asp Tyr Phe Lys Gln
35 40 45

Arg Phe Ala Gln Val Thr Asn Pro Ala Ile Asp Pro Leu Arg Glu Gly
50 55 60

Leu Val Met Ser Leu Glu Val Asn Ile Gly Lys Arg Gly Asn Ile Leu
65 70 75 80

Glu Val Gly Pro Glu Asn Ala Asp Gln Val Ala Leu Ser Ser Pro Val
85 90 95

Leu Asn Glu Gly Glu Leu Glu Thr Leu Leu Asn Asp Ser Lys Leu Lys
100 105 110

Pro Lys Val Leu Ser Thr Tyr Phe Asp Ile Arg Lys Gly Leu Asp Gly
115 120 125

Ser Leu Asp Lys Thr Ile Gln Ala Leu Cys Glu Glu Ala Asp Ala Ala
130 135 140

Val Arg Ser Gly Ser Gln Leu Leu Val Leu Ser Asp Arg Ser Glu Ala
145 150 155 160

Pro Glu Pro Thr Arg Pro Ala Ile Pro Ile Leu Leu Ala Val Gly Ala
165 170 175

Ile His Gln His Leu Ile Gln Asn Gly Leu Arg Met Ser Ala Ser Ile
180 185 190

Val Ala Asp Thr Ala Gln Cys Phe Ser Thr His His Phe Ala Cys Leu
195 200 205

Ile Gly Tyr Gly Ala Ser Ala Val Cys Pro Tyr Leu Ala Leu Glu Thr
210 215 220

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Cys Arg Gln Trp Arg Leu Ser Asn Lys Thr Leu Asn Leu Met Arg Asn
225 230 235 240

Gly Lys Met Pro Thr Val Thr Ile Glu Gln Ala Gln Arg Asn Phe Ile
245 250 255

Lys Ala Val Lys Ser Gly Leu Leu Lys Ile Leu Ser Lys Met Gly Ile
260 265 270

Ser Leu Leu Ser
275

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<213> Zea mays

<400> 2362
Met Ala Pro Leu Lys Leu Tyr Gly Met Pro Leu Ser Pro Asn Val Val
1 5 10 15

Arg Val Ala Thr Val Leu Asn Glu Lys Gly Leu Asp Phe Glu Ile Val
20 25 30

Pro Val Asp Leu Thr Thr Gly Ala His Lys Gln Pro Asp Phe Leu Ala
35 40 45

Leu Asn Pro Phe Gly Gln Ile Pro Ala Leu Val Asp Gly Asp Glu Val
50 55 60

Leu Phe Glu Ser Arg Ala Ile Asn Arg Tyr Ile Ala Ser Lys Tyr Ala
65 70 75 80

Ser Glu Gly Thr Asp Leu Leu Pro Ala Thr Ala Ser Ala Ala Lys Leu
85 90 95

Glu Val Trp Leu Glu
100

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<212> PRT
<213> Solanum lycopersicum

<400> 2363
Phe Tyr Gln Gln Phe Ala Cys Val Gly Gly Asp Pro Val Phe Ser Glu
1 5 10 15

Ser Leu Cys Lys Glu Leu Gln Lys Lys Phe Phe Gln Gln Arg Cys Glu
20 25 30

Leu Gly Arg Ile Gly Arg Arg Asn Met Asn Arg Lys Leu Asn Leu Asp
35 40 45

Ile Pro Gln Asn Asn Thr Phe Leu Leu Pro Arg Asp Ile Leu Ala Ala
50 55 60

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Ala Asp His Leu Ile Gly Leu Lys Phe Gly Met Gly Ala Leu Asp Asp
65 70 75 80

Met Asn His Leu Lys Asn Lys Arg Ile Arg Ser Val Ala Asp Leu Leu
85 90 95

Gln Asp Gln Phe Gly Leu Ala Leu Val Arg Leu Glu Asn Val Val Arg
100 105 110

Gly Thr Ile Cys Gly Ala Ile Arg His Lys Leu Ile Pro Thr Pro Gln
115 120 125

Asn Leu Val Thr Ser Pro Pro Leu Thr Thr Thr Tyr Glu Ser Phe Phe
130 135 140

Gly Leu His Pro Leu Ser Gln Val Leu Asp Arg Thr Asn Pro Leu Thr
145 150 155 160

Gln Ile Val His Gly Arg Lys Leu Ser Tyr Leu Gly Pro Gly Gly Leu
165 170 175

Thr Gly Arg Thr Ala Ser Phe Arg Ile Arg Asp Ile His Pro Ser His
180 185 190

Tyr Gly Arg Ile Cys Pro Ile Asp Thr Ser Glu Gly Ile Asn Val Gly
195 200 205

Leu Ile Gly Ser Leu Ser Ile His Ala Arg Ile Gly His Trp Gly Ser
210 215 220

Leu Glu
225

<210> 2364
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<213> Oryza sativa

<400> 2364
Arg Gln Pro Leu Ser Arg Lys Val Pro Ile Ser Ser Ser Arg Ile Asn
1 5 10 15

Pro Tyr Arg Met Val Ile Val Leu Arg Leu Ile Val Leu Cys Ile Phe
20 25 30

Leu His Tyr Arg Ile Thr Asn Pro Val Arg Asn Ala Tyr Pro Leu Trp
35 40 45

Leu Leu Ser Val Ile Cys Glu Ile Trp Phe Ala Leu Ser Trp Ile Leu
50 55 60

Asp Gln Phe Pro Lys Trp Ser Pro Ile Asn Arg Glu Thr Tyr Leu Asp
65 70 75 80

Arg Leu Ala Leu Arg Tyr Asp Arg Glu Gly Glu Pro Ser Gln Leu Ala
85 90 95

Pro Val Asp Ile Phe
100

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<213> Zea mays

<400> 2365
Trp Ala Tyr Met Lys Ser Gly Gly His Ile Ser His Ala Leu Ser Val
1 5 10 15

Tyr Ser Cys Gln Leu Arg Gln Pro Asn Gln Val Lys Lys Ile Phe Glu
20 25 30

Phe Leu Lys Asp Gly Phe His Glu Val Ser Ser Ser Leu Asp Leu Ser
35 40 45

Phe Asp Asp Asp Ser Val Ala Glu Glu Lys Ile Pro Phe Leu Ala Tyr
50 55 60

Leu Ala Ser Phe Leu Lys Glu Asn Lys Ser Asn Pro Cys Glu Pro Pro
65 70 75 80

Ala Gly Cys Leu Asn Phe Arg Lys Leu Val Ala Gly Phe Met Lys Ser
85 90 95

Tyr His His Ile Pro Leu Thr Pro Asp Asn Val Val Val Phe Pro Ser
100 105 110

Arg Ser Val Ala Ile Glu Asn Ala Leu Gln Leu Phe Ser Pro Ala Leu
115 120 125

Ala Ile Val Asp Glu His Leu Thr Arg His Leu Pro Lys Gln Trp Leu
130 135 140

Thr Ser Leu Ala Ile Glu Gly Arg Ala Asp Cys Asn His Ala Asp Gly
145 150 155 160

Thr Val Thr Val Ile Glu Ala Pro Arg Gln Ser Asp Leu Leu Ile Glu
165 170 175

Leu Ile Arg Lys Leu Gln Pro Gln Val Val Val Thr Gly Met Ala Gln
180 185 190

Phe Glu Ala Ile Thr Ser Ala Ala Phe Glu Asn Leu Leu Asn Val Thr
195 200 205

Lys Asp Val Gly Ser Arg Leu Phe Leu Asp Ile Ser Glu His Leu Glu
210 215 220

Leu Ser Ser Leu Pro Ser Ser Asn Gly Val Leu Lys Tyr Leu Ala Gly
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Val Ser Lys Thr Leu Leu Leu Tyr Thr Arg Trp Ile His Tyr Thr Gly
50 55 60

Gln Lys Gln Ser Asn Asp Ile Lys Ser Leu Tyr Ser Arg Val Ala Asp
65 70 75 80

Leu Arg Pro Lys Trp Glu Lys Gly Phe Phe Cys Ile Ala Lys Phe Tyr
85 90 95

Asp Asp Leu Leu Val Asp Ala Arg Arg Arg Gln Glu Asp Lys Lys Ile
100 105 110

Ala Ser Gly Val Gly Pro Val Pro Pro Ser Ser Thr Gly Ser Leu Thr
115 120 125

Thr Ala Thr Glu Glu Lys Pro Trp Trp Asp Met Leu Pro Val Val Leu
130 135 140

Ile Gln Tyr Ala Arg Gly Leu His Arg Gly His Lys Asn Leu Phe Gln
145 150 155 160

Ala Leu Pro Arg Leu Leu Thr Leu Trp Phe Glu Phe Gly Ser Ile Tyr
165 170 175

Ile Gln Asp Gly Ser Ser Phe Asn Lys Pro Met Lys Glu Val His Ile
180 185 190

Arg Leu Leu Gly Ile Met Arg Gly Cys Leu Lys Asp Leu Pro Pro Tyr
195 200 205

Gln Trp Leu Thr Val Leu Ser Gln Leu Ile Ser Arg Ile Cys His Gln
210 215 220

Asn Ile
225

<210> 2368
<211> 176
<212> PRT
<213> Zea mays

<400> 2368
Glu His Ser Val Cys Phe Ala Val Pro Glu Lys Glu Val Ala Leu Val
1 5 10 15

Ser Ala Ala Leu His Ala Arg Phe Arg Glu Ala Leu Ala Ala Gly Arg
20 25 30

Leu Ser Lys Val Glu Val Ile His Asn Cys Ser Ile Leu Ala Thr Val
35 40 45

Gly Leu Arg Met Ala Ser Thr Pro Gly Val Ser Ala Thr Leu Phe Asp
50 55 60

Ala Leu Ala Lys Ala Asn Ile Asn Val Arg Ala Ile Ala Gln Gly Cys
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65		70		75		80
Ser	Glu	Tyr	Asn	Ile	Thr	Arg
			85			90
						95
Ala	Leu	Arg	Ala	Ala	His	Ser
			100			105
						110
Ala	Val	Gly	Ile	Ile	Gly	Pro
		115				120
						125
Gln	Leu	Lys	Asp	Gln	Ala	Ala
	130				135	
						140
Leu	Arg	Val	Met	Gly	Ile	Ala
145					150	
						155
Ile	Gly	Val	Asp	Leu	Thr	Gln
				165		
						170
						175
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<213> Oryza sativa						
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Arg	Val	Arg	Met	Asp	Ala	Ile
1			5			10
						15
Tyr	Ser	Phe	Ala	Pro	Leu	Thr
			20			25
						30
Arg	Phe	Leu	Ser	Leu	Tyr	Gln
		35				40
						45
Gln	Leu	Leu	Ala	Val	Ala	Cys
	50				55	
						60
Thr	Asp	Val	Pro	Gln	Ser	Leu
65					70	
						75
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Ile	Gly	Thr	Val	Arg	Arg	Glu
1			5			10
						15
Ser	Ala	Arg	Lys	Ala	Leu	Gly
			20			25
						30
Tyr	Thr	Leu	Met	Tyr	Glu	Ala
		35				40
						45

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Pro Leu Phe Phe Ser Tyr Pro Gly Asp Val Glu Thr Tyr Gly Ile Asp
 50 55 60

Arg Gln Phe Leu Leu Gly Arg Gly Val Leu Val Ser
 65 70 75

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<212> PRT

<213> Solanum lycopersicum

<400> 2371

Lys Gly Lys Ile His Glu Val Leu Lys Asn Trp Pro Glu Lys Lys Ile
 1 5 10 15

Gln Val Ile Val Val Thr Asp Gly Glu Arg Ile Leu Gly Leu Gly Asp
 20 25 30

Leu Gly Cys Gln Gly Met Gly Ile Pro Val Gly Lys Leu Ser Leu Tyr
 35 40 45

Ser Ala Leu Gly Gly Ile Arg Pro Ser Ala Cys Leu Pro Val Thr Ile
 50 55 60

Asp Val Gly Gln Thr Met Lys Phe Val Asp Asp Glu Phe Tyr Ile Gly
 65 70 75 80

Leu Arg Gln Arg Arg Ala Thr Gly Gln Glu Tyr Ser Glu Leu Leu Asp
 85 90 95

Glu Phe Met Tyr Ala Val Lys Gln Asn Tyr Gly Glu Lys Val Leu Ile
 100 105 110

Gln Phe Glu Asp Phe Ala Asn His Asn Ala Phe Asn Leu Leu Ala Lys
 115 120 125

Tyr Gly Thr Ser His Leu Val Phe Asn Asp Asp Ile Gln Gly Thr Ala
 130 135 140

Ser Val Val Leu Ala Gly Leu Met Ala Ala Leu Asn Leu Val Gly Gly
 145 150 155 160

Ser Leu Ser Glu His Thr Phe Leu Phe Leu Gly Ala Gly Glu Ala Gly
 165 170 175

<210> 2372

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2372

Met Ala Val Val His Arg Ile Leu Arg Arg Gly Leu Ser Ala Ala Ser
 1 5 10 15

Pro Leu Pro Ser Leu Arg Gly Leu Leu Leu Val Ser Pro Gln Glu Leu
 20 25 30

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Gly Arg Arg Pro Ala Ser Ser Ser Ser Ala Ala Ala Ala Gly
35 40 45

Asp Val Glu Ala Glu Leu Arg Ala Ala Arg Glu Asp Val Arg Gln Leu
50 55 60

Leu Lys Ser Asn Pro Cys His Pro Ile Leu Val Arg Leu Gly Trp His
65 70 75 80

Asp Ala Gly Thr Tyr Asp Lys Asn Ile Thr Glu Trp Pro Lys Cys Gly
85 90 95

Gly Ala Asn Gly Ser Leu Arg Phe Gly Val Glu Leu Val His Ala Ala
100 105 110

Asn Lys Gly Leu Leu Lys Ala Leu Phe Leu Val Ile Pro Ile
115 120 125

<210> 2373
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<212> PRT
<213> Zea mays

<400> 2373
Leu Trp Ala Asp Ala Arg Lys Met Glu Ala Ser Lys Leu Tyr Tyr Arg
1 5 10 15

Val Leu Glu Ala Ile Cys Arg Ala Glu Leu Gln Asn Ser Asn Val Asn
20 25 30

Asn Leu Thr Pro Leu Leu Ser Asn Glu Arg Phe His Arg Cys Leu Ile
35 40 45

Ala Cys Ser Ala Asp Val Val Leu Ala Thr His Lys Thr Val Ile Met
50 55 60

Met Phe Pro Ala Val Leu Glu Ser Ala Gly Leu Thr
65 70 75

<210> 2374
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<213> Oryza sativa

<400> 2374
Ala Leu Ser Leu Ala Val Leu Ser Leu Gly Ala Val Leu Ser Ala Ala
1 5 10 15

Asn Pro Leu Leu Thr Pro Asp Glu Leu Ala Arg Gln Ala Asp Asp Ala
20 25 30

Lys Pro Phe Leu Ala Leu Val Thr Gly Glu Leu Ala Pro Lys Leu Arg
35 40 45

Ser Ile Ala Pro Asp Val Lys Leu Val Leu Val Glu Gln Leu Leu Ala
50 55 60

Asp Val Ala Ala Glu Val Asp Asp Asp Glu Thr Leu Asp Leu Pro Ala
65 70 75 80

Ala Asn Ile Gly Arg Asp Asp Ala Ala Leu Leu Phe Tyr Ser Ser Gly
85 90 95

Thr Thr Gly Arg Ser Lys Gly Val Val Ser Thr His Gly Asn Ala Ile
100 105 110

Ala Met Ala Ala Ser Leu Glu Arg Ala Trp Gly Gly Gly Gly
115 120 125

<210> 2375

<211> 76

<212> PRT

<213> Zea mays

<400> 2375

Ile Pro Trp Ala Glu Ala Arg Lys Val Glu Ala Ser Lys Leu Tyr Tyr
1 5 10 15

Arg Val Leu Glu Ala Ile Cys Arg Ala Glu Leu Gln Asn Ser Asn Val
20 25 30

Asn Asn Leu Thr Pro Leu Leu Ser Asn Glu Arg Phe His Arg Cys Leu
35 40 45

Ile Ala Cys Ser Ala Asp Leu Val Leu Ala Thr His Lys Thr Val Ile
50 55 60

Met Met Phe Pro Ala Val Leu Glu Ser Thr Gly Leu
65 70 75

<210> 2376

<211> 176

<212> PRT

<213> Zea mays

<400> 2376

Glu Leu Glu Thr Leu Leu Asn Asp Ser Lys Leu Lys Pro Lys Val Leu
1 5 10 15

Ser Thr Tyr Phe Asp Ile Arg Lys Gly Leu Asp Gly Ser Leu Asp Lys
20 25 30

Thr Ile Gln Ala Leu Cys Glu Glu Ala Asp Ala Ala Val Arg Ser Gly
35 40 45

Ser Gln Leu Leu Val Leu Ser Asp Arg Ser Glu Ala Pro Glu Pro Thr
50 55 60

Arg Pro Ala Ile Pro Ile Leu Leu Ala Val Gly Ala Ile His Gln His
65 70 75 80

Leu Ile Gln Asn Gly Leu Arg Met Ser Ala Ser Ile Val Ala Asp Thr

Ala Gln Cys Phe Ser Thr His His Phe Ala Cys Leu Ile Gly Tyr Gly
100 105 110

Ala Ser Ala Val Cys Pro Tyr Leu Ala Leu Glu Thr Cys Arg Gln Trp
115 120 125

Arg Leu Ser Asn Lys Thr Leu Asn Leu Met Arg Asn Gly Lys Met Pro
130 135 140

Thr Val Thr Ile Glu Gln Ala Gln Arg Asn Phe Ile Lys Ala Val Lys
145 150 155 160

Ser Gly Leu Leu Lys Ile Leu Ser Lys Met Gly Ile Ser Leu Leu Ser
165 170 175

<210> 2377

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2377

Glu Gln His Glu Val Val Asp Gly Asn Glu Ser Phe Pro Met Ala Leu
1 5 10 15

Tyr Val Val Ser Gly Asp Glu Asp Gly Glu Arg Gly Gly Ala Pro Val
20 25 30

Val Cys Ile Asp Val Ala Ala Gln Leu Cys Cys Asp Phe Asn Lys Gly
35 40 45

Gln Ser Thr Trp Ser Pro Ile Leu Leu Leu Val Pro Leu Val Leu Gly
50 55 60

Leu Asp Lys Ile Asn Pro Arg Tyr Ile Pro Leu Leu
65 70 75

<210> 2378

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2378

Gly Leu His Tyr Cys His Val Asn Gln Val Leu His Arg Asp Ile Lys
1 5 10 15

Gly Ser Asn Leu Leu Ile Asp Asn Glu Gly Asn Leu Lys Leu Ala Asp
20 25 30

Phe Gly Leu Ala Arg Ser Phe Ser Ser Asp His Asn Gly Asn Leu Thr
35 40 45

Asn Arg Val Ile Thr Leu Trp Tyr Arg Pro Pro Glu Leu Leu Leu Gly
50 55 60

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Ser Thr Arg Tyr Gly Pro Ala Val Asp Met Trp Ser Val Gly Cys Ile
65 70 75 80

Phe Ala Glu Leu Leu Asn Gly Lys Pro Ile Leu Thr Gly Lys Asn Glu
85 90 95

Pro Glu Gln Leu Ser
100

<210> 2379

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<213> Oryza sativa

<400> 2379

Gly Leu His Tyr Cys His Ile Asn Gln Val Leu His Arg Asp Ile Lys
1 5 10 15

Gly Ser Asn Leu Leu Ile Asp Asn Glu Gly Asn Leu Lys Leu Ala Asp
20 25 30

Phe Gly Leu Ala Arg Ser Phe Ser Asn Asp His Asn Gly Asn Leu Thr
35 40 45

Asn Arg Val Ile Thr Leu Trp Tyr Arg Pro Pro Glu Leu Leu Leu Gly
50 55 60

Ser Thr Lys Tyr Gly Pro Ala Val Asp Met Trp Ser Val Gly Cys Ile
65 70 75 80

Phe Ala Glu Leu Leu Asn Gly Lys Pro Ile Leu Pro Gly Lys Asn Glu
85 90 95

Pro Glu Gln Leu Ser
100

<210> 2380

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<213> Solanum lycopersicum

<400> 2380

Pro Val Gly Phe Thr Val Pro Ile Gln Leu Pro Val Ile Asn Gln Val
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Phe Ser Ala Asn Cys Ala Val Lys Ile Ser Pro Asn Ser Ala Val Ala
20 25 30

Arg Leu Arg Pro Thr Arg Lys Tyr Ile Pro Gly Glu Val Val Ala Val
35 40 45

Arg Val Pro Leu Leu His Leu Ser Asn Phe Gln Thr Asn Asp Trp Pro
50 55 60

Glu Leu Ser Pro Lys Ser Tyr Ala Leu Met Val Leu Met Leu Pro Ser
65 70 75 80

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Asn Ser Ala Arg Gln Trp His Val His Glu Leu Glu Leu Val Asp Val
85 90 95

Val Ala Asp Gln Val Ala Val Ala Leu Ser His Ala Ala Ile Leu Glu
100 105 110

Glu Ser Met Arg Ala Arg Asp Leu Leu Ile Glu Gln Asn Val Ala Leu
115 120 125

Asp Leu Ala Arg Arg Glu Ala Glu Thr Ala Val Arg Ala Arg Asn Asp
130 135 140

Phe Leu Gly Val Met Asn His Glu Met Arg Thr Pro Met His Ala Val
145 150 155 160

Val Ala Leu Ser Ser Leu Leu Gln Glu Ser Glu Leu Ile Pro Glu Gln
165 170 175

Arg Leu Met Val Glu Thr Ile Leu Lys Ser Ser Asn Leu Leu Ala Thr
180 185 190

Leu Ile Asn Asp Val Leu Asp Leu Ser
195 200

<210> 2381

<211> 276

<212> PRT

<213> Oryza sativa

<400> 2381

Met Met Glu Ile Asn Ser Glu Ala Thr Val Thr Leu Val Ser Val Val
1 5 10 15

Thr Leu Pro Ile Leu Leu Ala Leu Leu Thr Arg Lys Ser Ser Ser Lys
20 25 30

Lys Arg Arg Pro Pro Gly Pro Trp Asn Leu Pro Leu Val Gly Gly Leu
35 40 45

Leu His Leu Leu Arg Ser Gln Pro Gln Val Ala Leu Arg Asp Leu Ala
50 55 60

Gly Lys Tyr Gly Pro Val Met Phe Leu Arg Thr Gly Gln Val Asp Thr
65 70 75 80

Val Val Ile Ser Ser Pro Ala Ala Ala Gln Glu Val Leu Arg Asp Lys
85 90 95

Asp Val Thr Phe Ala Ser Arg Pro Ser Leu Leu Val Ser Glu Ile Phe
100 105 110

Cys Tyr Gly Asn Leu Asp Ile Gly Phe Ala Pro Tyr Gly Ala Tyr Trp
115 120 125

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Arg Met Leu Arg Lys Leu Cys Thr Val Glu Leu Leu Ser Thr Lys Met
130 135 140

Val Arg Gln Leu Ala Pro Ile Arg Asp Gly Glu Thr Leu Ala Leu Val
145 150 155 160

Arg Asn Ile Glu Ala Ala Ala Gly Gly Lys Lys Pro Phe Thr Leu Ala
165 170 175

Thr Leu Leu Ile Ser Cys Thr Asn Thr Phe Thr Ala Lys Ala Ala Phe
180 185 190

Gly Gln Ala Cys Gly Gly Glu Leu Gln Glu Gln Phe Leu Thr Ala Leu
195 200 205

Asp Glu Ala Leu Lys Phe Ser Asn Gly Phe Cys Phe Gly Asp Leu Phe
210 215 220

Pro Ser Leu Arg Phe Ile Asp Ala Met Thr Gly Leu Arg Ser Arg Leu
225 230 235 240

Glu Arg Leu Arg Leu Gln Leu Asp Thr Val Phe Asp Lys Ile Val Ala
245 250 255

Gln Cys Glu Ser Asn Pro Gly Asp Ser Leu Val Asn Val Leu Leu Arg
260 265 270

Ile Lys Asp Gln
275

<210> 2382

<211> 76

<212> PRT

<213> Zea mays

<400> 2382

Met Trp Phe Gly Gly Gly Pro Ile Asp Ala Ala Gly Ala Leu Arg Gly
1 5 10 15

Phe Val Arg Glu Ala Gly Gly Cys Ala Val Val Asp Gly Gly Leu Gly
20 25 30

Thr Glu Leu Glu Ala His Gly Ala Asp Leu His Asp Ala Leu Trp Ser
35 40 45

Ala Lys Cys Leu Ala Ser Ala Pro His Leu Ile Arg Lys Val His Leu
50 55 60

Asp Tyr Leu Glu Ala Gly Ala Asp Val Ile Ile Ser
65 70 75

<210> 2383

<211> 76

<212> PRT

<213> Solanum lycopersicum

1005_005_PCT_SL17083606

<400> 2383

Met Ser Ser Leu Val Leu Gln Cys Trp Lys Leu Ser Ser Pro Ser Leu
1 5 10 15

Ile Leu Gln Gln Asn Thr Ser Ile Ser Met Gly Ala Phe Lys Gly Ile
20 25 30

His Lys Leu Gln Ile Pro Asn Ser Pro Leu Thr Val Ser Ala Arg Gly
35 40 45

Leu Asn Lys Ile Ser Cys Ser Leu Asn Leu Gln Thr Glu Lys Leu Cys
50 55 60

Tyr Glu Asp Asn Asp Asn Asp Leu Asp Glu Glu Leu
65 70 75

<210> 2384

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2384

Phe Thr Asp Ile Glu Ser Tyr Leu Arg Leu Ala His Glu Leu Asp Met
1 5 10 15

Leu Val Met Leu Arg Val Gly Pro Tyr Ile Cys Gly Glu Trp Asp Leu
20 25 30

Gly Gly Phe Pro Pro Trp Leu Leu Thr Ile Glu Pro Thr Ile Glu Leu
35 40 45

Arg Ser Ser Asp Ser Thr Tyr Leu Ser Leu Val Asp Arg Trp Trp Gly
50 55 60

Val Leu Leu Pro Lys Ile Ala Pro Leu Leu Tyr Ser Asn Gly Gly Pro
65 70 75 80

Ile Ile Met Val Gln Ile Glu Asn Glu Phe Gly Ser Phe Gly Asp Asp
85 90 95

Lys Asn Tyr Leu His Tyr Leu Val Glu Val Ala Arg Arg Tyr Leu Gly
100 105 110

Asn Asp Ile Met Leu Tyr Thr Thr Asp Gly Gly Ala Ile Gly Asn Leu
115 120 125

Lys Asn Gly Thr Ile Leu Gln Asp Asp Val Phe Ala Ala Val Asp Phe
130 135 140

Asp Thr Gly Ser Asn Pro Trp Pro Ile Phe Gln Leu Gln Lys Glu Tyr
145 150 155 160

Asn Leu Pro Gly Lys Ser Ala Pro Leu Ser Ser Glu Phe Tyr Thr Gly
165 170 175

<210> 2385

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 2385

Leu Gln Phe Glu Leu Ala Lys Ala Met Ser Pro Cys Ile Ile Trp Ile
 1 5 10 15

Pro Asn Ile His Asp Leu Asp Val Asn Glu Ser Asn Asp Leu Ser Leu
 20 25 30

Gly Leu Leu Val Asn His Leu Ser Arg Asp Cys Glu Arg Cys Ser Thr
 35 40 45

Arg Asn Ile Leu Val Ile Ala Ser Thr His Ile Pro Gln Lys Val Asp
 50 55 60

Pro Ala Leu Ile Ala Pro Asn Lys Leu Asn Thr Cys
 65 70 75

<210> 2386

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2386

Met Ala Thr Ala Arg Val Ser Leu Ile Leu Leu Val Val Val Leu Ala
 1 5 10 15

Ala Ser Ala Cys Ala Glu Gly Leu Arg Leu Pro Arg Asp Ala Lys Phe
 20 25 30

Pro Ala Ala Gln Ala Glu Arg Leu Ile Arg Ser Leu Asn Leu Leu Pro
 35 40 45

Lys Glu Ala Gly Pro Thr Gly Ala Gly Asp Val Pro Ser Val Ala Pro
 50 55 60

Gly Glu Leu Leu Glu Arg Arg Val Thr Leu Pro Gly Leu Pro Gln Gly
 65 70 75 80

Val Gly Asp Leu Gly His His Ala Gly Tyr Tyr Arg Leu Pro Asn Thr
 85 90 95

His Asp Ala Arg Met Phe Tyr Phe Leu Phe Glu Ser Arg Gly Lys Lys
 100 105 110

Glu Asp Pro Val Val Ile Trp Leu Thr Gly Gly Pro Gly Cys
 115 120 125

<210> 2387

<211> 201

<212> PRT

<213> Solanum lycopersicum

<400> 2387

Met Glu Glu Ile His Arg Tyr Leu Gln Pro Asp Ser Ser Gln Gln His
 Page 1412

1 5 10 15
 Asn Phe Leu Tyr Pro Leu Ile Phe Gln Glu Tyr Ile Tyr Ala Leu Ala
 20 25 30
 Gln Asp His Gly Leu Asn Arg Asn Arg Ser Ile Leu Leu Glu Asn Ser
 35 40 45
 Gly Tyr Asn Asn Lys Phe Ser Phe Leu Ile Val Lys Arg Leu Ile Thr
 50 55 60
 Arg Met Asp Gln Gln Asn His Leu Ile Ile Ser Thr Asn Asp Ser Asn
 65 70 75 80
 Lys Asn Pro Phe Leu Gly Cys Asn Lys Ser Leu Tyr Ser Gln Met Ile
 85 90 95
 Ser Glu Gly Phe Ala Cys Ile Val Glu Ile Pro Phe Ser Ile Arg Leu
 100 105 110
 Ile Ser Ser Leu Ser Ser Phe Glu Gly Lys Lys Ile Phe Lys Ser His
 115 120 125
 Asn Leu Arg Ser Ile His Ser Thr Phe Pro Phe Leu Glu Asp Asn Phe
 130 135 140
 Ser His Leu Asn Tyr Val Leu Asp Ile Leu Ile Pro Tyr Pro Val His
 145 150 155 160
 Leu Glu Ile Leu Val Gln Thr Leu Arg Tyr Trp Val Lys Asp Ala Ser
 165 170 175
 Ser Leu His Leu Leu Arg Phe Phe Leu His Glu Tyr Cys Asn Leu Asn
 180 185 190
 Ser Leu Ile Thr Ser Lys Lys Pro Gly
 195 200
 <210> 2388
 <211> 276
 <212> PRT
 <213> Zea mays
 <400> 2388
 Met Ala Leu Gly Ala Ala Tyr His His Tyr Leu Gln Leu Ala Gly Asp
 1 5 10 15
 His Gly Thr Ala Thr His Ala Leu Leu Leu Gly Val Leu Ile Phe Leu
 20 25 30
 Val Ile Arg Leu Val Ser Ala Arg Arg Thr Gly Thr Thr Ser Ala Asn
 35 40 45
 Lys Arg Lys Gln Gln Gln Arg Leu Pro Leu Pro Pro Trp Pro Pro Gly
 50 55 60

Lys Leu Pro Ile Ile Gly His Leu His Leu Ile Gly Ala Glu Thr His
65 70 75 80

Ile Ser Ile Arg Asp Leu Asp Ala Lys His Gly Arg Asn Gly Leu Leu
85 90 95

Leu Leu Arg Ile Gly Ala Val Pro Thr Leu Phe Val Ser Ser Pro Ser
100 105 110

Ala Ala Asp Ala Val Leu Arg Thr Gln Asp His Ile Phe Ala Ser Arg
115 120 125

Pro Pro Trp Met Ala Ala Glu Ile Ile Arg Tyr Gly Pro Ser Asp Val
130 135 140

Ala Phe Val Pro Tyr Gly Glu Tyr Gly Arg Gln Gly Arg Lys Leu Leu
145 150 155 160

Thr Thr His Met Leu Ser Thr Lys Lys Val Gln Ser Phe Arg His Gly
165 170 175

Arg Gln Glu Glu Val Arg Leu Val Met Asp Lys Ile Arg Ala Ala Ala
180 185 190

Thr Ala Ala Pro Pro Ala Ala Val Asp Leu Ser Asp Leu Leu Ser Gly
195 200 205

Tyr Thr Asn Asp Val Val Ser Arg Ala Val Leu Gly Ala Ser His Arg
210 215 220

Asn Gln Gly Arg Asn Arg Leu Phe Ser Glu Leu Thr Glu Ile Asn Val
225 230 235 240

Ser Leu Leu Ala Gly Phe Asn Leu Glu Asp Tyr Phe Pro Pro Asn Met
245 250 255

Ala Met Ala Asp Val Leu Leu Arg Leu Val Ser Val Lys Ala Arg Arg
260 265 270

Leu Asn Gln Arg
275

<210> 2389
<211> 226
<212> PRT
<213> Oryza sativa

<400> 2389
Ala Leu Ser Leu Ala Val Leu Ser Leu Gly Ala Val Leu Ser Ala Ala
1 5 10 15

Asn Pro Leu Leu Thr Pro Asp Glu Leu Ala Arg Gln Ala Asp Asp Ala
20 25 30

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Lys Pro Phe Leu Ala Leu Val Thr Gly Glu Leu Ala Pro Lys Leu Arg
35 40 45

Ser Ile Ala Pro Asp Val Lys Leu Val Leu Val Glu Gln Leu Leu Ala
50 55 60

Asp Val Ala Ala Glu Val Asp Asp Asp Glu Thr Leu Asp Leu Pro Ala
65 70 75 80

Ala Asn Ile Gly Arg Asp Asp Ala Ala Leu Leu Phe Tyr Ser Ser Gly
85 90 95

Thr Thr Gly Arg Ser Lys Gly Val Val Ser Thr His Gly Asn Ala Ile
100 105 110

Ala Met Ala Ala Ser Leu Glu Arg Ala Trp Gly Gly Gly Gly Gly Gly
115 120 125

Gly Glu Lys Pro Gln Gln Tyr Asp Asp His Asp Glu Ala Tyr Gly Cys
130 135 140

Val Leu Pro Met Phe His Met Phe Gly Phe Ser Ser Phe Val Met Gly
145 150 155 160

Thr Ala Ala Leu Gly Ala Thr Ala Val Val Val Pro Gly Arg Phe Ser
165 170 175

Val Glu Lys Thr Met Ala Ala Val Glu Glu Tyr Gly Val Thr Arg Leu
180 185 190

Leu Val Val Pro Pro Met Val Val Lys Met Val Ala Ala Ala Ala Gly
195 200 205

Asp Gly Glu Pro Ser Arg Arg Arg Leu Arg Leu Arg Gln Val Val Ser
210 215 220

Ser Gly
225

<210> 2390
<211> 226
<212> PRT
<213> Zea mays

<400> 2390
Glu Tyr Ile Tyr Ala Phe Ala His Asp Tyr Gly Leu Asn Gly Ser Glu
1 5 10 15

Pro Val Glu Ile Phe Gly Cys Asn Asn Lys Lys Phe Ser Ser Leu Leu
20 25 30

Val Asn Arg Leu Ile Ile Arg Met Tyr Gln Gln Asn Phe Leu Ile Asn
35 40 45

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Ser Val Asn Tyr Pro Asn Gln Asp Arg Leu Leu Asp His Arg Asn Tyr
50 55 60

Phe Tyr Ser Glu Phe Tyr Ser Gln Ile Leu Ser Glu Gly Phe Ala Ile
65 70 75 80

Val Val Glu Ile Pro Leu Ser Leu Gly Gln Leu Ser Cys Pro Glu Glu
85 90 95

Lys Glu Ile Pro Asn Phe Gln Asn Leu Gln Ser Ile His Ser Ile Phe
100 105 110

Pro Phe Leu Glu Asp Lys Phe Leu His Leu His Tyr Leu Ser His Ile
115 120 125

Lys Ile Pro Tyr Pro Ile His Leu Glu Ile Leu Val Gln Leu Leu Glu
130 135 140

Tyr Arg Ser Gln Asp Val Pro Ser Leu His Leu Leu Arg Phe Phe Leu
145 150 155 160

Tyr Tyr Tyr Ser Asn Trp Asn Ser Phe Ile Thr Ser Met Lys Ser Ile
165 170 175

Phe Leu Leu Lys Lys Glu Asn Lys Arg Leu Phe Arg Phe Leu Tyr Asn
180 185 190

Ser Tyr Val Ser Glu Tyr Glu Phe Phe Leu Leu Phe Leu His Lys Gln
195 200 205

Ser Ser Cys Leu Arg Leu Thr Ser Ser Gly Thr Phe Leu Glu Arg Ile
210 215 220

Ile Phe
225

<210> 2391

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2391

Leu Lys Pro Glu Asn Leu Leu Val Ser Lys Asp Val Ile Lys Leu Ala
1 5 10 15

Asp Phe Gly Leu Ala Arg Glu Val Thr Ser Val Pro Pro Tyr Thr Glu
20 25 30

Tyr Val Ser Thr Arg Trp Tyr Arg Ala Pro Glu Val Leu Leu Gln Ser
35 40 45

Ser Ile Tyr Asp Ser Ala Val Asp Met Trp Ala Met Gly Ala Ile Met
50 55 60

Ala Glu Leu Leu Thr Leu His Pro Leu Phe Pro Gly

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65 70 75

<210> 2392
 <211> 126
 <212> PRT
 <213> Oryza sativa

<400> 2392
 Met Ala Pro Pro Glu Ser Ser His His His Leu Leu Glu Ser Gly Leu
 1 5 10 15

Leu Glu Val Ser Lys Ala Pro Ser Ala Ala Val Ala Ala Glu Glu Glu
 20 25 30

Glu Lys Lys Glu Ala Ala Ala Trp Thr Pro Ser Ser Ser Ser Ser Met
 35 40 45

Thr Gly Arg Lys Ile Lys Ser Glu Ala Ser Pro Leu Leu Arg Arg Leu
 50 55 60

Leu Gly Gly Pro Ala Ala Gln Leu Gln Glu Val Leu Leu Gly Thr Lys
 65 70 75 80

Leu Tyr Pro Leu Phe Ser Ala Val Pro Leu Ala Val Ala Ala Glu Ser
 85 90 95

Leu Arg Leu Gly Arg Val Trp Val Phe Ala Phe Ser Leu Ile Gly Leu
 100 105 110

Ala Pro Leu Ala Glu Arg Val Ser Phe Leu Ser Glu His Ile
 115 120 125

<210> 2393
 <211> 101
 <212> PRT
 <213> Zea mays

<400> 2393
 Asp Lys Tyr Asp Leu Tyr Gly Ser Val Ala Phe Pro Lys His His Asn
 1 5 10 15

Gln Ala Asp Val Pro Glu Ile Tyr Arg Leu Ala Ala Lys Met Lys Gly
 20 25 30

Val Phe Ile Asn Pro Ala Leu Val Glu Pro Phe Gly Leu Thr Leu Ile
 35 40 45

Glu Ala Ala Ala His Gly Leu Pro Ile Val Ala Thr Lys Asn Gly Gly
 50 55 60

Pro Val Asp Ile Thr Asn Ala Leu Asn Asn Gly Leu Leu Val Asp Pro
 65 70 75 80

His Asp Gln Asn Ala Ile Ala Asp Ala Leu Leu Lys Leu Val Ala Asp
 85 90 95

Lys Asn Leu Trp Gln
100

<210> 2394

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2394

Asp His Asp Ile Pro Glu Pro Leu Ser Ser Arg Leu Ser Val Pro Ser
1 5 10 15

Gly Glu Leu Asn Leu Tyr Arg Ala Ala Val Ala Leu Arg Leu Val Leu
20 25 30

Leu Ala Ala Phe Phe Arg Tyr Arg Val Thr Arg Pro Val Ala Asp Ala
35 40 45

His Ala Leu Trp Val Thr Ser Val Ala Cys Glu Leu Trp Leu Ala Ala
50 55 60

Ser Trp Leu Ile Ala Gln Leu Pro Lys Leu Ser Pro Ala Asn Arg Val
65 70 75 80

Thr Tyr Leu Asp Arg Leu Ala Ser Arg Tyr Glu Lys Gly Gly Glu Ala
85 90 95

Ser Arg Leu Ala Gly Val Asp Val Phe Val Ala Ala Ala Asp Ala Ala
100 105 110

Arg Glu Pro Pro Leu Ala Thr Ala Asn Thr Val Leu Ser Val Leu Ala
115 120 125

Ala Asp Tyr Pro Ala Gly Gly Val Ala Cys Tyr Val His Asp Asp Gly
130 135 140

Ala Asp Met Leu Val Phe Glu
145 150

<210> 2395

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 2395

Gly Met Trp Ser Leu Arg Ser Ala Thr Asp Asp Pro Tyr Asp Thr Phe
1 5 10 15

Leu Val Val Ser Phe Ile Ser Glu Thr Arg Val Leu Ala Met Asn Leu
20 25 30

Glu Asp Glu Leu Glu Glu Thr Glu Ile Glu Gly Phe Asn Ser Gln Val
35 40 45

Gln Thr Leu Phe Cys His Asp Ala Val Tyr Asn Gln Leu Val Gln Val
50 55 60

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Thr Ser Asn Ser Val Arg Leu Val Ser Ser Thr Ser Arg Asp Leu Lys
65 70 75 80

Asn Glu Trp Phe Ala Pro Val Gly Tyr Ser Val Asn Val Ala Thr Ala
85 90 95

Asn Ala Thr Gln Val Leu Leu Ala Thr Gly Gly Gly His Leu Val Tyr
100 105 110

Leu Glu Ile Gly Asp Gly Val Leu Asn Glu Val Lys Tyr Ala Lys Leu
115 120 125

Asp Tyr Asp Ile Ser Cys Leu Asp Ile Asn Pro Ile Gly Glu Asn Pro
130 135 140

Asn Tyr Ser Asn Ile Ala Ala Val Gly Met Trp Thr Asp Ile Ser Val
145 150 155 160

Arg Ile Tyr Ser Leu Pro Asp Leu Asn Leu Ile Thr Lys Glu Gln Leu
165 170 175

Gly Gly Glu Ile Ile Pro Arg Ser Val Leu Met Cys Ser Phe Glu Gly
180 185 190

Ile Ser Tyr Leu Leu Cys Ala Leu Gly Asp Gly His Leu Leu Asn Phe
195 200 205

Val Leu Ser Met Ser Thr Gly Glu Leu Thr Asp Arg Lys Lys Val Ser
210 215 220

Leu Gly
225

<210> 2396
<211> 201
<212> PRT
<213> Solanum lycopersicum

<400> 2396
Val Leu Leu Ala Thr Gly Gly Gly His Leu Val Tyr Leu Glu Ile Gly
1 5 10 15

Asp Gly Val Leu Asn Glu Val Lys Tyr Ala Lys Leu Asp Tyr Asp Ile
20 25 30

Ser Cys Leu Asp Ile Asn Pro Ile Gly Glu Asn Pro Asn Tyr Ser Asn
35 40 45

Ile Ala Ala Val Gly Met Trp Thr Asp Ile Ser Val Arg Ile Tyr Ser
50 55 60

Leu Pro Asp Leu Asn Leu Ile Thr Lys Glu Gln Leu Gly Gly Glu Ile
65 70 75 80

1005_005_PCT_SL17083606

Ile Pro Arg Ser Val Leu Met Cys Ser Phe Glu Gly Ile Ser Tyr Leu
85 90 95

Leu Cys Ala Leu Gly Asp Gly His Leu Leu Asn Phe Val Leu Ser Met
100 105 110

Ser Thr Gly Glu Leu Thr Asp Arg Lys Lys Val Ser Leu Gly Thr Gln
115 120 125

Pro Ile Thr Leu Arg Thr Phe Ser Ser Lys Asp Thr Thr His Val Phe
130 135 140

Ala Ala Ser Asp Arg Pro Thr Val Ile Tyr Ser Ser Asn Lys Lys Leu
145 150 155 160

Leu Tyr Ser Asn Val Asn Leu Lys Glu Val Ser His Met Cys Pro Phe
165 170 175

Asn Val Ala Ala Phe Pro Asp Ser Leu Ala Ile Ala Lys Glu Gly Glu
180 185 190

Leu Thr Ile Gly Thr Ile Asp Glu Ile
195 200

<210> 2397

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 2397

Leu Pro Gly Trp Phe Ser Glu Ile Ser Pro Leu Trp Pro Gly Glu Ala
1 5 10 15

His Ser Leu Lys Val Glu Lys Ile Leu Phe Gln Gly Lys Ser Asp Tyr
20 25 30

Gln Asn Val Leu Val Phe Gln Ser Ser Thr Tyr Gly Lys Val Leu Val
35 40 45

Leu Asp Gly Val Ile Gln Leu Thr Glu Arg Asp Glu Cys Ala Tyr Gln
50 55 60

Glu Met Ile Thr His Leu Pro Leu Cys Ser Ile Pro
65 70 75

<210> 2398

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 2398

Asn Thr Lys Val Val Ile Asp Tyr Gly Ser Val Pro Ile Phe Ile Arg
1 5 10 15

Leu Leu Ser Ser Pro Ser Asp Asp Val Arg Glu Gln Ala Val Trp Ala
20 25 30

1005_005_PCT_SL17083606

Leu Gly Asn Ile Ala Gly Asp Ser Pro Lys Tyr Arg Asp Leu Val Leu
35 40 45

Gly His Gly Ala Leu Val Ala Leu Leu Ala Gln Phe Asn Glu Gln Ala
50 55 60

Lys Leu Ser Met Leu Arg Asn Ala Thr Trp Thr Leu Ser Asn Phe Cys
65 70 75 80

Arg Gly Lys Pro Gln Pro Leu Phe Glu Gln Thr Lys Ala Ala Leu Pro
85 90 95

Thr Leu Gly Arg Leu Ile His Ser Asn Asp Glu Glu Val Leu Thr Asp
100 105 110

Ala Cys Trp Ala Leu Ser Tyr Leu Ser Asp Gly Thr Asn Asp Lys Ile
115 120 125

Gln Ala Val Ile Glu Ala Gly Val Cys Ser Arg Leu Val Glu Leu Leu
130 135 140

Leu His Ser Ser Pro Ser Val Leu Ile Pro Ala Leu Arg Thr Val Gly
145 150 155 160

Asn Ile Val Thr Gly Asp Asp Ile Gln Thr Gln Val Met Ile Asp His
165 170 175

<210> 2399

<211> 226

<212> PRT

<213> Zea mays

<400> 2399

Pro Leu Thr Pro Asp Asn Val Val Val Phe Pro Ser Arg Ser Val Ala
1 5 10 15

Ile Glu Asn Ala Leu Gln Leu Phe Ser Pro Ala Leu Ala Ile Val Asp
20 25 30

Glu His Leu Thr Arg His Leu Pro Lys Gln Trp Leu Thr Ser Leu Ala
35 40 45

Ile Glu Gly Arg Ala Asp Cys Asn His Ala Asp Gly Thr Val Thr Val
50 55 60

Ile Glu Ala Pro Arg Gln Ser Asp Leu Leu Ile Glu Leu Ile Arg Lys
65 70 75 80

Leu Gln Pro Gln Val Val Val Thr Gly Met Ala Gln Phe Glu Ala Ile
85 90 95

Thr Ser Ala Ala Phe Glu Asn Leu Leu Asn Val Thr Lys Asp Val Gly
100 105 110

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Ser Arg Leu Phe Leu Asp Ile Ser Glu His Leu Glu Leu Ser Ser Leu
115 120 125

Pro Ser Ser Asn Gly Val Leu Lys Tyr Leu Ala Gly Lys Thr Leu Pro
130 135 140

Ser His Ala Ala Ile Leu Cys Gly Leu Val Lys Asn Gln Val Tyr Ser
145 150 155 160

Asp Leu Glu Val Ala Phe Ala Ile Ser Glu Asp Ala Ala Val Tyr Lys
165 170 175

Ala Leu Ser Gln Thr Ile Glu Leu Leu Glu Gly His Thr Ser Leu Ile
180 185 190

Ser Gln His Tyr Tyr Gly Cys Leu Phe His Glu Leu Leu Ala Phe Gln
195 200 205

Ile Ala Asp Arg His Pro Gln Gln Glu Arg Gln Pro Ala Glu Val Ile
210 215 220

Pro Gln
225

<210> 2400

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2400

Leu Cys Ala Val Arg Ala Gly Ala Ala Val Ala Leu Met Pro Arg Phe
1 5 10 15

Glu Met Gly Ala Met Leu Gly Ala Ile Glu Arg Trp Arg Val Thr Val
20 25 30

Ala Ala Val Val Pro Pro Leu Val Leu Ala Leu Ala Lys Asn Pro Phe
35 40 45

Val Glu Arg His Asp Leu Ser Ser Ile Arg Ile Val Leu Ser Gly Ala
50 55 60

Ala Pro Leu Gly Lys Glu Leu Glu Asp Ala Leu Arg
65 70 75

<210> 2401

<211> 151

<212> PRT

<213> Zea mays

<400> 2401

Pro Val Asp Ala Ser Gln Pro Leu Ala Glu Gln Gly Pro Phe His Leu
1 5 10 15

Leu Ile His Lys Leu Tyr Gly Asp Asp Trp Arg Ala Gln Leu Val Ala
20 25 30

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Phe Ala Ala Arg His Pro Ala Val Pro Ile Val Asp Pro Pro His Ala
35 40 45

Ile Asp Arg Leu His Asn Arg Ile Ser Met Leu Gln Val Val Ser Glu
50 55 60

Leu Asp His Ala Ala Asp Gln Asp Ser Thr Phe Gly Ile Pro Ser Gln
65 70 75 80

Val Val Val Tyr Asp Ala Ala Ala Leu Ala Asp Phe Gly Leu Leu Ala
85 90 95

Ala Leu Arg Phe Pro Leu Ile Ala Lys Pro Leu Val Ala Asp Gly Thr
100 105 110

Ala Lys Ser His Lys Met Ser Leu Val Tyr His Arg Glu Gly Leu Gly
115 120 125

Lys Leu Arg Pro Pro Leu Val Leu Gln Glu Phe Val Asn His Gly Gly
130 135 140

Val Ile Phe Lys Val Tyr Val
145 150

<210> 2402

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2402

Ala Ile Ala Glu Leu Gln Gln Thr Leu Leu Asn Met Pro Ala Asp Val
1 5 10 15

Leu Gly Pro Thr Val Leu Ser Ser Leu Ser Ser Leu Ser Leu Ala Leu
20 25 30

Pro Asn Ala Pro Leu Ser Val Thr Gln Ala Ser Lys Glu Asn Pro Asp
35 40 45

Val Ser Lys Thr Leu Leu Leu Tyr Thr Arg Trp Ile His Tyr Thr Gly
50 55 60

Gln Lys Gln Ser Asn Asp Ile Lys Ser Leu Tyr Ser Arg Val Ala Asp
65 70 75 80

Leu Arg Pro Lys Trp Glu Lys Gly Phe Phe Cys Ile Ala Lys Phe Tyr
85 90 95

Asp Asp Leu Leu Val
100

<210> 2403

<211> 251

<212> PRT

<213> Zea mays

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<400> 2403

Ser Tyr Leu Leu Glu Thr Leu Asn Asp Arg Tyr Ser Lys Lys Leu Val
1 5 10 15

Gln Thr Tyr Ser Val Phe Pro Asn Gln Met Glu Thr Ser Asp Val Val
20 25 30

Val Gln Pro Tyr Asn Ser Leu Leu Thr Leu Lys Arg Leu Thr Leu Asn
35 40 45

Ala Asp Cys Val Val Val Leu Asp Asn Thr Ala Leu Asn Arg Ile Ala
50 55 60

Val Glu Arg Leu His Leu Ser Asn Pro Thr Phe Ala Gln Thr Asn Ser
65 70 75 80

Leu Val Ser Thr Val Met Ser Ala Ser Thr Thr Thr Leu Arg Tyr Pro
85 90 95

Gly Tyr Met Asn Asn Asp Leu Val Gly Leu Leu Ala Ser Leu Ile Pro
100 105 110

Thr Pro Arg Cys His Phe Leu Met Thr Gly Tyr Thr Pro Leu Thr Val
115 120 125

Glu Arg Gln Val Asn Met Ile Arg Lys Thr Thr Val Leu Asp Val Met
130 135 140

Arg Arg Leu Leu Gln Thr Lys Asn Val Met Val Ser Ser Tyr Ala Arg
145 150 155 160

Thr Lys Glu Ala Ser Gln Ala Lys Tyr Ile Ser Ile Leu Asn Ile Ile
165 170 175

Gln Gly Glu Val Asp Pro Thr Gln Val His Glu Ser Leu Gln Arg Ile
180 185 190

Arg Glu Arg Lys Leu Val Asn Phe Ile Asp Trp Ala Pro Ala Ser Ile
195 200 205

Gln Val Ala Leu Ser Arg Lys Ser Pro Tyr Val Gln Thr Thr His Arg
210 215 220

Val Ser Gly Leu Met Leu Ala Asn His Thr Ser Ile Arg His Leu Phe
225 230 235 240

Gly Lys Cys Leu Gly Gln Tyr Glu Lys Leu Arg
245 250

<210> 2404

<211> 201

<212> PRT

<213> Oryza sativa

1005_005_PCT_SL17083606

<400> 2404

Gly Tyr Pro Gln Ser Met Leu Asp Ile Leu Gly Arg Asn Asn Ile Ala
1 5 10 15

Ala Val Gln Gly Pro Leu His Arg Ala Met Arg Gly Ala Met Leu Ser
20 25 30

Leu Val Arg Pro Ala Met Ile Arg Ser Ser Leu Leu Pro Lys Ile Asp
35 40 45

Ala Phe Met Arg Ser His Leu Ala Ala Trp Ser Ser Ser Ser Ser Ser
50 55 60

Ala Val Val Asp Ile Gln Ala Lys Thr Lys Glu Met Ala Leu Leu Ser
65 70 75 80

Ala Leu Arg Gln Ile Ala Gly Val Ser Ala Gly Pro Leu Ser Asp Ala
85 90 95

Leu Lys Ala Glu Leu Tyr Thr Leu Val Leu Gly Thr Ile Ser Leu Pro
100 105 110

Ile Asn Leu Pro Gly Thr Asn Tyr Tyr Gln Gly Phe Lys Ala Arg Lys
115 120 125

Lys Leu Val Ala Met Leu Glu Gln Met Ile Ala Glu Arg Arg Ser Ser
130 135 140

Gly Gln Val His Asp Asp Met Leu Asp Ala Leu Leu Thr Gly Val Glu
145 150 155 160

Gly Thr Arg Glu Lys Leu Thr Asp Glu Gln Ile Ile Asp Leu Ile Ile
165 170 175

Thr Leu Ile Tyr Ser Gly Tyr Glu Thr Met Ser Thr Thr Ser Met Met
180 185 190

Ala Val Lys Tyr Leu Ser Asp His Pro
195 200

<210> 2405

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2405

Leu Asp Gly Thr Lys Leu Val Val Ser Gly Gly Cys Ala Asp Ser Gly
1 5 10 15

Val Leu Leu Ser Asp Thr Tyr Leu Leu Asp Val Thr Met Asp Lys Pro
20 25 30

Val Trp Arg Glu Val Pro Ala Ser Trp Thr Pro Pro Ser Arg Leu Gly
35 40 45

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 His Ser Met Ser Val Tyr Gly Gly Arg Lys Ile Leu Met Phe Gly Gly
 50 55 60

Leu Ala Lys Ser Gly Pro Leu Arg Leu Arg Ser Ser
 65 70 75

<210> 2406
 <211> 176
 <212> PRT
 <213> Oryza sativa

<400> 2406
 Met Met Glu Ile Asn Ser Glu Ala Thr Val Thr Leu Val Ser Val Val
 1 5 10 15

Thr Leu Pro Ile Leu Leu Ala Leu Leu Thr Arg Lys Ser Ser Ser Lys
 20 25 30

Lys Arg Arg Pro Pro Gly Pro Trp Asn Leu Pro Leu Val Gly Gly Leu
 35 40 45

Leu His Leu Leu Arg Ser Gln Pro Gln Val Ala Leu Arg Asp Leu Ala
 50 55 60

Gly Lys Tyr Gly Pro Val Met Phe Leu Arg Thr Gly Gln Val Asp Thr
 65 70 75 80

Val Val Ile Ser Ser Pro Ala Ala Ala Gln Glu Val Leu Arg Asp Lys
 85 90 95

Asp Val Thr Phe Ala Ser Arg Pro Ser Leu Leu Val Ser Glu Ile Phe
 100 105 110

Cys Tyr Gly Asn Leu Asp Ile Gly Phe Ala Pro Tyr Gly Ala Tyr Trp
 115 120 125

Arg Met Leu Arg Lys Leu Cys Thr Val Glu Leu Leu Ser Thr Lys Met
 130 135 140

Val Arg Gln Leu Ala Pro Ile Arg Asp Gly Glu Thr Leu Ala Leu Val
 145 150 155 160

Arg Asn Ile Glu Ala Ala Ala Gly Gly Lys Lys Pro Phe Thr Leu Ala
 165 170 175

<210> 2407
 <211> 126
 <212> PRT
 <213> Solanum lycopersicum

<400> 2407
 Asn Thr Thr Gly Leu Pro Thr Ile Asp Tyr Arg Ile Thr Asp Ala Met
 1 5 10 15

Ala Asp Pro Pro Asn Ala Lys Gln Lys His Val Glu Glu Leu Val Arg
 20 25 30

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Leu Pro Asn Ser Phe Leu Cys Tyr Thr Pro Ser Pro Glu Ala Gly Pro
35 40 45

Val Cys Pro Ala Pro Ala Leu Ser Asn Gly Phe Val Thr Phe Gly Ser
50 55 60

Phe Asn Asn Leu Ala Lys Ile Thr Pro Lys Val Leu Lys Val Trp Ala
65 70 75 80

Arg Ile Leu Ser Ala Val Pro His Ser Arg Leu Ile Val Lys Cys Lys
85 90 95

Pro Phe Cys Cys Asp Ser Val Arg Gln Arg Phe Leu Ser Ile Leu Glu
100 105 110

Gln Leu Gly Leu Glu Pro Gln Arg Val Asp Leu Leu Pro Leu
115 120 125

<210> 2408
<211> 276
<212> PRT
<213> Solanum lycopersicum

<400> 2408
Asn Thr Lys Val Val Ile Asp Tyr Gly Ser Val Pro Ile Phe Ile Arg
1 5 10 15

Leu Leu Ser Ser Pro Ser Asp Asp Val Arg Glu Gln Ala Val Trp Ala
20 25 30

Leu Gly Asn Ile Ala Gly Asp Ser Pro Lys Tyr Arg Asp Leu Val Leu
35 40 45

Gly His Gly Ala Leu Val Ala Leu Leu Ala Gln Phe Asn Glu Gln Ala
50 55 60

Lys Leu Ser Met Leu Arg Asn Ala Thr Trp Thr Leu Ser Asn Phe Cys
65 70 75 80

Arg Gly Lys Pro Gln Pro Leu Phe Glu Gln Thr Lys Ala Ala Leu Pro
85 90 95

Thr Leu Gly Arg Leu Ile His Ser Asn Asp Glu Glu Val Leu Thr Asp
100 105 110

Ala Cys Trp Ala Leu Ser Tyr Leu Ser Asp Gly Thr Asn Asp Lys Ile
115 120 125

Gln Ala Val Ile Glu Ala Gly Val Cys Ser Arg Leu Val Glu Leu Leu
130 135 140

Leu His Ser Ser Pro Ser Val Leu Ile Pro Ala Leu Arg Thr Val Gly
145 150 155 160

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Asn Ile Val Thr Gly Asp Asp Ile Gln Thr Gln Val Met Ile Asp His
165 170 175

His Ala Leu Pro Cys Leu Val Asn Leu Leu Thr Gln Asn Tyr Lys Lys
180 185 190

Ser Ile Lys Lys Glu Ala Cys Trp Thr Ile Ser Asn Ile Thr Ala Gly
195 200 205

Asn Arg Asn Gln Ile Gln Ile Val Ile Glu Ala Gly Ile Ile Ala Pro
210 215 220

Leu Val Tyr Leu Leu Gln Asn Ala Glu Phe Glu Ile Lys Lys Glu Ala
225 230 235 240

Ala Trp Ala Ile Ser Asn Ala Thr Ser Gly Gly Asn His Asp Gln Ile
245 250 255

Lys Phe Leu Val Ser Gln Gly Cys Ile Lys Pro Leu Cys Asp Leu Leu
260 265 270

Val Cys Pro Asp
275

<210> 2409

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2409

Gly Gly Cys Gly Arg Gln Gly Leu Leu Asn Asp Val Phe Met Leu Asp
1 5 10 15

Leu Asp Ala Gln Gln Pro Thr Trp Arg Glu Ile Pro Gly Leu Ala Pro
20 25 30

Pro Val Pro Arg Ser Trp His Ser Ser Cys Thr Leu Asp Gly Thr Lys
35 40 45

Leu Val Val Ser Gly Gly Cys Ala Asp Ser Gly Val Leu Leu Ser Asp
50 55 60

Thr Tyr Leu Leu Asp Val Thr Met Glu Arg Pro Val
65 70 75

<210> 2410

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2410

Met Gly Glu Leu Ala Asp Leu Val Val Val Pro Ser Gln Pro Pro Leu
1 5 10 15

Ala Gly Gly Arg Arg Asp Arg Leu Ala Ala Leu Leu Glu Leu Ala Ala
20 25 30

1005_005_PCT_SL17083606

Ala Asp Asp Val Asp Gly Leu Arg Gly Ala Leu Ala Glu Gly Gly Glu
35 40 45

Glu Ala Ala Glu Leu Ala Asp Gly Val Gly Leu Trp Tyr Gly Arg Ser
50 55 60

Lys Ala Tyr Glu Ala Arg Thr Pro Leu Met Val Ala Ala Thr Tyr Gly
65 70 75 80

Ser Ala Gly Val Val Ser Leu Leu Val Gly Leu Gly Gly Cys Val Asp
85 90 95

Val Asn Arg Arg Pro Gly Ala Asp Gly Ala Thr Ala Leu His Cys Ala
100 105 110

Ala Ser Gly Gly Ser Arg Asn Ala Val Ala Val Val Lys Leu Leu Leu
115 120 125

Ala Ala Gly Ala Asp Pro Ala Thr Pro Asp Ser Ala Gly Arg Phe Pro
130 135 140

Ala Asp Val Ile Leu Ala Pro
145 150

<210> 2411

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 2411

Asn Thr Lys Val Val Ile Asp Tyr Gly Ser Val Pro Ile Phe Ile Arg
1 5 10 15

Leu Leu Ser Ser Pro Ser Asp Asp Val Arg Glu Gln Ala Val Trp Ala
20 25 30

Leu Gly Asn Ile Ala Gly Asp Ser Pro Lys Tyr Arg Asp Leu Val Leu
35 40 45

Gly His Gly Ala Leu Val Ala Leu Leu Ala Gln Phe Asn Glu Gln Ala
50 55 60

Lys Leu Ser Met Leu Arg Asn Ala Thr Trp Thr Leu
65 70 75

<210> 2412

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2412

Ala Gly Ser Trp Val Gly Pro Tyr Ala Met Cys Arg Ala Trp Gln Thr
1 5 10 15

Leu Val Cys Thr Asn Arg Glu His His Glu Ala Val Asp Gly Asn Gly
20 25 30

Asn Phe Pro Met Ala Leu Tyr Val Val Ser Gly Asp Glu Asp Gly Glu
35 40 45

Arg Gly Gly Ala Pro Val Val Cys Ile Asp Val Ala Ala Gln Leu Cys
50 55 60

Cys Asp Phe Asn Lys Asn Gln Ser Thr Trp Ser Pro Ile Leu Leu Leu
65 70 75 80

Val Pro Leu Val Leu Gly Leu Asp Lys Leu Asn Pro Arg Tyr Ile Pro
85 90 95

Leu Leu Lys Glu Thr Leu Thr Phe Pro Gln Ser Leu Gly Ile Leu Gly
100 105 110

Gly Lys Pro Gly Thr Ser Thr Tyr Ile Ala Gly Val Gln Asp Asp Arg
115 120 125

Ala Leu Tyr Leu Asp Pro His Glu Val Gln Leu Ala Val Asp Ile Ala
130 135 140

Ala Asp Asn Leu Glu Ala Gly
145 150

<210> 2413

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2413

Ile Thr Ile Asp Asp Asp Glu Ala Thr Pro Glu Gly Cys Leu Pro Phe
1 5 10 15

Trp Asp Leu Ile Ala Asp Ala Asp Glu Gly Ser Val Pro Glu Val Ala
20 25 30

Ile Ser Pro Asp Asp Pro Val Ala Leu Pro Phe Ser Ser Gly Thr Thr
35 40 45

Gly Leu Pro Lys Gly Val Val Leu Thr His Arg Ser Val Val Ser Gly
50 55 60

Val Ala Gln Gln Val Asp Gly Glu Asn Pro Asn Leu His Met Gly Ala
65 70 75 80

Gly Asp Val Ala Leu Cys Val Leu Pro Leu Phe His Ile Phe Ser Leu
85 90 95

Asn Ser Val Leu Leu Cys Ala Val Arg Ala Gly Ala Ala Val Ala Leu
100 105 110

Met Pro Arg Phe Glu Met Gly Ala Met Leu Gly Ala Ile Glu Arg Trp
115 120 125

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Arg Val Thr Val Ala Ala Val Val Pro Pro Leu Val Leu Ala Leu Ala
130 135 140

Lys Asn Pro Phe Val Glu Arg His Asp Leu Ser Ser Ile Arg Ile Val
145 150 155 160

Leu Ser Gly Ala Ala Pro Leu Gly Lys Glu Leu Glu Asp Ala Leu Arg
165 170 175

<210> 2414

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 2414

Leu Leu Ser Ala His Val Ser Cys Leu Arg Ile Ala Thr Pro Val Asp
1 5 10 15

Gln Leu Pro Arg Ile Asp Ala Gln Leu Ala Gln Ser Gln Asn Val Val
20 25 30

Ala Lys Tyr Ser Val Leu Gly Gln Gly Gln Pro Pro Leu Asp Asp Lys
35 40 45

Asp Leu Asp Gln Phe Met Thr His Tyr Val Leu Leu Leu Ser Ser Phe
50 55 60

Lys Glu Gln Leu Gln Gln His Val Arg Val His Ala Met Glu Ala Val
65 70 75 80

Met Ala Cys Trp Glu Leu Glu Gln Ser Leu Gln Ser Leu Thr Gly Val
85 90 95

Ala Pro Gly Glu Gly
100

<210> 2415

<211> 101

<212> PRT

<213> Zea mays

<400> 2415

Leu Glu Val Glu Ala His Gln Leu Ser Pro Pro Ala Ile Ala Ile Val
1 5 10 15

Val Glu Cys Val Phe Ala Pro Phe Leu Gly Arg Glu Arg Asn Gln Ala
20 25 30

Val Val Asp Glu Asn Val Glu Lys Leu Lys Lys Val Leu Glu Val Tyr
35 40 45

Glu Ala Arg Leu Ala Thr Cys Thr Tyr Leu Ala Gly Asp Phe Leu Ser
50 55 60

Leu Ala Asp Leu Ser Pro Phe Thr Ile Met His Cys Leu Met Ala Thr
65 70 75 80

Glu Tyr Ala Ala Leu Val His Ala Leu Pro His Val Ser Ala Trp Trp
85 90 95

Gln Gly Leu Ala Ala
100

<210> 2416

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2416

Leu Ile Asn Cys Leu Ser Pro Asp Asn His Met Ala Tyr Pro Leu Glu
1 5 10 15

Pro Ala Ile Ser Ile Gln Val Leu Ser Leu Leu Cys Leu Ser Leu Ser
20 25 30

Val Tyr Pro Lys Thr Asn Leu Phe Ser Arg Ile Ser Lys Gln Val Leu
35 40 45

Ser Trp Ile Pro Trp Ile Cys Lys Gln Thr Thr Lys Ile Cys Met Phe
50 55 60

Ser Phe Asp Val Ser Leu Tyr Phe Glu Ala Val Gln Thr Val Met Leu
65 70 75 80

Leu Gln Ser Phe Leu Pro Gly His Thr Lys Leu Phe Glu Asp Glu Pro
85 90 95

Leu Leu Ile Gly Asn Gly Cys Thr Asp Phe Glu Tyr Pro Arg Tyr Ala
100 105 110

Asp Leu Ile Asn Leu Leu Lys Leu Val Ser Asp Asp Gly Tyr Leu Thr
115 120 125

Ser Gln Thr Cys Ser Glu Lys Leu Lys Cys Leu Ala Val Gln Ile Ile
130 135 140

Ala Lys Ile Gly Ser Arg Gln Asn Ala Glu Cys Asp Leu Gln Val Leu
145 150 155 160

Glu Leu Ala Ile Gln Ser Glu Thr Gly Glu Leu Gln Asn Glu Ala Leu
165 170 175

<210> 2417

<211> 176

<212> PRT

<213> Zea mays

<400> 2417

Val Cys Phe Ala Val Pro Glu Lys Glu Val Ala Val Val Ser Ala Glu
1 5 10 15

Leu His Asp Arg Phe Arg Glu Ala Leu Ala Ala Gly Arg Leu Ser Lys

20

25

30

Val Glu Val Ile Asn Gly Cys Ser Ile Leu Ala Ala Val Gly Leu Arg
 35 40 45

Met Ala Ser Thr Pro Gly Val Ser Ala Ile Leu Phe Asp Ala Leu Ala
 50 55 60

Lys Ala Asn Ile Asn Val Arg Ala Ile Ala Gln Gly Cys Ser Glu Tyr
 65 70 75 80

Asn Ile Thr Val Val Leu Lys Gln Gln Asp Cys Val Arg Ala Leu Arg
 85 90 95

Ala Ala His Ser Arg Phe Phe Leu Ser Lys Thr Thr Leu Ala Val Gly
 100 105 110

Ile Ile Gly Pro Gly Leu Ile Gly Gly Ala Leu Leu Asn Gln Leu Lys
 115 120 125

Asn Gln Thr Ala Val Leu Lys Glu Asn Met Asn Ile Asp Leu Arg Val
 130 135 140

Ile Gly Ile Thr Gly Ser Ser Thr Met Leu Leu Ser Asp Thr Gly Ile
 145 150 155 160

Asp Leu Thr Gln Trp Lys Gln Leu Leu Gln Lys Glu Ala Glu Pro Ala
 165 170 175

<210> 2418

<211> 226

<212> PRT

<213> Solanum lycopersicum

<400> 2418

Asn Thr Thr Gly Leu Pro Thr Ile Asp Tyr Arg Ile Thr Asp Ala Met
 1 5 10 15

Ala Asp Pro Pro Asn Ala Lys Gln Lys His Val Glu Glu Leu Val Arg
 20 25 30

Leu Pro Asn Ser Phe Leu Cys Tyr Thr Pro Ser Pro Glu Ala Gly Pro
 35 40 45

Val Cys Pro Ala Pro Ala Leu Ser Asn Gly Phe Val Thr Phe Gly Ser
 50 55 60

Phe Asn Asn Leu Ala Lys Ile Thr Pro Lys Val Leu Lys Val Trp Ala
 65 70 75 80

Arg Ile Leu Ser Ala Val Pro His Ser Arg Leu Ile Val Lys Cys Lys
 85 90 95

Pro Phe Cys Cys Asp Ser Val Arg Gln Arg Phe Leu Ser Ile Leu Glu
 100 105 110

Gln Leu Gly Leu Glu Pro Gln Arg Val Asp Leu Leu Pro Leu Ile Leu
115 120 125

Leu Asn His Asp His Met Gln Ala Tyr Ser Leu Met Asp Ile Ser Leu
130 135 140

Asp Thr Phe Pro Tyr Ala Gly Thr Thr Thr Thr Cys Glu Ser Leu Tyr
145 150 155 160

Met Gly Val Pro Cys Val Thr Met Gly Gly Ser Val His Ala His Asn
165 170 175

Val Gly Val Ser Leu Leu Lys Thr Val Gly Leu Glu Asn Leu Val Ala
180 185 190

Arg Asn Glu Asp Glu Tyr Val Glu Ser Ala Ile Gln Leu Ala Ser Asp
195 200 205

Val Thr Ser Leu Ser Asn Leu Arg Met Ser Leu Arg Glu Leu Met Ser
210 215 220

Lys Ser
225

<210> 2419
<211> 126
<212> PRT
<213> Zea mays

<400> 2419
Arg Val Val Gln Glu Ala Phe Phe Leu Ala Ser Ser Gly Arg Pro Gly
1 5 10 15

Pro Val Leu Val Asp Ile Pro Lys Asp Ile Gln Gln Gln Met Ala Val
20 25 30

Pro Val Trp Asp Lys Pro Met Ser Leu Pro Gly Tyr Ile Ala Arg Leu
35 40 45

Pro Lys Pro Pro Ala Thr Glu Leu Leu Glu Gln Val Leu Arg Leu Val
50 55 60

Gly Glu Ser Arg Arg Pro Val Leu Tyr Val Gly Gly Gly Cys Ala Ala
65 70 75 80

Ser Gly Glu Glu Leu Arg Arg Phe Val Glu Leu Thr Gly Ile Pro Val
85 90 95

Thr Thr Thr Leu Met Gly Leu Gly Asn Phe Pro Ser Asp Asp Pro Leu
100 105 110

Ser Leu Arg Met Leu Gly Met His Gly Thr Val Tyr Ala Asn
115 120 125

<210> 2420
 <211> 76
 <212> PRT
 <213> Zea mays

<400> 2420
 Gly Thr Asp Met Ser Val Thr Arg Gly Ser Asp Leu Val Ile Val Thr
 1 5 10 15

Ala Gly Ala Arg Gln Ile Gln Gly Glu Thr Arg Leu Asp Leu Leu Gln
 20 25 30

Arg Asn Val Ala Leu Phe Arg Lys Ile Val Pro Pro Leu Ala Glu Gln
 35 40 45

Ser His Asp Ala Leu Leu Leu Val Val Ser Asn Pro Val Asp Val Leu
 50 55 60

Thr Tyr Val Ala Trp Lys Leu Ser Gly Phe Pro Ala
 65 70 75

<210> 2421
 <211> 101
 <212> PRT
 <213> Oryza sativa

<400> 2421
 Arg Val Asn Asp Gln Tyr Leu Leu Asn Leu Leu Leu Lys Ile Asn Ala
 1 5 10 15

Lys Leu Gly Gly Ile Asn Ser Leu Leu Gln Ile Glu Ala Ser Pro Ser
 20 25 30

Ile Pro Leu Val Ser Lys Thr Pro Thr Ile Ile Leu Gly Met Asp Val
 35 40 45

Ser His Gly Gln Pro Gly Gln Ser Asp Arg Pro Ser Ile Ala Ala Val
 50 55 60

Val Ser Ser Arg Gln Trp Pro Leu Ile Ser Lys Tyr Arg Ala Ser Val
 65 70 75 80

His Thr Gln Ser Pro Lys Leu Glu Met Met Ser Ser Leu Phe Lys Pro
 85 90 95

Arg Gly Thr Glu Asp
 100

<210> 2422
 <211> 126
 <212> PRT
 <213> Solanum lycopersicum

<400> 2422
 Gly Leu Gln Leu Asn Met Glu Leu Gln Leu Ala Ser Gln Leu Ser Glu
 1 5 10 15

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Lys His Val Leu Arg Thr Gln Thr Leu Leu Cys Asp Met Leu Leu Arg
20 25 30

Asp Ser Pro Pro Gly Ile Val Thr Gln Ser Pro Ser Ile Met Asp Leu
35 40 45

Val Lys Cys Asp Gly Ala Ala Leu Tyr Tyr Gln Arg Lys Tyr Tyr Pro
50 55 60

Leu Gly Val Thr Pro Thr Glu Ala Gln Ile Lys Asp Ile Val Glu Trp
65 70 75 80

Leu Leu Ala Tyr His Gly Asp Ser Thr Gly Leu Ser Thr Asp Ser Leu
85 90 95

Ala Asp Ala Gly Tyr Pro Gly Ala Ala Ser Leu Gly Asp Ala Val Cys
100 105 110

Gly Met Ala Val Ala Tyr Ile Thr Ser Lys Asp Phe Leu Phe
115 120 125

<210> 2423

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2423

Pro Ala Arg Arg Leu Val Ser Arg Leu Leu Asp Pro Asn Pro Ala Thr
1 5 10 15

Arg Leu Ala Val Ala Glu Leu Ala Thr His Pro Trp Phe Lys Arg Ser
20 25 30

Leu Ser Leu Asp Ser Gln Leu Gly Ser Leu Leu Gly Gly Gln Pro Glu
35 40 45

Arg Glu Leu Ala Phe Gln Ala Pro Pro Pro Leu Asn Ala Phe Asp Ile
50 55 60

Ile Ser Met Ser Pro Gly Leu Asp Leu Ser Gly Leu
65 70 75

<210> 2424

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2424

Gln Cys Leu Ala Pro Thr Lys Ile Asn Asp Gln Tyr Leu Thr Asn Val
1 5 10 15

Leu Leu Lys Ile Asn Ala Lys Leu Gly Gly Leu Asn Ser Leu Leu Gln
20 25 30

Ile Glu Arg Asn Gln Ala Ile Pro Leu Leu Ser Lys Thr Pro Thr Ile
35 40 45

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Ile Leu Gly Met Asp Val Ser His Gly Ser Pro Gly Arg Asp Asp Val
50 55 60

Pro Ser Val Ala Ala Val Val Ser Ser Leu Glu Trp Pro Leu Ile Ser
65 70 75 80

Lys Tyr Lys Ala Ser Val Cys Thr Gln Ser Pro Arg Leu Glu Met Ile
85 90 95

Asp Ser Leu Phe Lys
100

<210> 2425

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2425

Met Glu Glu Leu Val Tyr Gly Phe Asn Leu Trp Asp Asn Ile Leu Tyr
1 5 10 15

Leu Ala Val Ser Tyr Val Asp Arg Phe Leu Ser Arg Asn Val Val Asn
20 25 30

Arg Glu Arg Leu Gln Leu Leu Gly Thr Ser Ala Leu Phe Val Ala Ser
35 40 45

Lys Tyr Glu Asp Arg Cys His Pro Ser Ala Arg Phe Phe Ser Ser Ile
50 55 60

Thr Ala Asp Thr Tyr Thr Thr Gln Gln Val Val Ala Met Glu Ala Asn
65 70 75 80

Ile Leu Ser Phe Leu Asn Phe Gln Met Gly Ser Pro Thr Val Ile Thr
85 90 95

Phe Leu Arg Arg Phe Leu Phe Ser Cys Arg Gly Ser Asn Arg Pro Ile
100 105 110

Asn Ile Arg Leu Glu Leu Met Cys Ile Tyr Leu Ala Glu Leu Ser Leu
115 120 125

Leu Asp Asp Tyr Asn Ile Arg Phe Leu Pro Ser Ile Val Ala Ala Ala
130 135 140

Cys Leu Phe Val Gly Lys Phe
145 150

<210> 2426

<211> 201

<212> PRT

<213> Oryza sativa

<400> 2426

Arg Val Ser Val Leu Asn Asp Gly Ser Ile Val Val Glu Val Gly Gly
1 5 10 15

Val Glu Leu Gly Gln Gly Leu Trp Thr Lys Val Gln Gln Met Thr Ala
20 25 30

Phe Ala Leu Gly Gln Leu Trp Pro Lys Gly Cys Glu Gly Leu Leu Asp
35 40 45

Arg Ile Arg Val Leu Gln Ser Asp Thr Leu Asn Leu Ile Gln Gly Gly
50 55 60

Leu Thr Ala Gly Ser Thr Thr Ser Glu Ser Ser Cys Ala Ala Thr Leu
65 70 75 80

Gln Ala Cys Asn Met Leu Ile Glu Arg Leu Lys Pro Val Met Glu Arg
85 90 95

Leu Gln Leu Gln Ser Asp Thr Val Ser Trp Asp Thr Leu Ile Ser Gln
100 105 110

Ala Ser Gln Glu Asn Ile Asn Leu Ser Ala Ser Ala Tyr Trp Val Pro
115 120 125

Glu Gln Asp Ser Asn Phe Tyr Leu Asn Tyr Gly Ala Gly Thr Ser Glu
130 135 140

Val Glu Val Asp Leu Leu Thr Gly Ala Ile Thr Ile Ile Arg Ser Asp
145 150 155 160

Leu Ile Tyr Asp Cys Gly Lys Ser Leu Asn Pro Ala Val Asp Leu Gly
165 170 175

Gln Ile Glu Gly Ser Phe Ile Gln Gly Ile Gly Phe Phe Ile Tyr Glu
180 185 190

Glu His Gln Thr Asn Ser Asp Gly Leu
195 200

<210> 2427

<211> 276

<212> PRT

<213> Oryza sativa

<400> 2427

Met Gln Phe Phe Ala Lys Gln Asn Cys Gln Val Asn Leu Leu Thr Asn
1 5 10 15

Asn Pro Ser Ser Asn Pro Arg Phe Ile Met Glu Ile Asn Ser Ala Ala
20 25 30

Thr Leu Thr Leu Val Ser Leu Leu Thr Leu Pro Ile Leu Leu Ala Leu
35 40 45

Leu Thr Arg Lys Ser Ser Ser Lys Lys Arg Arg Pro Pro Gly Pro Trp
50 55 60

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Asn Leu Pro Leu Val Gly Gly Leu Leu His Leu Leu Arg Ser His Pro
65 70 75 80

Gln Val Ala Leu Arg Glu Leu Ala Ser Lys Tyr Gly Pro Val Met Phe
85 90 95

Leu Arg Met Gly Gln Ile Asp Thr Val Val Val Ser Ser Pro Ala Ala
100 105 110

Ala Gln Glu Val Leu Arg Asp Lys Asp Val Met Phe Ala Ser Arg Pro
115 120 125

Ser Leu Leu Val Ser Glu Ile Phe Cys Tyr Asp Asn Leu Asp Val Gly
130 135 140

Phe Ala Pro Tyr Gly Ala Tyr Trp Arg Met Leu Arg Lys Leu Cys Thr
145 150 155 160

Val Glu Leu Leu Ser Thr Lys Val Val Arg Gln Leu Ala Pro Val Arg
165 170 175

Asn Asp Glu Thr Leu Thr Leu Val Arg Asn Ile Lys Ala Ala Ser Ser
180 185 190

Gly His Gly Gly Gly Gly Gly Lys Lys Pro Val Thr Leu Ala Arg Leu
195 200 205

Leu Thr Thr Cys Thr Asn Thr Ile Thr Ala Lys Ala Ala Phe Gly Gln
210 215 220

Ala Cys Gly Val Glu Leu Gln Glu Gln Phe Leu Thr Ala Leu Asp Val
225 230 235 240

Gly Leu Lys Phe Ser Gly Gly Phe Cys Phe Gly Asp Leu Phe Pro Ser
245 250 255

Leu Arg Phe Ile Asp Ala Met Thr Gly Leu Arg Ser Arg Leu Trp Arg
260 265 270

Ala Arg Gly Gln
275

<210> 2428

<211> 201

<212> PRT

<213> Oryza sativa

<400> 2428

Gln Pro Pro Pro Thr Thr Pro Pro Pro Ala Pro Arg Arg Arg Asp Pro
1 5 10 15

Arg Tyr Ala Gly Val Arg Arg Gly Asp Val Arg Thr Leu Thr Ala Glu
20 25 30

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Lys Ala Ala Ala Ala Ala Ala Val Pro Thr Ala Ala Gln Val His Gly
35 40 45

Ser Lys Ser Ala Ala Ser Ala Thr Thr Leu Arg Trp Ser Gly Met Val
50 55 60

Ser Val Ala Ala Ile Val Leu Cys Phe Ser Ser Leu Val Arg Ser Asn
65 70 75 80

Ser Ser Leu His Asp Gln Val His His Leu Lys Ala Gln Leu Ala Glu
85 90 95

Ala Thr Thr Lys Leu Gln Ser Cys Ile Thr Glu Ser Ser Met Asp Met
100 105 110

Ser Ser Ile Leu Ser Tyr Gln Ser Asn Asn Ser Thr Ser Gln Asn Arg
115 120 125

Gly Leu Lys Asn Phe Ser Leu Leu Leu Ser Leu Ser Thr Leu Tyr Ala
130 135 140

Pro Leu Leu Ile Leu Lys Tyr Met Asp Leu Phe Leu Lys Leu Arg Ser
145 150 155 160

Ser Gln Asp Ser Glu Glu Glu Val Pro Ile Asn Lys Arg Leu Ala Tyr
165 170 175

Arg Val Asp Ile Phe Leu Ser Leu Gln Pro Tyr Ala Lys Pro Leu Val
180 185 190

Leu Leu Val Ala Thr Leu Leu Leu Ile
195 200

<210> 2429

<211> 101

<212> PRT

<213> Zea mays

<400> 2429

Gly Leu Ser Cys Ala Tyr Glu Leu Ser Lys Asp Pro Ala Val Ser Ile
1 5 10 15

Ala Ile Val Glu Gln Ser Val Ser Pro Gly Gly Gly Ala Trp Leu Gly
20 25 30

Gly Gln Leu Phe Ser Ala Met Val Val Arg Lys Pro Ala His Leu Phe
35 40 45

Leu Asp Glu Leu Gly Val Ala Tyr Asp Glu Ala Glu Asp Tyr Val Val
50 55 60

Ile Lys His Ala Ala Leu Phe Thr Ser Thr Val Met Ser Leu Leu Leu
65 70 75 80

Ala Arg Pro Asn Val Lys Leu Phe Asn Ala Val Ala Val Glu Asp Leu

Ile Val Arg Gly Gly
100

<210> 2430
<211> 201
<212> PRT
<213> Oryza sativa

<400> 2430
Met Val Leu Val Ala Ile Gly Val Val Val Ala Ala Ala Val Val Val
1 5 10 15

Ser Ser Leu Leu Leu Arg Trp Asn Glu Val Arg Tyr Ser Arg Lys Arg
20 25 30

Gly Leu Pro Pro Gly Thr Met Gly Trp Pro Leu Phe Gly Glu Thr Thr
35 40 45

Glu Phe Leu Lys Gln Gly Pro Ser Phe Met Lys Ala Arg Arg Leu Arg
50 55 60

Tyr Gly Ser Val Phe Arg Thr His Ile Leu Gly Cys Pro Thr Val Val
65 70 75 80

Cys Met Glu Ala Glu Leu Asn Arg Arg Ala Leu Ala Ser Glu Gly Arg
85 90 95

Gly Phe Val Pro Gly Tyr Pro Gln Ser Met Leu Asp Ile Leu Gly Arg
100 105 110

Asn Asn Ile Ala Ala Val Gln Gly Pro Leu His Arg Ala Met Arg Gly
115 120 125

Ala Met Leu Ser Leu Val Arg Pro Ala Met Ile Arg Ser Ser Leu Leu
130 135 140

Pro Lys Ile Asp Ala Phe Met Arg Ser His Leu Ala Ala Trp Ser Ser
145 150 155 160

Ser Ser Ser Ser Ala Val Val Asp Ile Gln Ala Lys Thr Lys Glu Met
165 170 175

Ala Leu Leu Ser Ala Leu Arg Gln Ile Ala Gly Val Ser Ala Gly Pro
180 185 190

Leu Ser Asp Ala Leu Lys Ala Glu Leu
195 200

<210> 2431
<211> 126
<212> PRT
<213> Oryza sativa

<400> 2431

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Leu Leu Pro Tyr Leu Val Leu Asn Val Val Cys Tyr Gly Thr Pro Glu
1 5 10 15

Ala Arg Gln Ser Ile Thr Glu Glu Ile Leu Ser Val Leu Asn Ala Ala
20 25 30

Ala Ser Glu Ser Ser Gly Ala Ile Val His Gly Ile Thr Gly Gly Gln
35 40 45

Ser Glu Val Cys Ile Gln Ala Val Phe Thr Leu Leu Asp Asn Leu Gly
50 55 60

Gln Trp Val Asp Asp Leu Lys Gln Glu Ile Ala Leu Ser Gln Ser Asn
65 70 75 80

Tyr Ala Met Ala Gly Arg Gln Gly Gly Lys Leu Arg Asp Glu Ser Asn
85 90 95

Ser Met Tyr Asp Gln Asp Gln Leu Leu Val Gln Cys Ser Asn Val Ala
100 105 110

Glu Leu Leu Ala Ala Ile Pro Lys Val Thr Leu Ala Lys Ala
115 120 125

<210> 2432

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2432

Leu Lys Pro Glu Asn Leu Leu Leu Asp Ser His Gly Ala Leu Lys Val
1 5 10 15

Ser Asp Phe Gly Leu Ser Ala Phe Ala Pro Gln Thr Lys Glu Asp Gly
20 25 30

Leu Leu His Thr Ala Cys Gly Thr Pro Asn Tyr Val Ala Pro Glu Val
35 40 45

Leu Ala Asp Lys Gly Tyr Asp Gly Met Ala Ala Asp Val Trp Ser Cys
50 55 60

Gly Ile Ile Leu Phe Val Leu Met Ala Gly Tyr Leu
65 70 75

<210> 2433

<211> 276

<212> PRT

<213> Oryza sativa

<400> 2433

Val Val Arg Ile Asn Val Pro Pro Gly Pro Phe Met Ala Arg Asp Pro
1 5 10 15

Arg Val Val Ala Leu Leu Asp Ala Lys Ser Phe Pro Val Leu Phe Asp
20 25 30

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Val Ala Lys Val Glu Lys Arg Asp Val Phe Thr Gly Thr Phe Met Pro
35 40 45

Ser Thr Ser Leu Thr Gly Gly Tyr Arg Val Cys Ala Tyr Leu Asp Pro
50 55 60

Ser Glu Pro Asn His Ala Lys Ile Lys Gln Leu Leu Leu Ser Leu Leu
65 70 75 80

Val Ser Arg Lys Asp Ala Phe Val Pro Val Phe Arg Ser Asn Phe Gly
85 90 95

Ala Leu Leu Asp Thr Val Glu Ser Gln Leu Ala Ser Gly Gly Gly Lys
100 105 110

Ser Asp Phe Thr Ala Leu Asn Asp Ala Thr Ser Phe Glu Phe Ile Gly
115 120 125

Glu Ala Tyr Phe Gly Val Arg Pro Ser Ala Ser Ser Ser Leu Gly Thr
130 135 140

Gly Gly Pro Thr Lys Ala Ala Leu Trp Leu Leu Trp Gln Leu Ala Pro
145 150 155 160

Leu Thr Thr Leu Gly Leu Pro Met Ile Ile Glu Asp Pro Leu Leu His
165 170 175

Thr Leu Pro Leu Pro Pro Phe Leu Ile Ser Ser Asp Tyr Lys Ala Leu
180 185 190

Tyr Ala Tyr Phe Ala Ala Ala Ala Ser Gln Ala Leu Asp Ala Ala Glu
195 200 205

Gly Leu Gly Leu Ser Arg Glu Glu Ala Cys His Asn Leu Leu Phe Ala
210 215 220

Thr Val Phe Asn Ser Tyr Gly Gly Phe Lys Leu Leu Leu Pro Gln Ile
225 230 235 240

Leu Ser Arg Val Ala Gln Ala Gly Glu Lys Leu His Glu Arg Leu Ala
245 250 255

Ala Glu Ile Arg Ser Ala Val Ala Asp Ala Gly Gly Asn Val Thr Leu
260 265 270

Ala Ala Leu Glu
275

<210> 2434

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 2434

1005_005_PCT_SL17083606

Arg Leu Tyr Arg Glu Arg Leu Leu Phe Leu Gly Gln Gly Ile Gly Thr
1 5 10 15

Glu Leu Ser Asn Gln Leu Ile Gly Leu Met Leu Tyr Leu Ser Met Glu
20 25 30

Asp Glu Asn Lys Asp Leu Tyr Leu Phe Val Asn Ser Pro Gly Gly Trp
35 40 45

Val Ile Pro Gly Ile Ala Ile Tyr Asp Thr Met Gln Phe Val Arg Pro
50 55 60

Asp Ile His Thr Ile Cys Leu Gly Leu Ala Ala Ser
65 70 75

<210> 2435

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2435

Gly Met Thr Thr Ile Lys Leu Arg Pro His Cys Gly Glu Ala Gly Asp
1 5 10 15

Ile Asp His Leu Ala Ala Ala Phe Leu Thr Ser His Asn Ile Ala His
20 25 30

Gly Val Asn Leu Lys Lys Ser Pro Val Leu Gln Tyr Leu Tyr Tyr Leu
35 40 45

Ala Gln Ile Gly Leu Ala Met Ser Pro Leu Ser Asn Asn Ser Leu Phe
50 55 60

Ile Asp Tyr His Arg Asn Pro Phe Pro Thr Phe Phe Leu Arg Gly Leu
65 70 75 80

Asn Val Ser Leu Ser Thr Asp Asp Pro Leu Gln Ile His Leu Thr Lys
85 90 95

Glu Pro Leu Val Glu Glu Tyr Ser Ile Ala Ala Ser Leu Trp Lys Leu
100 105 110

Ser Ser Cys Asp Leu Cys Glu Ile Ala Arg Asn Ser Val Tyr
115 120 125

<210> 2436

<211> 101

<212> PRT

<213> Zea mays

<400> 2436

Val Val Glu Leu Leu Pro Phe Val Tyr Thr Pro Thr Val Gly Glu Ala
1 5 10 15

Cys Gln Lys Tyr Gly Ser Ile Phe Gly Arg Pro Gln Gly Leu Tyr Val
20 25 30

1005_005_PCT_SL17083606

Ser Leu Lys Asp Lys Gly Lys Val Leu Glu Val Leu Arg Asn Trp Pro
35 40 45

His Arg Asn Ile Gln Val Ile Cys Val Thr Asp Gly Glu Arg Ile Leu
50 55 60

Gly Leu Gly Asp Leu Gly Cys Gln Gly Met Gly Ile Pro Val Gly Lys
65 70 75 80

Leu Ala Leu Tyr Thr Ala Leu Gly Gly Val Asp Pro Ser Val Cys Leu
85 90 95

Pro Ile Thr Ile Asp
100

<210> 2437

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2437

Ser Ile Asp Pro Ala Ala Arg Ala Glu Ser Val Ser Trp Ile Leu Lys
1 5 10 15

Val Gln Glu Tyr Asn Gly Phe Leu Pro Leu Thr Ala Tyr Leu Ala Val
20 25 30

Asn Tyr Met Asp Arg Phe Leu Ser Leu Arg His Leu Pro Glu Gly Gln
35 40 45

Gly Trp Ala Met Gln Leu Leu Ala Val Ala Cys Leu Ser Leu Ala Ala
50 55 60

Lys Met Glu Glu Thr Leu Val Pro Ser Leu Leu Asp
65 70 75

<210> 2438

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2438

Met Gln Phe Phe Ala Lys Gln Asn Cys Gln Val Asn Leu Leu Thr Asn
1 5 10 15

Asn Pro Ser Ser Asn Pro Arg Phe Ile Met Glu Ile Asn Ser Ala Ala
20 25 30

Thr Leu Thr Leu Val Ser Leu Leu Thr Leu Pro Ile Leu Leu Ala Leu
35 40 45

Leu Thr Arg Lys Ser Ser Ser Lys Lys Arg Arg Pro Pro Gly Pro Trp
50 55 60

Asn Leu Pro Leu Val Gly Gly Leu Leu His Leu Leu Arg Ser His Pro
65 70 75 80

1005_005_PCT_SL17083606

Gln Val Ala Leu Arg Glu Leu Ala Ser Lys Tyr Gly Pro Val Met Phe
85 90 95

Leu Arg Met Gly Gln Ile Asp Thr Val Val Val Ser Ser Pro Ala Ala
100 105 110

Ala Gln Glu Val Leu Arg Asp Lys Asp Val Met Phe Ala Ser Arg Pro
115 120 125

Ser Leu Leu Val Ser Glu Ile Phe Cys Tyr Asp Asn Leu Asp Val Gly
130 135 140

Phe Ala Pro Tyr Gly Ala Tyr Trp Arg Met Leu Arg Lys Leu Cys Thr
145 150 155 160

Val Glu Leu Leu Ser Thr Lys Val Val Arg Gln Leu Ala Pro Val Arg
165 170 175

<210> 2439

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 2439

Val Leu Leu Ala Thr Gly Gly Gly His Leu Val Tyr Leu Glu Ile Gly
1 5 10 15

Asp Gly Val Leu Asn Glu Val Lys Tyr Ala Lys Leu Asp Tyr Asp Ile
20 25 30

Ser Cys Leu Asp Ile Asn Pro Ile Gly Glu Asn Pro Asn Tyr Ser Asn
35 40 45

Ile Ala Ala Val Gly Met Trp Thr Asp Ile Ser Val Arg Ile Tyr Ser
50 55 60

Leu Pro Asp Leu Asn Leu Ile Thr Lys Glu Gln Leu Gly Gly Glu Ile
65 70 75 80

Ile Pro Arg Ser Val Leu Met Cys Ser Phe Glu Gly Ile Ser Tyr Leu
85 90 95

Leu Cys Ala Leu Gly
100

<210> 2440

<211> 201

<212> PRT

<213> Oryza sativa

<400> 2440

Pro Ala Thr Leu Leu Tyr Ser Ser Gly Thr Thr Gly Pro Ser Lys Gly
1 5 10 15

Val Val Ala Thr His Arg Ser Leu Ile Ser Met Val Gln Ile Ile Met

20

25

30

Thr Arg Phe Arg Leu Glu Gly Ser Asp Lys Thr Glu Thr Phe Leu Cys
 35 40 45

Thr Val Pro Met Phe His Val Tyr Gly Leu Val Ala Phe Ala Thr Gly
 50 55 60

Leu Leu Gly Cys Gly Ala Thr Val Val Val Leu Ser Lys Tyr Glu Leu
 65 70 75 80

Pro Glu Met Leu Arg Ser Ile Asn Ala Tyr Gly Val Thr Tyr Leu Pro
 85 90 95

Leu Val Pro Pro Ile Leu Val Ala Met Val Ala His Pro Lys Pro Leu
 100 105 110

Pro Leu Gly Gln Met Arg Lys Val Leu Ser Gly Gly Ala Pro Leu Gly
 115 120 125

Lys Glu Leu Ile Glu Gly Phe Arg Glu Lys Tyr Pro Gln Val Glu Ile
 130 135 140

Leu Gln Gly Tyr Gly Leu Thr Glu Ser Thr Ala Ile Gly Ala Ser Thr
 145 150 155 160

Asp Ser Ala Glu Glu Ser Arg Arg Tyr Gly Thr Ala Gly Leu Leu Ser
 165 170 175

Pro Asn Thr Glu Ala Lys Ile Val Asp Pro Asp Ser Gly Glu Ala Leu
 180 185 190

Pro Val Asn Arg Thr Gly Glu Leu Trp
 195 200

<210> 2441

<211> 226

<212> PRT

<213> Oryza sativa

<400> 2441

Met Glu Thr Glu Leu His Leu Ala Ala Gly Tyr Cys Ala Ala Thr Gly
 1 5 10 15

Val Tyr Arg Ser Gly His Pro Pro Gln Phe Ala Ala Ala Ala Ala Leu
 20 25 30

Ser Phe Pro Glu Tyr Ile Leu Pro His Met Leu Leu Pro Gly Arg Arg
 35 40 45

Ala Arg Pro Ala Phe Val Asp Ala Ser Thr Gly Ala Ala Leu Ser Phe
 50 55 60

Ala Gly Leu Arg Ala Leu Ser Leu Arg Val Ala Arg Ala Leu Ala Ala
 65 70 75 80

Ala Gly Leu Arg Arg Gly Arg Val Ala Leu Leu Leu Ser Pro Asn Ser
85 90 95

Leu His Phe Pro Ala Leu Ser Leu Ala Val Leu Ser Leu Gly Ala Val
100 105 110

Leu Ser Ala Ala Asn Pro Leu Leu Thr Pro Asp Glu Leu Ala Arg Gln
115 120 125

Ala Asp Asp Ala Lys Pro Phe Leu Ala Leu Val Thr Gly Glu Leu Ala
130 135 140

Pro Lys Leu Arg Ser Ile Ala Pro Asp Val Lys Leu Val Leu Val Glu
145 150 155 160

Gln Leu Leu Ala Asp Val Ala Ala Glu Val Asp Asp Asp Glu Thr Leu
165 170 175

Asp Leu Pro Ala Ala Asn Ile Gly Arg Asp Asp Ala Ala Leu Leu Phe
180 185 190

Tyr Ser Ser Gly Thr Thr Gly Arg Ser Lys Gly Val Val Ser Thr His
195 200 205

Gly Asn Ala Ile Ala Met Ala Ala Ser Leu Glu Arg Ala Trp Gly Gly
210 215 220

Gly Gly
225

<210> 2442
<211> 76
<212> PRT
<213> Oryza sativa

<400> 2442
Ile Leu Thr Gly Phe Lys Met His Ala Arg Gly Trp Ile Ser Ile Tyr
1 5 10 15

Cys Met Pro Pro Arg Pro Cys Phe Lys Gly Ser Ala Pro Ile Asn Leu
20 25 30

Ser Asp Arg Leu Asn Gln Val Leu Arg Trp Ala Leu Gly Ser Val Glu
35 40 45

Ile Leu Leu Ser Arg His Cys Pro Ile Trp Tyr Gly Tyr Asn Gly Arg
50 55 60

Leu Lys Leu Leu Glu Arg Leu Ala Tyr Ile Asn Thr
65 70 75

<210> 2443
<211> 76
<212> PRT

<213> Oryza sativa

<400> 2443

Phe Met Gly Thr Val Ser Ala Val Gln Val Ala Asp Pro Ile Arg Trp
 1 5 10 15

Pro Asn Ser Pro Trp Arg Leu Leu Gln Val Ser Trp Asp Glu Pro Asp
 20 25 30

Leu Leu Gln Asn Val Lys Arg Val Ser Pro Trp Leu Val Glu Leu Val
 35 40 45

Ser Asn Met Pro Ala Ile His Leu Ala Pro Phe Ser Pro Pro Arg Lys
 50 55 60

Lys Leu Cys Val Pro Leu Tyr Pro Glu Leu Pro Ile
 65 70 75

<210> 2444

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2444

Met Arg Gly Ala Met Lys Pro Ser Ile Val His Cys Leu Lys Leu Leu
 1 5 10 15

Met Leu Leu Ala Leu Gly Gly Val Thr Met His Val Pro Asp Glu Asp
 20 25 30

Asp Val Val Ala Ser Leu Gly Ala Leu Arg Leu Asp Gly His Phe Ser
 35 40 45

Phe Asp Asp Ala His Ala Ala Arg Asp Phe Gly Asn Arg Cys Ser
 50 55 60

Leu Leu Pro Ala Ala Val Leu His Pro Gly Ser Val Ser Asp Val Ala
 65 70 75 80

Ala Thr Val Arg Arg Val Phe Gln Leu Gly Arg Ser Ser Pro Leu Thr
 85 90 95

Val Ala Ala Arg Gly His Gly His Ser Leu Leu Gly Gln Ser Gln Ala
 100 105 110

Ala Gly Gly Ile Val Val Lys Met Glu Ser Leu Ala Ala Ala Ala Ala
 115 120 125

Arg Ala Val Arg Val His Gly Gly Ala Ser Pro His Val Asp Ala Pro
 130 135 140

Gly Gly Glu Leu Trp Ile Asn
 145 150

<210> 2445

<211> 101

<212> PRT

<213> *Oryza sativa*

<400> 2445

Met Glu Ala Ala Ala Met Glu Ala Gly Arg Lys Leu Ala Ala Arg
 1 5 10 15

His Pro His Gly Arg Ser Arg Thr Ala His Asn Met Ser Ser Ser Ser
 20 25 30

Leu Arg Lys Lys Ser Asp Ala Ala Leu Val Arg Lys Val Pro Val Ala
 35 40 45

Pro Leu Arg Pro Leu Leu Ala Asn Leu Gln Glu Val Phe Leu Ala Thr
 50 55 60

Lys Leu Ala Val Leu Phe Pro Ala Val Pro Leu Ala Ile Ala Ala Gln
 65 70 75 80

Cys Phe Arg Phe Asp Gln Val Trp Val Phe Ala Leu Ser Leu Leu Gly
 85 90 95

Leu Ile Pro Leu Ala
 100

<210> 2446

<211> 201

<212> PRT

<213> *Solanum lycopersicum*

<400> 2446

Asn Leu Phe Pro Trp Val Ser Ser Met Gly Phe Val Glu Leu Glu Phe
 1 5 10 15

Phe Ser Leu Lys Gly Asn Lys Leu Ala Gly Ser Ile Pro Glu Leu Asp
 20 25 30

Phe Lys Asn Leu Ser Tyr Leu Asp Leu Ser Ala Asn Asn Phe Ser Thr
 35 40 45

Val Phe Pro Ser Phe Lys Asp Cys Ser Asn Leu Gln His Leu Asp Leu
 50 55 60

Ser Ser Asn Lys Phe Tyr Gly Asp Ile Gly Ser Ser Leu Ser Ser Cys
 65 70 75 80

Gly Lys Leu Ser Phe Leu Asn Leu Thr Asn Asn Gln Phe Val Gly Leu
 85 90 95

Val Pro Lys Leu Pro Ser Glu Ser Leu Gln Tyr Leu Tyr Leu Arg Gly
 100 105 110

Asn Asp Phe Gln Gly Val Tyr Pro Asn Gln Leu Ala Asp Leu Cys Lys
 115 120 125

Thr Val Val Glu Leu Asp Leu Ser Tyr Asn Asn Phe Ser Gly Met Val

130

135

140

Pro Glu Ser Leu Gly Glu Cys Ser Ser Leu Glu Leu Val Asp Ile Ser
145 150 155 160

Tyr Asn Asn Phe Ser Gly Lys Leu Pro Val Asp Thr Leu Ser Lys Leu
165 170 175

Ser Asn Ile Lys Thr Met Val Leu Ser Phe Asn Lys Phe Val Gly Gly
180 185 190

Leu Pro Asp Ser Phe Ser Asn Leu Leu
195 200

<210> 2447

<211> 251

<212> PRT

<213> Oryza sativa

<400> 2447

Met Glu Val Ala Met Val Cys Thr Arg Val Asn Leu Leu Ile Leu Ile
1 5 10 15

Leu Ser Leu Cys Ser Pro Tyr Lys Phe Ile Gln Ser Pro Met Asp Phe
20 25 30

Gly Pro Leu Asn Leu Leu Pro Thr Thr Thr Thr Ala Ser Ser Asp Phe
35 40 45

Gly Arg Ile Leu Phe His Ser Pro Ser Ala Val Leu Lys Pro Gln Ala
50 55 60

Pro Arg Asp Ile Ser Leu Leu Leu Ser Phe Leu Ser Ala Ser Pro Leu
65 70 75 80

Gly Lys Val Thr Val Ala Ala Arg Gly Ala Gly His Ser Ile His Gly
85 90 95

Gln Ala Gln Ala Leu Asp Gly Ile Val Val Glu Met Ser Ser Leu Pro
100 105 110

Ser Glu Ile Glu Phe Tyr Arg Arg Gly Glu Gly Asp Val Ser Tyr Ala
115 120 125

Asp Val Gly Gly Gly Ile Met Trp Ile Glu Leu Leu Glu Gln Ser Leu
130 135 140

Lys Leu Gly Leu Ala Pro Arg Ser Trp Thr Asp Tyr Leu Tyr Leu Thr
145 150 155 160

Ile Gly Gly Thr Leu Ser Asn Ala Gly Ile Ser Gly Gln Thr Phe Lys
165 170 175

His Gly Pro Gln Ile Ser Asn Val Leu Gln Leu Glu Val Val Thr Gly
180 185 190

Arg Gly Glu Ile Val Thr Cys Ser Pro Thr Lys Asp Ala Glu Leu Phe
195 200 205

Asn Ala Val Leu Gly Gly Leu Gly Gln Phe Gly Ile Ile Thr Arg Ala
210 215 220

Arg Ile Leu Leu Gln Glu Ala Pro Gln Lys Val Lys Trp Val Arg Ala
225 230 235 240

Phe Tyr Asp Asp Phe Ala Thr Phe Thr Lys Asp
245 250

<210> 2448

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2448

Leu Pro Gly Gln Pro Lys Phe Leu Leu Cys Val Leu Ala Glu Arg Lys
1 5 10 15

Asn Ser Asp Ile Tyr Gly Pro Trp Lys Arg Lys Cys Leu Ala Glu Phe
20 25 30

Gly Ile Ile Thr Gln Cys Val Ala Pro Thr Arg Val Asn Asp Gln Tyr
35 40 45

Ile Thr Asn Val Leu Leu Lys Ile Asn Ala Lys Leu Gly Gly Leu Asn
50 55 60

Ser Leu Leu Gln Ile Glu Thr Ser Pro Ser Ile Pro Leu Val Ser Lys
65 70 75 80

Val Pro Thr Ile Ile Leu Gly Met Asp Val Ser His Gly Ser Pro Gly
85 90 95

Gln Ser Asp Ile Pro
100

<210> 2449

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2449

Met Ala Ala Gln Arg Asp Asp Glu Ala Gly Trp Ser Ala Glu Ala Ala
1 5 10 15

Arg Arg Val Trp Gly Gly Ala Val Pro Leu Gln Val His Leu His Asp
20 25 30

Ala Asp Val Thr Thr Leu Pro Pro Pro Pro Phe Leu Thr Leu Gly
35 40 45

Pro Arg Ile Gly Tyr Leu Pro Leu Leu Val Pro Ile Ile Lys Ala His

50

55

60

Phe Ser Ser Thr Leu Pro Pro Gly Ile Asp Thr Val Trp Phe Glu Tyr
65 70 75 80

Lys Gly Leu Pro Leu Lys Trp Tyr Ile Pro Ile Gly Val Leu Tyr Asp
85 90 95

Leu Leu Cys Ala Asp
100

<210> 2450

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2450

Ala Arg Ala Ser Pro Ala Asp Val Leu Ala Gly Ala Ser Arg Arg Ala
1 5 10 15

Val Ala Ala Met Gly Ile Leu Leu Ser Arg Arg His Ser Pro Val Trp
20 25 30

Ala Gly Arg Arg Leu Gly Leu Leu Gln Arg Leu Gly Tyr Val Ala Arg
35 40 45

Ala Ser Tyr Pro Leu Ala Ser Leu Pro Leu Thr Val Tyr Cys Ala Leu
50 55 60

Pro Ala Val Cys Leu Leu Thr Gly Lys Ser Thr Phe Pro Ser Asp Val
65 70 75 80

Ser Tyr Tyr Asp Gly Val Leu Leu Ile Leu Leu Leu Phe Ser Val Ala
85 90 95

Ala Ser Val Ala Leu Glu Leu Arg Trp Ser Arg Val Pro Leu Arg Ala
100 105 110

Trp Trp Arg Asp Glu Lys Leu Trp Met Val Thr Ala Thr Ser Ala Ser
115 120 125

Leu Ala Ala Val Phe Gln Gly Ile Leu Ser Ala Cys Thr Gly Ile Asp
130 135 140

Val Ala Phe Ser Thr Glu Thr Ala Ala Ser Pro Pro Lys Arg Pro Ala
145 150 155 160

Ala Gly Asn Asp Asp Gly Glu Glu Glu Ala Ala Leu Ala Ser Glu Ile
165 170 175

<210> 2451

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2451

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Phe Ile Gly Glu Ala Tyr Phe Gly Val Arg Pro Ser Ala Ser Ser Ser
1 5 10 15

Leu Gly Thr Gly Gly Pro Thr Lys Ala Ala Leu Trp Leu Leu Trp Gln
20 25 30

Leu Ala Pro Leu Thr Thr Leu Gly Leu Pro Met Ile Ile Glu Asp Pro
35 40 45

Leu Leu His Thr Leu Pro Leu Pro Pro Phe Leu Ile Ser Ser Asp Tyr
50 55 60

Lys Ala Leu Tyr Ala Tyr Phe Ala Ala Ala Ala Ser Gln Ala Leu Asp
65 70 75 80

Ala Ala Glu Gly Leu Gly Leu Ser Arg Glu Glu Ala Cys His Asn Leu
85 90 95

Leu Phe Ala Thr Val Phe Asn Ser Tyr Gly Gly Phe Lys Leu Leu Leu
100 105 110

Pro Gln Ile Leu Ser Arg Val Ala Gln Ala Gly Glu Lys Leu His Glu
115 120 125

Arg Leu Ala Ala Glu Ile Arg Ser Ala Val Ala Asp Ala Gly Gly Asn
130 135 140

Val Thr Leu Ala Ala Leu Glu Lys Met Glu Leu Thr Arg Ser Val Val
145 150 155 160

Trp Glu Ala Leu Arg Leu Asp Pro Pro Val Arg Phe Gln Tyr Gly Arg
165 170 175

<210> 2452

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 2452

Met Gly Ile Thr Lys Lys Pro Asp Leu Asn Asp Pro Val Leu Arg Ala
1 5 10 15

Lys Leu Ala Lys Gly Met Gly His Asn Tyr Tyr Gly Glu Pro Ala Trp
20 25 30

Pro Asn Asp Leu Leu Tyr Ile Phe Pro Val Val Ile Leu Gly Thr Ile
35 40 45

Ala Cys Asn Val Gly Leu Ala Val Leu Glu Pro Ser Met Ile Gly Glu
50 55 60

Pro Ala Asp Pro Phe Ala Thr Pro Leu Glu Ile Leu
65 70 75

<210> 2453

<211> 76
 <212> PRT
 <213> Zea mays

<400> 2453

Met Gly Val Thr Lys Lys Pro Asp Leu Asn Asp Pro Val Leu Arg Ala
 1 5 10 15

Lys Leu Ala Lys Gly Met Gly His Asn Tyr Tyr Gly Glu Pro Ala Trp
 20 25 30

Pro Asn Asp Leu Leu Tyr Ile Phe Pro Val Val Ile Leu Gly Thr Ile
 35 40 45

Ala Cys Asn Val Gly Leu Ala Val Leu Glu Pro Ser Met Ile Gly Glu
 50 55 60

Pro Ala Asp Pro Phe Ala Thr Pro Leu Glu Ile Leu
 65 70 75

<210> 2454
 <211> 276
 <212> PRT
 <213> Oryza sativa

<400> 2454

Met Asp Lys Ser Glu Met Asp Lys Ile Asn Gly Thr Asn Pro Glu Ser
 1 5 10 15

Thr Asp Gln Ala Pro Ser Leu Ala Ser Arg Pro Asp Glu Phe Glu Glu
 20 25 30

Glu Glu Ser Leu Val Thr Pro Asp Ala Leu Ser Ala Arg Ile Gly Gly
 35 40 45

Phe Gln Ile Tyr Ala Gly Ser Val Asn Trp Gly Val Phe Gly Ser Met
 50 55 60

Lys Ile Val Phe Leu Lys Ser Lys Leu Asn Val Leu Ile Pro Cys Gly
 65 70 75 80

Phe Leu Ala Ile Phe Leu Asn Tyr Met Thr Gln Arg Tyr Gly Trp Val
 85 90 95

Phe Pro Leu Ser Met Leu Gly Ile Ile Pro Leu Ala Glu Arg Leu Gly
 100 105 110

Phe Ala Thr Asp Trp Gln Ile Ser Cys Glu Val Gly Arg Leu Leu Asn
 115 120 125

Ser Ala Phe Gly Asn Ala Thr Glu Leu Ile Ile Ser Ile His Ala Leu
 130 135 140

Ser Arg Gly Lys Leu His Val Val Gln Gln Cys Leu Leu Gly Ser Ile
 145 150 155 160

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Leu Ser Asn Leu Leu Leu Val Leu Gly Ser Ala Phe Phe Ser Gly Gly
165 170 175

Leu Ala Cys Gly Lys Thr Met Gln Thr Phe Ser Lys Ala Asp Ala Val
180 185 190

Val Asn Ser Gly Leu Leu Leu Met Ala Val Met Gly Leu Leu Ile Pro
195 200 205

Ala Ala Leu His Tyr Thr His Ser Glu Ala Gln Phe Gly Lys Ser Glu
210 215 220

Leu Ala Leu Ser Arg Phe Ser Ser Cys Ile Met Leu Val Ala Tyr Ala
225 230 235 240

Ser Tyr Leu Tyr Phe Gln Leu Ser Asn Asn Arg Arg Arg Asn Glu Ala
245 250 255

Asn Val Tyr Pro Cys Met Pro Leu Ile Lys Arg Arg Ile Gln Asp Asp
260 265 270

Val Asp Gly Asn
275

<210> 2455

<211> 126

<212> PRT

<213> Solanum lycopersicum

<400> 2455

Leu Gly Asp Ser Val His Ala Met Gln Pro Asn Leu Gly Gln Gly Gly
1 5 10 15

Cys Met Ala Ile Glu Asp Ser Tyr Gln Leu Ala Leu Glu Leu Glu Lys
20 25 30

Ala Cys Ser Arg Ser Ala Glu Phe Gly Ser Pro Val Asp Ile Ile Ser
35 40 45

Ser Leu Arg Ser Tyr Glu Ser Ala Arg Lys Leu Arg Val Gly Val Ile
50 55 60

His Gly Leu Ala Arg Met Ala Ala Ile Met Ala Ser Thr Tyr Lys Ala
65 70 75 80

Tyr Leu Gly Val Gly Leu Gly Pro Leu Ser Phe Leu Thr Gln Tyr Arg
85 90 95

Ile Pro His Pro Gly Arg Val Gly Gly Arg Val Phe Ile Asp Leu Gly
100 105 110

Met Pro Leu Met Leu Ser Trp Val Leu Gly Gly Asn Gly Asp
115 120 125

<210> 2456

<211> 76
 <212> PRT
 <213> Zea mays

<400> 2456

Leu Lys Lys Glu Ala Leu Trp Pro Tyr Leu Gln Glu Phe Val Asp Gly
 1 5 10 15

Ala Leu Ala His Ile Leu Asn Met Ser Lys Ala Leu Gly Glu Gln Val
 20 25 30

Gly Asn Gly Arg Pro Val Leu Pro Tyr Val Ile His Gly His Tyr Ala
 35 40 45

Asp Ala Gly Asp Val Ala Ala Leu Leu Ser Gly Ala Leu Asn Val Pro
 50 55 60

Met Val Leu Thr Gly His Ser Leu Gly Arg Asn Lys
 65 70 75

<210> 2457

<211> 276

<212> PRT

<213> Solanum lycopersicum

<400> 2457

Thr Ser Tyr Leu Leu Pro Leu Ser Asn Leu Glu Ser Leu Val Leu Lys
 1 5 10 15

Asn Ala Asn Leu Ser Gly Ser Leu Thr Ser Ala Ala Lys Ser Gln Cys
 20 25 30

Gly Val Thr Leu Asp Ser Ile Asp Leu Ala Glu Asn Thr Ile Ser Gly
 35 40 45

Pro Ile Ser Asp Ile Ser Ser Phe Gly Val Cys Ser Asn Leu Lys Ser
 50 55 60

Leu Asn Leu Ser Lys Asn Phe Leu Asp Pro Pro Gly Lys Glu Met Leu
 65 70 75 80

Lys Ala Ala Thr Phe Ser Leu Gln Val Leu Asp Leu Ser Tyr Asn Asn
 85 90 95

Ile Ser Gly Phe Asn Leu Phe Pro Trp Val Ser Ser Met Gly Phe Val
 100 105 110

Glu Leu Glu Phe Phe Ser Leu Lys Gly Asn Lys Leu Ala Gly Ser Ile
 115 120 125

Pro Glu Leu Asp Phe Lys Asn Leu Ser Tyr Leu Asp Leu Ser Ala Asn
 130 135 140

Asn Phe Ser Thr Val Phe Pro Ser Phe Lys Asp Cys Ser Asn Leu Gln
 145 150 155 160

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His Leu Asp Leu Ser Ser Asn Lys Phe Tyr Gly Asp Ile Gly Ser Ser
165 170 175

Leu Ser Ser Cys Gly Lys Leu Ser Phe Leu Asn Leu Thr Asn Asn Gln
180 185 190

Phe Val Gly Leu Val Pro Lys Leu Pro Ser Glu Ser Leu Gln Tyr Leu
195 200 205

Tyr Leu Arg Gly Asn Asp Phe Gln Gly Val Tyr Pro Asn Gln Leu Ala
210 215 220

Asp Leu Cys Lys Thr Val Val Glu Leu Asp Leu Ser Tyr Asn Asn Phe
225 230 235 240

Ser Gly Met Val Pro Glu Ser Leu Gly Glu Cys Ser Ser Leu Glu Leu
245 250 255

Val Asp Ile Ser Tyr Asn Asn Phe Ser Gly Lys Leu Pro Val Asp Thr
260 265 270

Leu Ser Lys Leu
275

<210> 2458

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2458

Met Glu Leu Lys Ala Met Tyr Leu Tyr Ala Ala Val Leu Ala Val Leu
1 5 10 15

Leu Cys Ser Ser Val Asn Phe Ile Gln Ser Pro Thr Asp Val Leu Gly
20 25 30

Pro Val Ala Leu Leu Glu Pro Thr Pro Ser Ser Ala Arg Asp Phe Gly
35 40 45

Ala Val Val Ser Asp Ala Pro Phe Ala Val Met Arg Pro Glu Ser Pro
50 55 60

Asp Asp Ile Ala Leu Leu Leu Gly Ala Leu Ser Ser Thr Ala Pro Ser
65 70 75 80

Pro Arg Ala Thr Val Ala Ala Val Gly Ala Gly His Ser Leu His Gly
85 90 95

Gln Ala Gln Ala Arg Asp Gly Ile Val Val Glu Thr Arg Ala Leu Pro
100 105 110

Arg Asp Val His Val Val Ser Ala Arg Ala His Gly Gly Asp Asp Asp
115 120 125

Ala Thr Val Arg Ala Tyr Ala Asp Val Gly Ala Gly Ala Leu Trp Val

<210> 2461

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 2461

Ile Leu Lys Leu Gly Asn Asn Ser Ile Ser Gly Asn Ile Pro Ala Glu
1 5 10 15

Leu Gly Asn Cys Gln Ser Leu Ile Trp Leu Asp Leu Asn Thr Asn Phe
20 25 30

Leu Asn Gly Ser Ile Pro Pro Pro Leu Phe Lys Gln Ser Gly Asn Ile
35 40 45

Ala Val Ala Leu Leu Thr Gly Lys Arg Tyr Val Tyr Ile Lys Asn Asp
50 55 60

Gly Ser Lys Glu Cys His Gly Ala Gly Asn Leu Leu Glu Phe Gly Gly
65 70 75 80

Ile Arg Gln Glu Gln Leu Asp Arg Ile Ser Thr Arg His Pro Cys Asn
85 90 95

Phe Thr Arg Val Tyr Arg Gly Ile Thr Gln Pro Thr Phe Asn His Asn
100 105 110

Gly Ser Met Ile Phe Leu Asp Leu Ser Tyr Asn Lys Leu Glu Gly Ser
115 120 125

Ile Pro Lys Glu Leu Gly Ala Met Tyr Tyr Leu Ser Ile Leu Asn Leu
130 135 140

Gly His Asn Asp Leu Ser Gly Met Ile Pro Gln Gln Leu Gly Gly Leu
145 150 155 160

Lys Asn Val Ala Ile Leu Asp Leu Ser Tyr Asn Arg Phe Asn Gly Thr
165 170 175

<210> 2462

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 2462

Ile Gly Leu His Tyr Pro Ala Thr Asp Ile Pro Gln Ala Ser Arg Phe
1 5 10 15

Leu Phe Lys Gln Asn Arg Val Arg Met Ile Val Asp Cys His Ala Thr
20 25 30

Pro Val Arg Val Thr Gln Asp Glu Ser Leu Met Gln Pro Leu Cys Leu
35 40 45

Val Gly Ser Thr Leu Arg Ala Pro His Gly Cys His Ala Gln Tyr Met
50 55 60

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Ala Asn Met Gly Ser Ile Ala Ser Leu Thr Leu Ala Val Ile Ile Asn
65 70 75 80

Gly Asn Asp Glu Glu Ala Val Gly Gly Gly Arg Asn Ser Met Arg Leu
85 90 95

Trp Gly Leu Val Val Gly His His Thr Ser Val Arg Ser Ile Pro Phe
100 105 110

Pro Leu Arg Tyr Ala Cys Glu Phe Leu Met Gln Ala Phe Gly Leu Gln
115 120 125

Leu Asn Met Glu Leu Gln Leu Ala Ser Gln Leu Ser Glu Lys His Val
130 135 140

Leu Arg Thr Gln Thr Leu Leu Cys Asp Met Leu Leu Arg Asp Ser Pro
145 150 155 160

Pro Gly Ile Val Thr Gln Ser Pro Ser Ile Met Asp Leu Val Lys Cys
165 170 175

<210> 2463

<211> 176

<212> PRT

<213> Solanum lycopersicum

<400> 2463

Thr Ser Tyr Leu Leu Pro Leu Ser Asn Leu Glu Ser Leu Val Leu Lys
1 5 10 15

Asn Ala Asn Leu Ser Gly Ser Leu Thr Ser Ala Ala Lys Ser Gln Cys
20 25 30

Gly Val Thr Leu Asp Ser Ile Asp Leu Ala Glu Asn Thr Ile Ser Gly
35 40 45

Pro Ile Ser Asp Ile Ser Ser Phe Gly Val Cys Ser Asn Leu Lys Ser
50 55 60

Leu Asn Leu Ser Lys Asn Phe Leu Asp Pro Pro Gly Lys Glu Met Leu
65 70 75 80

Lys Ala Ala Thr Phe Ser Leu Gln Val Leu Asp Leu Ser Tyr Asn Asn
85 90 95

Ile Ser Gly Phe Asn Leu Phe Pro Trp Val Ser Ser Met Gly Phe Val
100 105 110

Glu Leu Glu Phe Phe Ser Leu Lys Gly Asn Lys Leu Ala Gly Ser Ile
115 120 125

Pro Glu Leu Asp Phe Lys Asn Leu Ser Tyr Leu Asp Leu Ser Ala Asn
130 135 140

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Asn Phe Ser Thr Val Phe Pro Ser Phe Lys Asp Cys Ser Asn Leu Gln
145 150 155 160

His Leu Asp Leu Ser Ser Asn Lys Phe Tyr Gly Asp Ile Gly Ser Ser
165 170 175

<210> 2464

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2464

Met Asp Lys Ser Glu Met Asp Lys Ile Asn Gly Thr Asn Pro Glu Ser
1 5 10 15

Thr Asp Gln Ala Pro Ser Leu Ala Ser Arg Pro Asp Glu Phe Glu Glu
20 25 30

Glu Glu Ser Leu Val Thr Pro Asp Ala Leu Ser Ala Arg Ile Gly Gly
35 40 45

Phe Gln Ile Tyr Ala Gly Ser Val Asn Trp Gly Val Phe Gly Ser Met
50 55 60

Lys Ile Val Phe Leu Lys Ser Lys Leu Asn Val Leu Ile Pro Cys Gly
65 70 75 80

Phe Leu Ala Ile Phe Leu Asn Tyr Met Thr Gln Arg Tyr Gly Trp Val
85 90 95

Phe Pro Leu Ser Met Leu Gly Ile Ile Pro Leu Ala Glu Arg Leu Gly
100 105 110

Phe Ala Thr Asp Trp Gln Ile Ser Cys Glu Val Gly Arg Leu Leu Asn
115 120 125

Ser Ala Phe Gly Asn Ala Thr Glu Leu Ile Ile Ser Ile His Ala Leu
130 135 140

Ser Arg Gly Lys Leu His Val Val Gln Gln Cys Leu Leu Gly Ser Ile
145 150 155 160

Leu Ser Asn Leu Leu Leu Val Leu Gly Ser Ala Phe Phe Ser Gly Gly
165 170 175

<210> 2465

<211> 101

<212> PRT

<213> Solanum lycopersicum

<400> 2465

Phe Thr Gly Leu Phe Ala Lys Glu Glu Phe Val Leu Gln Ala Tyr Asn
1 5 10 15

Ser Gly Lys Thr Gln Ile Ile Arg Pro Ser Gly Leu Ile Leu Gly Gly
20 25 30

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Gly Trp Gly Leu Phe Gly Ala Gln Ile Val Glu Leu Leu Ser Ile Val
35 40 45

Val Trp Val Ser Leu Thr Met Gly Pro Leu Phe Tyr Leu Leu Gln Lys
50 55 60

Leu Gly Ile Leu Arg Ile Ser Ser Asp Glu Glu Val Ala Gly Leu Asp
65 70 75 80

Ile Ser Ser His Gly Gly Tyr Ala Tyr Asp Ala Ser Gln Glu Glu Ser
85 90 95

Asn Ala Arg Phe Tyr
100

<210> 2466
<211> 101
<212> PRT
<213> Solanum lycopersicum

<400> 2466
Cys Trp Lys Ile Phe Asn Ser Leu Asn Ser Leu Glu Leu Lys Ser Leu
1 5 10 15

Glu Glu Pro Ile Tyr Leu Phe Gly Gln Phe Phe Lys Lys Pro Leu Glu
20 25 30

Cys Leu Thr Leu Ala Tyr Tyr Leu Pro Gln Asn Ala Gly Ser Ile Ala
35 40 45

Arg Lys Tyr Ile Arg Asp Pro Gly Leu Leu Ser Phe Ile Asp Ala Glu
50 55 60

Cys Phe Ile Val Ser Thr Val Asn Ala Leu Gln Thr Pro Met Ile Asn
65 70 75 80

Ala Ser Met Val Leu Cys Asp Arg His Phe Gly Gly Ile Asn Tyr Pro
85 90 95

Val Gly Gly Val Gly
100

<210> 2467
<211> 126
<212> PRT
<213> Oryza sativa

<400> 2467
Val Val Leu Phe Gly Gly Glu Gly Val Asn Met Gln Pro Met Asn Asp
1 5 10 15

Thr Phe Val Leu Asp Leu Asn Ala Ser Asn Pro Glu Trp Arg His Val
20 25 30

Asn Val Ser Ser Ala Pro Pro Gly Arg Trp Gly His Thr Leu Ser Cys
35 40 45

Leu Asn Gly Ser Leu Leu Val Val Phe Gly Gly Cys Gly Arg Gln Gly
50 55 60

Leu Leu Asn Asp Val Phe Thr Leu Asp Leu Asp Ala Lys Gln Pro Thr
65 70 75 80

Trp Arg Glu Ile Pro Gly Val Ala Pro Pro Val Pro Arg Ser Trp His
85 90 95

Ser Ser Cys Thr Leu Asp Gly Thr Lys Leu Val Val Ser Gly Gly Cys
100 105 110

Ala Asp Ser Gly Val Leu Leu Ser Asp Thr Tyr Leu Leu Asp
115 120 125

<210> 2468

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2468

Met Thr Ala Arg Leu Ala Leu Leu Ala Ser Leu Leu Leu Leu Leu Gln
1 5 10 15

Leu Val Pro Pro Ser Ser Ala Val Val Leu Glu Leu His Gly Asn Val
20 25 30

Tyr Pro Ile Gly His Phe Phe Ile Thr Met Asn Ile Gly Asp Pro Ala
35 40 45

Lys Ser Tyr Phe Leu Asp Ile Asp Thr Gly Ser Thr Leu Thr Trp Leu
50 55 60

Gln Cys Asp Ala Pro Cys Thr Asn Cys Asn Ile Val Pro His Val Leu
65 70 75 80

Tyr Lys Pro Thr Pro Lys Lys Leu Val Thr Cys Ala Asp Ser Leu Cys
85 90 95

Thr Asp Leu Tyr Thr Asp Leu Gly Lys Pro Lys Arg Cys Gly Ser Gln
100 105 110

Lys Gln Cys Asp Tyr Val Ile Gln Tyr Val Asp Ser Ser Ser Met Gly
115 120 125

Val Leu Val Ile Asp Arg Phe Ser Leu Ser Ala Ser Asn Gly Thr Asn
130 135 140

Pro Thr Thr Ile Ala Phe Gly Cys Gly Tyr Asp Gln Gly Lys Lys Asn
145 150 155 160

Arg Asn Val Pro Ile Pro Val Asp Ser Ile Leu Gly Leu Ser Arg Gly
165 170 175

<210> 2469

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2469

Met Glu Val Ala Met Val Cys Thr Arg Val Asn Leu Leu Ile Leu Ile
1 5 10 15Leu Ser Leu Cys Ser Pro Tyr Lys Phe Ile Gln Ser Pro Met Asp Phe
20 25 30Gly Pro Leu Asn Leu Leu Pro Thr Thr Thr Thr Ala Ser Ser Asp Phe
35 40 45Gly Arg Ile Leu Phe His Ser Pro Ser Ala Val Leu Lys Pro Gln Ala
50 55 60Pro Arg Asp Ile Ser Leu Leu Leu Ser Phe Leu Ser Ala Ser Pro Leu
65 70 75 80Gly Lys Val Thr Val Ala Ala Arg Gly Ala Gly His Ser Ile His Gly
85 90 95Gln Ala Gln Ala Leu Asp Gly Ile Val Val Glu Met Ser Ser Leu Pro
100 105 110Ser Glu Ile Glu Phe Tyr Arg Arg Gly Glu Gly Asp Val Ser Tyr Ala
115 120 125Asp Val Gly Gly Gly Ile Met Trp Ile Glu Leu Leu Glu Gln Ser Leu
130 135 140Lys Leu Gly Leu Ala Pro Arg
145 150

<210> 2470

<211> 76

<212> PRT

<213> Zea mays

<400> 2470

Met Leu Leu Trp His Gly Ser Arg Leu Thr Asn Phe Val Gly Ile Leu
1 5 10 15Ser Gln Gly Leu Arg Ile Ala Pro Pro Glu Ala Pro Val Thr Gly Tyr
20 25 30Met Phe Gly Lys Gly Leu Tyr Phe Ala Asp Leu Val Ser Lys Ser Ala
35 40 45Gln Tyr Cys Tyr Val Asp Arg Asn Asn Pro Val Gly Leu Met Leu Leu
50 55 60Ser Glu Val Ala Leu Gly Asp Met Tyr Glu Leu Lys
65 70 75

<210> 2471

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2471

Leu Gln Ser Cys Ile Thr Glu Ser Ser Met Asp Met Ser Ser Ile Leu
 1 5 10 15

Ser Tyr Gln Ser Asn Asn Ser Thr Ser Gln Asn Arg Gly Leu Lys Asn
 20 25 30

Phe Ser Leu Leu Leu Ser Leu Ser Thr Leu Tyr Ala Pro Leu Leu Ile
 35 40 45

Leu Lys Tyr Met Asp Leu Phe Leu Lys Leu Arg Ser Ser Gln Asp Ser
 50 55 60

Glu Glu Glu Val Pro Ile Asn Lys Arg Leu Ala Tyr Arg Val Asp Ile
 65 70 75 80

Phe Leu Ser Leu Gln Pro Tyr Ala Lys Pro Leu Val Leu Leu Val Ala
 85 90 95

Thr Leu Leu Leu Ile Gly Leu Gly Gly Leu Ala Leu Tyr Gly Val Asn
 100 105 110

Asp Asp Ser Leu Leu Asp Cys Leu Trp Leu Ser Trp Thr Phe Val Ala
 115 120 125

Asp Ser Gly Asn His Ala Asn Ala Glu Gly Phe Gly Pro Lys Leu Val
 130 135 140

Ser Val Ser Ile Ser Ile Gly
 145 150

<210> 2472

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2472

Ala Glu Pro Leu Thr Pro Leu Met Val Ala Ala Val Tyr Gly Ser Val
 1 5 10 15

Gly Cys Leu Asp Ala Leu Leu Ser Pro Pro Tyr Leu Val Asp Pro Asn
 20 25 30

Arg Ala Ser Ala Ser Ser Leu Ser Thr Pro Leu His Leu Ala Ala Ala
 35 40 45

Gly Gly Ser Ala Ser Ala Pro Ala Ala Val Ser Arg Leu Leu Ala Ala
 50 55 60

Gly Ala Asp Pro Ala Leu Leu Asp His Leu Gln Arg Arg Ala Ser Asp
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65	70										75	80				
Leu	Val	Ala	Leu	Pro 85	Pro	Asn	Ser	Leu	Pro 90	Leu	Lys	Asn	His	Leu 95	Leu	
Ser	Leu	Leu	Gly 100	Ala	Arg	Lys	Glu	Trp 105	Pro	Pro	Asp	Pro	Ser 110	Leu	Pro	
Asp	Ile	Lys 115	Asn	Gly	Ala	Tyr	Ala 120	Ser	Asp	Asp	Phe	Arg 125	Met			
<210> 2473																
<211> 101																
<212> PRT																
<213> Oryza sativa																
<400> 2473																
Glu 1	Ser	Leu	Leu	Asp 5	Val	Val	Val	Ser	Ser 10	Leu	Gly	Thr	Lys	Leu 15	Val	
Arg	Ala	Leu	Thr 20	Pro	Gly	Ala	Pro	Met 25	Glu	Gly	Val	Pro	Ser 30	Leu	Arg	
Tyr	Ile	Val 35	Ala	Ser	Ala	Thr	Pro 40	Val	Pro	Asn	Ser	Gln 45	Ser	Met	Leu	
Ala	Cys 50	His	Asp	Met	Leu	Tyr 55	Pro	Tyr	Lys	Val 60	Phe	Phe	Cys	His	Thr	
Pro 65	Lys	Gln	Thr	Arg	Leu 70	Tyr	Gln	Val	Ser	Leu 75	Val	Ser	Gly	Glu	Ser 80	
Gly	Arg	Pro	Leu	Ile 85	Asp	Gly	Leu	Leu	Ala 90	Val	Cys	His	Gln	Asn 95	Thr	
Ser	Asp	Trp	Asp 100	Thr												
<210> 2474																
<211> 76																
<212> PRT																
<213> Oryza sativa																
<400> 2474																
Lys 1	Ile	Ser	Asp	Phe 5	Gly	Leu	Ser	Ala	Leu 10	Pro	Gln	His	Leu	Gly 15	Asn	
Asp	Gly	Leu	Leu 20	His	Thr	Thr	Cys	Gly 25	Ser	Pro	Asn	Tyr	Ile 30	Ala	Pro	
Glu	Val	Leu 35	Gln	Asn	Lys	Gly	Tyr 40	Asp	Gly	Ser	Leu	Ser 45	Asp	Ile	Trp	
Ser	Cys 50	Gly	Val	Ile	Leu	Tyr 55	Val	Met	Leu	Ile	Gly 60	Tyr	Leu	Pro	Phe	

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Asp Asp Arg Asn Ile Val Val Leu Tyr Gln Lys Ile
65 70 75

<210> 2475

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2475

Met Ala Ala Ser Arg Gly Pro Pro Leu Leu Gly Phe Arg Ala Leu Ala
1 5 10 15

Leu Ala Leu Leu Leu Ala Ile Leu Leu Leu Leu Gly Cys Ser Ala Ala
20 25 30

Ala Ala Tyr Ala Gly Ala Glu Gly Val Leu Arg Gln Val Val Gly Arg
35 40 45

Arg Gly Asp Asp Gly Gly Gly Gly Asn Phe Phe Glu Pro Phe Asn Val
50 55 60

Thr Tyr Asp His Arg Ala Val Leu Ile Gly Gly Lys Arg Arg Met Leu
65 70 75 80

Val Ser Ala Gly Leu His Tyr Pro Arg Ala Thr Pro Glu Met Trp Pro
85 90 95

Ser Leu Ile Ala Lys
100

<210> 2476

<211> 251

<212> PRT

<213> Oryza sativa

<400> 2476

Met Arg Pro Ser Leu Leu Gln Tyr Leu Lys Leu Leu Leu Leu Leu Ala
1 5 10 15

Leu Gly Gly Val Thr Thr Met His Val Pro Lys Gln Asp Val Pro Ser
20 25 30

Ser Leu Glu Glu Leu Thr Leu Asp Gly His Phe Ser Phe His Asp Val
35 40 45

Ser Ala Ala Ala Gln Asp Phe Gly Asn Leu Ser Ser Phe Pro Pro Val
50 55 60

Ala Val Leu His Pro Gly Ser Val Ala Asp Ile Ala Thr Thr Ile Arg
65 70 75 80

His Val Phe Leu Met Gly Glu His Ser Thr Leu Thr Val Ala Ala Arg
85 90 95

Gly His Gly His Ser Leu Tyr Gly Gln Ser Gln Ala Ala Glu Gly Ile
100 105 110

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Ile Ile Ser Met Glu Ser Leu Gln Ser Asn Thr Met Arg Val Asn Pro
115 120 125

Gly Val Ser Pro Tyr Val Asp Ala Ser Gly Gly Glu Leu Trp Ile Asn
130 135 140

Val Leu His Glu Thr Leu Lys Tyr Gly Leu Ala Pro Lys Ser Trp Thr
145 150 155 160

Asp Tyr Leu His Leu Thr Val Gly Gly Thr Leu Ser Asn Ala Gly Val
165 170 175

Ser Gly Gln Thr Phe Arg His Gly Pro Gln Ile Ser Asn Val Asn Glu
180 185 190

Leu Glu Ile Val Thr Gly Arg Gly Asp Val Ile Thr Cys Ser Pro Glu
195 200 205

Gln Asn Ser Asp Leu Phe His Ala Ala Leu Gly Gly Leu Gly Gln Phe
210 215 220

Gly Val Ile Thr Arg Ala Arg Ile Pro Leu Glu Pro Ala Pro Lys Met
225 230 235 240

Val Arg Trp Leu Arg Val Leu Tyr Leu Asp Phe
245 250

<210> 2477
<211> 101
<212> PRT
<213> Solanum lycopersicum

<400> 2477
Arg Thr Gly Leu Glu Leu Gln Leu Ser Tyr Thr Leu Arg His Gln Asn
1 5 10 15

Pro Val Gly Leu Thr Val Pro Ile Gln Leu Pro Val Ile Asn Gln Val
20 25 30

Phe Gly Thr Asn His Val Val Lys Ile Ser Pro Asn Ser Pro Val Ala
35 40 45

Arg Leu Arg Pro Ala Gly Lys Tyr Met Pro Gly Glu Val Val Ala Val
50 55 60

Arg Val Pro Leu Leu His Leu Ser Asn Phe Gln Ile Asn Asp Trp Pro
65 70 75 80

Glu Leu Ser Thr Lys Arg Tyr Ala Leu Met Val Leu Met Leu Pro Ser
85 90 95

Asp Ser Ala Arg Gln
100

<210> 2478

<211> 76

<212> PRT

<213> Solanum lycopersicum

<400> 2478

Thr Ile Ile Ile Trp Ile Ala Ser Ala Leu His Ala Ala Leu His Phe
1 5 10 15

Gly Leu Tyr Ser Tyr Ala Gly Tyr Leu Pro Asn Arg Pro Thr Leu Ser
20 25 30

Cys Asn Leu Met Pro Glu Pro Gly Ser Val Glu Tyr Glu Glu Leu Lys
35 40 45

Thr Asn Pro Asp Lys Val Phe Leu Lys Thr Phe Val Pro Gln Leu Gln
50 55 60

Ser Leu Leu Glu Ile Ser Ile Phe Glu Val Ser Ser
65 70 75

<210> 2479

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2479

Met Glu Leu Pro Trp Leu Asp Leu Pro Phe Thr Leu Leu Thr Leu Leu
1 5 10 15

Leu Ala Thr Arg Leu Ala Tyr Asp Tyr Tyr Gly Val Val Ala Ala Thr
20 25 30

Phe Thr Gly Ser Phe Ser Leu Gln Ile Phe Leu Phe Tyr Cys Phe Ala
35 40 45

Arg Trp Tyr Arg His Thr Ile Ala Ala Arg Ala Ala Ala Asp Ala Asp
50 55 60

Gly Asp Gly Gly Gly Gly Ala Val Ala Asp Glu Glu Ala Ala Pro Pro
65 70 75 80

Val Leu Ile Pro Leu Leu Glu Gly Arg Gly Gly Gly Gly Gly Ala
85 90 95

Gly Ala Ala Ser Ser Leu Ala Asn Arg Cys Phe Ala Val Val Phe Met
100 105 110

Val Phe Val Pro Leu Val Ile Val Val Phe Glu Arg Ser Gln Ala Asp
115 120 125

Val Val Ala Tyr Ala Leu Cys Leu Ala Asn Ile Leu Val Met Val Val
130 135 140

Trp Leu Ser Pro Asp Ala Ala Ala Asp Pro Ala Ser Ala Ala Lys Ser
145 150 155 160

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Phe Leu Arg Leu Ser Asp Asp Glu Asp Glu Gly Ser Cys Ser Gly Ser
165 170 175

<210> 2480

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2480

Ser Arg Gly Asn Leu Lys Val Ser Asp Phe Gly Leu Ser Thr Leu Ala
1 5 10 15

Gln Lys Gly Val Gly Leu Leu His Thr Thr Cys Gly Thr Pro Asn Tyr
20 25 30

Val Ala Pro Glu Val Leu Ser Asn Asn Gly Tyr Asp Gly Ser Ala Ala
35 40 45

Asp Val Trp Ser Cys Gly Val Ile Leu Tyr Val Leu Met Ala Gly Tyr
50 55 60

Leu Pro Phe Glu Glu Asp Asp Leu Pro Thr Leu Tyr
65 70 75

<210> 2481

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2481

Tyr Lys Leu Pro Ala Trp Ser Val Ser Ile Leu Pro Asp Cys Lys Asn
1 5 10 15

Val Val Leu Asn Thr Ala Gln Ile Asn Ser Gln Val Thr Thr Ser Glu
20 25 30

Met Arg Ser Leu Gly Ser Ser Ile Gln Asp Thr Asp Asp Ser Leu Ile
35 40 45

Thr Pro Glu Leu Ala Thr Ala Gly Trp Ser Tyr Ala Ile Glu Pro Val
50 55 60

Gly Ile Thr Lys Glu Asn Ala Leu Thr Lys Pro Gly Leu Met Glu Gln
65 70 75 80

Ile Asn Thr Thr Ala Asp Ala Ser Asp Phe Leu Trp Tyr Ser Thr Ser
85 90 95

Ile Val Val Lys Gly Asp Glu Pro Tyr Leu Asn Gly Ser Gln Ser Asn
100 105 110

Leu Leu Val Asn Ser Leu Gly His Val Leu Gln Ile Tyr Ile Asn Gly
115 120 125

Lys Leu Ala Gly Ser Ala Lys Gly Ser Ala Ser Ser Ser Leu Ile Ser
130 135 140

Leu Gln Thr Pro Val Thr Leu Val Pro Gly Lys Asn Lys Ile Asp Leu
145 150 155 160

Leu Ser Thr Thr Val Gly Leu Ser Asn Tyr Gly Ala Phe Phe Asp Leu
165 170 175

<210> 2482

<211> 201

<212> PRT

<213> Zea mays

<400> 2482

Met Ala Ala Ala Ala Trp Thr Gly Ala Ala Ser Pro Asn Ser Leu
1 5 10 15

Leu Leu Ser Arg Ser Pro Pro His Ala Ala Ala Leu Ala Pro Ser Pro
20 25 30

Gly Ser Ser Met Arg Arg Arg Leu Leu Leu Gly Val Gly Thr Pro Ala
35 40 45

Val Ala Ala Leu Ala Ala Ala Pro Pro Ala Val Leu Gln Asp Gly
50 55 60

Ala Val Thr Val Leu Ile Thr Ala Gly Ala Tyr Ser Leu Val Arg Val
65 70 75 80

Phe Asp Glu Leu Thr Glu Arg Arg Leu Ile Glu Lys Ser Leu Ser Arg
85 90 95

Lys Val Val His Val Leu Ser Gly Val Leu Phe Met Ser Ser Trp Pro
100 105 110

Leu Phe Ser Asn Ser Thr Glu Ala Arg Tyr Phe Ala Ala Val Val Pro
115 120 125

Phe Leu Asn Ser Met Arg Leu Leu Ile Tyr Gly Leu Arg Leu Tyr Thr
130 135 140

Asp Glu Ala Leu Val Lys Ser Val Thr Arg Glu Gly Lys Pro Glu Glu
145 150 155 160

Leu Leu Arg Gly Pro Leu Tyr Tyr Val Leu Val Leu Leu Phe Ser Val
165 170 175

Leu Val Phe Trp Arg Glu Ser Pro Ile Gly Ile Val Ser Leu Ser Met
180 185 190

Met Ser Gly Gly Asp Gly Phe Ala Asp
195 200

<210> 2483

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2483

Trp His Ala Cys Ala Gly Pro Leu Val Ser Leu Pro Pro Val Gly Ser
 1 5 10 15

Leu Val Val Tyr Phe Pro Gln Gly His Ser Glu Gln Val Ala Ala Ser
 20 25 30

Met His Lys Glu Leu Asp Asn Ile Pro Gly Tyr Pro Ser Leu Pro Ser
 35 40 45

Lys Leu Ile Cys Lys Leu Leu Ser Leu Thr Leu His Ala Asp Ser Glu
 50 55 60

Thr Asp Glu Val Tyr Ala Gln Met Thr Leu Gln Pro
 65 70 75

<210> 2484

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2484

Lys Ile Leu Met Phe Gly Gly Leu Ala Lys Ser Gly Pro Leu Arg Leu
 1 5 10 15

Arg Ser Asn Asp Val Phe Thr Leu Asp Leu Ser Glu Asn Lys Pro Cys
 20 25 30

Trp Arg Cys Ile Thr Gly Ser Gly Met Pro Gly Ala Ser Asn Pro Ala
 35 40 45

Gly Val Gly Pro Pro Pro Arg Leu Asp His Val Ala Val Ser Leu Pro
 50 55 60

Gly Gly Arg Ile Leu Ile Phe Gly Gly Ser Val Ala
 65 70 75

<210> 2485

<211> 151

<212> PRT

<213> Oryza sativa

<400> 2485

Met Met Gly Ala Glu Lys Ala Glu Gly Met Glu Glu Leu Glu Leu Glu
 1 5 10 15

Glu Gly Gly Gly Ser Pro Ser Pro Ser Pro Met Thr Ala Ala Gly Lys
 20 25 30

Met Gln Ala Leu Asp Phe Glu His Ile Gly Ser Leu Ala Ala Val Ala
 35 40 45

Glu Ser Leu Ser Thr Gly Ser Lys Trp Arg Arg Ala Leu Thr Ser Val
 50 55 60

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Arg Val Val Ile Leu Gln Ala Lys Ile Asn Val Leu Leu Pro Phe Gly
65 70 75 80

Pro Leu Ala Val Met Leu His Tyr Leu Ser Ala Asn His Gln Gly Trp
85 90 95

Val Phe Leu Phe Ser Leu Ile Gly Ile Thr Pro Leu Ala Glu Arg Leu
100 105 110

Gly Tyr Ala Thr Glu Gln Leu Ala Leu Tyr Thr Gly Pro Thr Ile Gly
115 120 125

Gly Leu Leu Asn Ala Thr Phe Gly Asn Ala Thr Glu Met Ile Ile Ser
130 135 140

Leu Tyr Ala Leu Lys Asn Gly
145 150

<210> 2486

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2486

Met Leu Gly Ile Ile Pro Leu Ala Glu Arg Leu Gly Phe Ala Thr Asp
1 5 10 15

Trp Gln Ile Ser Cys Glu Val Gly Arg Leu Leu Asn Ser Ala Phe Gly
20 25 30

Asn Ala Thr Glu Leu Ile Ile Ser Ile His Ala Leu Ser Arg Gly Lys
35 40 45

Leu His Val Val Gln Gln Cys Leu Leu Gly Ser Ile Leu Ser Asn Leu
50 55 60

Leu Leu Val Leu Gly Ser Ala Phe Phe Ser Gly Gly Leu Ala Cys Gly
65 70 75 80

Lys Thr Met Gln Thr Phe Ser Lys Ala Asp Ala Val Val Asn Ser Gly
85 90 95

Leu Leu Leu Met Ala Val Met Gly Leu Leu Ile Pro Ala Ala Leu His
100 105 110

Tyr Thr His Ser Glu Ala Gln Phe Gly Lys Ser Glu Leu Ala Leu Ser
115 120 125

Arg Phe Ser Ser Cys Ile Met Leu Val Ala Tyr Ala Ser Tyr Leu Tyr
130 135 140

Phe Gln Leu Ser Asn Asn Arg Arg Arg Asn Glu Ala Asn Val Tyr Pro
145 150 155 160

Cys Met Pro Leu Ile Lys Arg Arg Ile Gln Asp Asp Val Asp Gly Asn

<210> 2487

<211> 151

<212> PRT

<213> Zea mays

<400> 2487

Met Ala Ala Ala Ala Arg Val Ser Glu Val Lys Ala Glu Gly Leu Leu
1 5 10 15Arg Gly Ala Cys Thr Ala Leu Ala Ala Ala Ala Leu Leu Val Gly
20 25 30Leu Ser Thr Gln Thr Glu Thr Val Leu Leu Val Arg Lys Lys Ala Thr
35 40 45Val Lys Asp Val Gln Ala Leu Trp Val Leu Ala Met Ala Ala Ala Ala
50 55 60Ala Ala Gly Tyr His Leu Leu Gln Leu Leu Lys Cys Leu Tyr Leu Gly
65 70 75 80Arg Val Gly Gly Ala Arg Pro Cys Arg Arg Ser Ser Arg Ala Leu Ala
85 90 95Trp Thr Cys Leu Leu Leu Asp Lys Ala Cys Ala Tyr Thr Thr Phe Ala
100 105 110Thr Thr Val Ala Ala Ala Gln Ala Cys Val Val Ala Leu Asp Gly Ala
115 120 125His Ala Leu Gln Trp Thr Lys Leu Cys Asn Ile Tyr Thr Arg Phe Cys
130 135 140Glu Gln Val Ala Gly Ser Leu
145 150

<210> 2488

<211> 176

<212> PRT

<213> Oryza sativa

<400> 2488

Ala Thr Ser Leu Leu Val Trp Leu Leu Leu Asp Ser Phe Val Phe Gly
1 5 10 15Arg Leu Ser Val Ile Ser Ala Val Gln Gly Met Ile Thr Gly Leu Val
20 25 30Cys Val Thr Pro Ala Ala Arg Leu Val Leu His Lys Arg Ser Arg Leu
35 40 45Leu Ala Arg Val Asp Asp Thr Leu Ala Val Leu His Thr His Gly Val
50 55 60

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Ala Gly Ser Leu Ser Gly Val Leu Thr Gly Leu Leu Leu Ala Glu
65 70 75 80

Pro Arg Phe Ala Arg Leu Phe Phe Gly Asp Asp Pro Arg Tyr Val Gly
85 90 95

Leu Ala Tyr Ala Val Arg Asp Gly Arg Ala Gly Ser Gly Leu Arg Gln
100 105 110

Val Gly Val Gln Leu Ala Gly Ile Ala Phe Val Val Ala Leu Asn Val
115 120 125

Ala Val Thr Ser Ala Val Cys Leu Ala Val Arg Val Ala Val Pro Gln
130 135 140

Leu Ala Gly Gly Gly Asp Ala Ile His Gly Glu Asp Ala Tyr Ala Val
145 150 155 160

Trp Gly Asp Gly Glu Thr Tyr Glu Gln Tyr Ser Val His Gly Gly Gly
165 170 175

<210> 2489

<211> 151

<212> PRT

<213> Zea mays

<400> 2489

Met Ala Ala Ala Ala Arg Val Ser Glu Val Lys Ala Glu Gly Leu Leu
1 5 10 15

Arg Gly Ala Cys Ala Ala Leu Ala Ala Ala Ala Leu Leu Val Gly
20 25 30

Leu Ser Thr Gln Thr Glu Thr Val Leu Leu Val Arg Lys Lys Ala Thr
35 40 45

Val Lys Asp Val Gln Ala Leu Trp Val Leu Ala Met Ala Ala Ala Ala
50 55 60

Ala Ala Gly Tyr His Leu Leu Gln Leu Leu Lys Cys Leu Tyr Leu Gly
65 70 75 80

Arg Val Gly Gly Ala Arg Pro Cys Arg Arg Ser Ser Arg Ala Leu Ala
85 90 95

Trp Thr Cys Leu Leu Leu Asp Lys Ala Cys Ala Tyr Thr Thr Phe Ala
100 105 110

Thr Thr Val Ala Ala Ala Gln Ala Cys Val Val Ala Leu Asp Gly Ala
115 120 125

His Ala Val Gln Trp Thr Lys Leu Cys Asn Ile Tyr Thr Arg Phe Cys
130 135 140

Glu Gln Val Ala Gly Ser Leu

145

150

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 <211> 101
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 <213> Zea mays

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 Met Glu Val Arg Gly Gly Val Gly Gln Gly Ser Ala Ala Arg His Pro
 1 5 10 15
 Pro Ala Pro Glu Pro Ser Arg Ala Ala Ala Arg Val Gln Ala Gly Asp
 20 25 30
 Ala Leu Pro Leu Pro Ile Arg His Thr Asn Leu Ile Phe Ser Ala Leu
 35 40 45
 Phe Ala Ala Ser Leu Ala Tyr Leu Met Arg Arg Trp Arg Glu Lys Ile
 50 55 60
 Arg Ser Ser Thr Pro Leu His Ala Val Gly Leu Ala Glu Met Leu Ala
 65 70 75 80
 Ile Phe Gly Leu Val Ala Ser Leu Ile Tyr Leu Leu Ser Phe Phe Gly
 85 90 95
 Ile Ala Phe Val Gln
 100

<210> 2491
 <211> 126
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<400> 2491
 His Ser Ala Pro Leu Leu Leu Arg Tyr Ala Val Ala Ala Gly Glu His
 1 5 10 15
 Ser Val Ser Ala Thr Ser Ala Ala Ala Ser Leu Asp Leu Ser Arg Ala
 20 25 30
 Cys Ser Phe Val Met Leu Ala Ser Tyr Val Ala Tyr Leu Phe Phe Gln
 35 40 45
 Leu Lys Thr His Arg Gln Leu Phe Glu Pro Gln Glu Val Asp Gly Gly
 50 55 60
 Asp Ala Gly Asp Asp Asp Glu Glu Pro Ala Leu Gly Phe Ala Ser Ala
 65 70 75 80
 Leu Phe Trp Leu Ala Leu Met Thr Ala Val Ile Ser Val Leu Ser Glu
 85 90 95
 Tyr Val Val Gly Thr Ile Glu Pro Thr Ser Gln Ser Trp Gly Leu Ser
 100 105 110

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Val Ser Phe Ile Ser Ile Ile Leu Leu Pro Ile Val Gly Asn
 115 120 125

<210> 2492

<211> 226

<212> PRT

<213> Oryza sativa

<400> 2492

Met Ala Ala Glu Ala Ala Pro Glu Trp Val Glu Lys Gly Asp Asn Ala
 1 5 10 15

Trp Pro Leu Ala Ala Ala Thr Leu Val Gly Leu Gln Ser Val Pro Arg
 20 25 30

Leu Val Ile Leu Tyr Gly Asp Cys Gly Ala Val Gly Pro Arg Thr Glu
 35 40 45

Lys Asp Arg Glu Ala Phe Pro Pro Asn Asn Val Leu Leu Thr Leu Ala
 50 55 60

Gly Ala Gly Leu Leu Leu Trp Met Gly Trp Thr Gly Phe Asn Gly Gly
 65 70 75 80

Ala Pro Tyr Ala Ala Asn Val Asp Ala Ser Val Thr Val Val Asn Thr
 85 90 95

His Leu Cys Thr Ala Thr Ser Leu Leu Val Trp Leu Leu Leu Asp Ser
 100 105 110

Phe Val Phe Gly Arg Leu Ser Val Ile Ser Ala Val Gln Gly Met Ile
 115 120 125

Thr Gly Leu Val Cys Val Thr Pro Ala Ala Arg Leu Val Leu His Lys
 130 135 140

Arg Ser Arg Leu Leu Ala Arg Val Asp Asp Thr Leu Ala Val Leu His
 145 150 155 160

Thr His Gly Val Ala Gly Ser Leu Ser Gly Val Leu Thr Gly Leu Leu
 165 170 175

Leu Leu Ala Glu Pro Arg Phe Ala Arg Leu Phe Phe Gly Asp Asp Pro
 180 185 190

Arg Tyr Val Gly Leu Ala Tyr Ala Val Arg Asp Gly Arg Ala Gly Ser
 195 200 205

Gly Leu Arg Gln Val Gly Val Gln Leu Ala Gly Ile Ala Phe Val Val
 210 215 220

Ala Leu
 225

<210> 2493

<211> 201

<212> PRT

<213> Oryza sativa

<400> 2493

Ala Glu Arg Val Ser Phe Leu Thr Glu Gln Ile Ala Leu Tyr Thr Gly
 1 5 10 15

Pro Thr Val Gly Gly Leu Leu Asn Ala Thr Cys Gly Asn Ala Thr Glu
 20 25 30

Leu Ile Ile Ala Leu Phe Ala Leu Leu Lys Gly Lys Ile Glu Val Val
 35 40 45

Lys Cys Ser Leu Leu Gly Ser Val Leu Ser Asn Leu Leu Val Leu
 50 55 60

Gly Thr Ser Leu Phe Cys Gly Gly Val Val Asn Leu Gly Ala Arg Gln
 65 70 75 80

Pro Tyr Asp Arg Asn Gln Ser Asp Val Ser Thr Ala Leu Leu Phe Leu
 85 90 95

Ala Val Leu Cys His Ser Ala Pro Leu Leu Leu Arg Tyr Ala Val Ala
 100 105 110

Ala Gly Glu His Ser Val Ser Ala Thr Ser Ala Ala Ala Ser Leu Asp
 115 120 125

Leu Ser Arg Ala Cys Ser Phe Val Met Leu Ala Ser Tyr Val Ala Tyr
 130 135 140

Leu Phe Phe Gln Leu Lys Thr His Arg Gln Leu Phe Glu Pro Gln Glu
 145 150 155 160

Val Asp Gly Gly Asp Ala Gly Asp Asp Asp Glu Glu Pro Ala Leu Gly
 165 170 175

Phe Ala Ser Ala Leu Phe Trp Leu Ala Leu Met Thr Ala Val Ile Ser
 180 185 190

Val Leu Ser Glu Tyr Val Val Gly Thr
 195 200

<210> 2494

<211> 76

<212> PRT

<213> Oryza sativa

<400> 2494

Met Ala Gly Ala Ser Ser Tyr Phe Ser Leu Arg Arg Leu Leu Leu Leu
 1 5 10 15

Leu Leu Pro Leu Val Pro Leu Leu Gly Ala Thr Thr Ala Ala Ala Ala
 20 25 30

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Gly Ala Asn Ser Ser Val Thr Tyr Asp His Arg Ser Leu Ile Ile Ser
35 40 45

Gly Arg Arg Arg Leu Leu Ile Ser Thr Ser Ile His Tyr Pro Arg Ser
50 55 60

Val Pro Glu Met Trp Pro Lys Leu Val Ala Glu Ala
65 70 75

<210> 2495
<211> 151
<212> PRT
<213> Zea mays

<400> 2495
Met Ala Ala Ser Val Ser Ala Ser Cys Leu Asn Arg Leu Ser Ser Leu
1 5 10 15

Ala Val Val Leu Val Ala Leu Ala Ser Ala Ala Ser Ala Gln Leu Ser
20 25 30

Ser Thr Phe Tyr Asp Arg Ser Cys Pro Asn Ala Leu Ser Thr Ile Arg
35 40 45

Ser Gly Val Asn Ser Ala Val Arg Gln Glu Pro Arg Val Gly Ala Ser
50 55 60

Leu Leu Arg Leu His Phe His Asp Cys Phe Val Arg Gly Cys Asp Ala
65 70 75 80

Ser Leu Leu Leu Asn Asp Thr Ser Gly Glu Gln Ser Gln Gly Pro Asn
85 90 95

Leu Thr Leu Asn Pro Arg Gly Phe Val Val Val Asn Ser Ile Lys Ala
100 105 110

Gln Val Glu Ser Val Cys Pro Gly Ile Val Ser Cys Ala Asp Ile Leu
115 120 125

Ala Val Ala Ala Arg Asp Gly Val Val Ala Leu Gly Gly Pro Ser Trp
130 135 140

Thr Val Leu Leu Gly Arg Arg
145 150

<210> 2496
<211> 76
<212> PRT
<213> Oryza sativa

<400> 2496
Met Glu Asn Pro Gln Ile Glu Met Gly Ala Phe Lys Ala Asn Gly Pro
1 5 10 15

Gln Leu Gln Asn Gly Gly Leu Arg Ser Ser Met Val Gln Ser Trp Asn
20 25 30

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Leu Gln Arg Phe Val Glu Ser Ala Leu Arg Ser Ile Arg Ile Val Ile
35 40 45

Phe Thr Ser Lys Leu Asn Leu Leu Pro Phe Gly Pro Ala Ser Ile
50 55 60

Ile Leu His Tyr Thr Thr Ser Arg His Gly Leu Val
65 70 75

<210> 2497
<211> 101
<212> PRT
<213> Zea mays

<400> 2497
Met Ala Ala Ala Ala Ala Trp Thr Gly Ala Ala Ser Pro Asn Ser Leu
1 5 10 15

Leu Leu Ser Arg Ser Pro Pro His Ala Ala Ala Leu Ala Pro Ser Pro
20 25 30

Gly Ser Ser Met Arg Arg Arg Leu Leu Leu Gly Val Gly Thr Pro Ala
35 40 45

Val Ala Ala Leu Ala Ala Ala Ala Pro Pro Ala Val Leu Gln Asp Gly
50 55 60

Ala Val Thr Val Leu Ile Thr Ala Gly Ala Tyr Ser Leu Val Arg Val
65 70 75 80

Phe Asp Glu Leu Thr Glu Arg Arg Leu Ile Glu Lys Ser Leu Ser Arg
85 90 95

Lys Val Val His Val
100

<210> 2498
<211> 76
<212> PRT
<213> Oryza sativa

<400> 2498
Ser Tyr Ala Asp Val Gly Gly Gly Ile Met Trp Ile Glu Leu Leu Glu
1 5 10 15

Gln Ser Leu Lys Leu Gly Leu Ala Pro Arg Ser Trp Thr Asp Tyr Leu
20 25 30

Tyr Leu Thr Ile Gly Gly Thr Leu Ser Asn Ala Gly Ile Ser Gly Gln
35 40 45

Thr Phe Lys His Gly Pro Gln Ile Ser Asn Val Leu Gln Leu Glu Val
50 55 60

Val Thr Gly Arg Gly Glu Ile Val Thr Cys Ser Pro
65 70 75

<210> 2499

<211> 101

<212> PRT

<213> Oryza sativa

<400> 2499

Arg Ala Asp Val Pro Leu Pro Ala Asp Pro Glu Val Asp Val Val Ser
1 5 10 15

Phe Leu Ala Ser Arg Arg His Ser Gly Val Val Ala Leu Val Asp Ala
20 25 30

Ala Thr Gly Arg Arg Ile Thr Phe Thr Glu Leu Trp Arg Ala Val Ala
35 40 45

Gly Ala Ala Ser Ala Leu Ala Ala His Pro Val Ser Leu Arg Lys Gly
50 55 60

His Val Ala Leu Ile Leu Ser Pro Asn Ser Val His Phe Pro Val Ala
65 70 75 80

Ala Leu Ala Ala Met Ser Leu Gly Ala Val Leu Thr Thr Ala Asn Pro
85 90 95

Leu Asn Thr Pro Ala
100

<210> 2500

<211> 126

<212> PRT

<213> Oryza sativa

<400> 2500

Phe Ser Leu Leu Ser Ser Ser Thr Leu Pro Gly Arg Pro Ala Leu Val
1 5 10 15

Asp Ala Ala Thr Gly Ile Ala Ile Ser Tyr Pro Ser Phe Leu Ala Ala
20 25 30

Val Arg Ser Leu Ala Gly Gly Leu Trp Cys Ser Leu Gly Leu Arg Pro
35 40 45

Gly Asp Val Ala Leu Val Val Ala Pro Ser Arg Leu Glu Val Pro Val
50 55 60

Leu Asp Phe Ala Leu Met Ser Ile Gly Ala Val Val Ser Pro Ala Asn
65 70 75 80

Pro Val Ser Thr Pro Glu Glu Tyr Ala His Gln Val Ala Leu Ser Arg
85 90 95

Pro Val Val Ala Phe Ala Ala Pro Glu Val Ala Ala Lys Leu Pro Glu
100 105 110

His Val Arg Cys Val Val Ile Gly Ser Asp Glu Tyr Gly Arg

115

120

125

<210> 2501

<211> 276

<212> PRT

<213> Oryza sativa

<400> 2501

Met Glu Asn Pro Gln Ile Glu Met Gly Ala Phe Lys Ala Asn Gly Pro
1 5 10 15Gln Leu Gln Asn Gly Gly Leu Arg Ser Ser Met Val Gln Ser Trp Asn
20 25 30Leu Gln Arg Phe Val Glu Ser Ala Leu Arg Ser Ile Arg Ile Val Ile
35 40 45Phe Thr Ser Lys Leu Asn Leu Leu Leu Pro Phe Gly Pro Ala Ser Ile
50 55 60Ile Leu His Tyr Thr Thr Ser Arg His Gly Leu Val Phe Leu Phe Ser
65 70 75 80Met Leu Gly Ile Thr Pro Leu Ala Glu Arg Leu Gly Tyr Ala Thr Glu
85 90 95Gln Leu Ala Ile Tyr Thr Gly Pro Thr Val Gly Gly Leu Leu Asn Ala
100 105 110Thr Phe Gly Asn Ala Thr Glu Met Ile Ile Ala Ile Tyr Ala Leu Lys
115 120 125Asn Gly Met Ile Arg Val Val Gln Gln Ser Leu Leu Gly Ser Ile Leu
130 135 140Ser Asn Met Leu Leu Val Met Gly Cys Ala Phe Phe Ala Gly Gly Ile
145 150 155 160Val His Arg Asn Lys Asp Gln Val Phe Ser Lys Ala Thr Ala Val Val
165 170 175Asn Ser Gly Leu Leu Leu Met Ala Val Met Gly Leu Met Phe Pro Ala
180 185 190Val Leu His Phe Thr His Ser Glu Val Arg Gln Gly Ala Ser Glu Val
195 200 205Ser Leu Ser Arg Phe Ser Ser Cys Ile Met Leu Val Ala Tyr Ala Ser
210 215 220Tyr Leu Tyr Phe Gln Leu Ser Gly Arg Asn Asn Ala Tyr Ser Pro Ile
225 230 235 240Gly Ser Glu Glu Met Pro Asn Glu Asp Ala Ala Glu Glu Asp Glu Glu
245 250 255

Pro Ala Val Cys Leu Leu Thr Gly Lys Ser Thr Phe Pro Ser Asp Val
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65				70				75				80			
Ser	Tyr	Tyr	Asp	Gly 85	Val	Leu	Leu	Ile	Leu 90	Leu	Leu	Phe	Ser	Val 95	Ala
Ala	Ser	Val	Ala 100	Leu	Glu	Leu	Arg	Trp 105	Ser	Arg	Val	Pro	Leu 110	Arg	Ala
Trp	Trp	Arg 115	Asp	Glu	Lys	Leu	Trp 120	Met	Val	Thr	Ala	Thr 125	Ser	Ala	Ser
Leu	Ala 130	Ala	Val	Phe	Gln	Gly 135	Ile	Leu	Ser	Ala	Cys 140	Thr	Gly	Ile	Asp
Val 145	Ala	Phe	Ser	Thr	Glu 150	Thr	Ala	Ala	Ser	Pro 155	Pro	Lys	Arg	Pro	Ala 160
Ala	Gly	Asn	Asp	Asp 165	Gly	Glu	Glu	Glu	Ala 170	Ala	Leu	Ala	Ser	Glu 175	Ile
Thr	Met	Arg	Trp 180	Thr	Asn	Leu	Leu	Val 185	Ala	Pro	Thr	Ser	Val 190	Val	Val
Ala	Asn	Leu 195	Ala	Gly	Val	Val	Ala 200	Ala	Val	Ala	Tyr	Gly 205	Val	Asp	His
Gly	Tyr 210	Tyr	Gln	Ser	Trp	Gly 215	Ala	Leu	Gly	Ala	Lys 220	Leu	Ala	Leu	Ala
Gly 225	Trp	Val	Val	Ala	His 230	Leu	Gln	Gly	Phe	Leu 235	Arg	Gly	Leu	Leu	Ala 240
Pro	Arg	Asp	Arg	Ala 245	Pro	Pro	Thr	Ile	Ala 250	Val	Leu	Trp	Ser	Val 255	Val
Phe	Val	Ser	Val 260	Ala	Ser	Leu	Leu	Trp 265	Val	His	Ala	Ala	Ser 270	Phe	Ser
Ala	Pro	Thr 275	Ala												
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<211> 76															
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<213> Zea mays															
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Ile	Gln	Lys	Lys 20	Ala	Val	Pro	Lys	Asp 25	Val	Gln	Ala	Leu	Trp 30	Val	Leu
Ile	Val	Ala 35	Ala	Ala	Ala	Ala	Ala 40	Ala	Tyr	His	Val	Ala 45	Gln	Leu	Ala

Arg Cys Phe Cys Met Glu Arg Leu Ala Ile Thr Gly Gly Gly Gly Gly
50 55 60

Cys Arg Arg Leu Gly Arg Ala Val Ala Cys Ala Ser
65 70 75

<210> 2505
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<213> Oryza sativa

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Met Cys Ala Thr Leu Cys Thr Leu Leu Asp Glu Ile Ser Ile Leu Ile
1 5 10 15

Leu Met Leu Leu Leu Ile Gln Leu Glu Ile Arg Val Ser Ala Ala Gln
20 25 30

Gly Gly Gly Ser His Ala Ala Met Ser Pro Glu Gln Tyr Trp Arg Ser
35 40 45

Ile Leu Pro Asp Ser Thr Pro Met Pro Ile Ser Ile Ser Gln Leu Leu
50 55 60

Gly Asp Gly Tyr Pro Tyr Ser Pro Ala Val Gly Leu Pro Lys Arg Gly
65 70 75 80

Asp Arg Val Gln Ile Arg Tyr Gly Pro Asn Ile Tyr Gly Leu Ala Ala
85 90 95

Ser Gln Gln Phe Phe
100

<210> 2506
<211> 176
<212> PRT
<213> Zea mays

<400> 2506
Met Ala Ser Ser Ser Phe Thr Ser Leu Ser Val Met Val Leu Leu Cys
1 5 10 15

Leu Ala Ala Ala Ala Val Ala Ser Ala Gln Leu Ser Pro Thr Phe Tyr
20 25 30

Ser Arg Ser Cys Pro Arg Ala Leu Ala Thr Ile Lys Ala Ala Val Thr
35 40 45

Ala Ala Val Ala Gln Glu Ala Arg Met Gly Ala Ser Leu Leu Arg Leu
50 55 60

His Phe His Asp Cys Phe Val Gln Gly Cys Asp Gly Ser Val Leu Leu
65 70 75 80

Asn Asp Thr Ala Thr Phe Thr Gly Glu Gln Thr Ala Asn Pro Asn Val
Page 1486

Gly Ser Ile Arg Gly Phe Gly Val Val Asp Asn Ile Lys Ala Gln Val
100 105 110

Glu Ala Val Cys Pro Gly Val Val Ser Cys Ala Asp Ile Leu Ala Val
115 120 125

Ala Ala Arg Asp Ser Val Val Ala Leu Gly Gly Pro Ser Trp Arg Val
130 135 140

Leu Leu Gly Arg Arg Asp Ser Thr Thr Ala Ser Leu Ala Leu Ala Asn
145 150 155 160

Ser Asp Leu Pro Ala Pro Ser Leu Asp Leu Ala Asn Leu Thr Ala Ala
165 170 175

<210> 2507

<211> 276

<212> PRT

<213> Oryza sativa

<400> 2507

Phe Arg Ser Leu Arg Pro Pro Val Pro Leu Pro Pro Pro Asp Val Pro
1 5 10 15

Leu Ser Phe Pro Glu Phe Ala Phe Ser Leu Leu Pro Arg Ser Ser Ser
20 25 30

Ser Ser Ser Ser Ser Leu Leu Pro Ala Asn Pro Ala Leu Val Asp Ala
35 40 45

Ala Thr Gly Glu Ala Val Ser Phe Gln Ala Phe Leu Ser Arg Val Arg
50 55 60

Ala Leu Ala Gly Ala Leu Arg Ser Arg Val Gly Leu Arg Gly Gly Asp
65 70 75 80

Val Ala Phe Val Leu Ala Pro Ala Gly Leu Asp Val Pro Val Leu Tyr
85 90 95

Phe Ala Leu Leu Ser Ile Gly Ala Val Val Ser Pro Ala Asn Pro Ala
100 105 110

Leu Thr Pro Ala Glu Val Ser Arg Leu Val Ser Leu Ser Gly Ala Ser
115 120 125

Val Ala Phe Ala Val Ser Ser Thr Ala Thr Lys Leu Pro Ala Gly Leu
130 135 140

Thr Thr Val Val Leu Leu Asp Ser Pro His Phe Arg Ser Leu Leu Met
145 150 155 160

Asp Cys Gly Gln Ala Gln Gly Gln Glu Pro Leu Pro Val Val Val Val
165 170 175

Arg Gln Ser Glu Thr Ala Ala Ile Gln Tyr Ser Ser Gly Thr Thr Gly
180 185 190

Arg Val Lys Ala Ala Ala Leu Pro His Arg Ser Phe Ile Ala Met Val
195 200 205

Ala Gly Phe His Ala Leu Arg Ala Lys Ala Arg Glu Val Arg Thr Leu
210 215 220

Leu Gly Ala Pro Met Phe His Ser Met Gly Phe Leu Phe Val Leu Gln
225 230 235 240

Gly Val Ala Leu Gly Ala Thr Thr Val Val Val Thr Asp Ala Val Ala
245 250 255

Arg Ala Gly Ile Arg Gly Leu Val Glu Ala Ala Glu Arg Trp Ala Val
260 265 270

Met Asp Met Thr
275

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Ala Arg Ala Ser Pro Ala Asp Val Leu Ala Gly Ala Ser Arg Arg Ala
1 5 10 15

Val Ala Ala Met Gly Ile Leu Leu Ser Arg Arg His Ser Pro Val Trp
20 25 30

Ala Gly Arg Arg Leu Gly Leu Leu Gln Arg Leu Gly Tyr Val Ala Arg
35 40 45

Ala Ser Tyr Pro Leu Ala Ser Leu Pro Leu Thr Val Tyr Cys Ala Leu
50 55 60

Pro Ala Val Cys Leu Leu Thr Gly Lys Ser Thr Phe
65 70 75

<210> 2509
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<213> Oryza sativa

<400> 2509
Met Ala Ala Glu Ala Ala Pro Glu Trp Val Glu Lys Gly Asp Asn Ala
1 5 10 15

Trp Pro Leu Ala Ala Ala Thr Leu Val Gly Leu Gln Ser Val Pro Arg
20 25 30

Leu Val Ile Leu Tyr Gly Asp Cys Gly Ala Val Gly Pro Arg Thr Glu
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35

40

45

Lys Asp Arg Glu Ala Phe Pro Pro Asn Asn Val Leu Leu Thr Leu Ala
 50 55 60

Gly Ala Gly Leu Leu Leu Trp Met Gly Trp Thr Gly Phe Asn Gly Gly
 65 70 75 80

Ala Pro Tyr Ala Ala Asn Val Asp Ala Ser Val Thr Val Val Asn Thr
 85 90 95

His Leu Cys Thr Ala Thr Ser Leu Leu Val Trp Leu Leu Leu Asp Ser
 100 105 110

Phe Val Phe Gly Arg Leu Ser Val Ile Ser Ala Val Gln Gly
 115 120 125

<210> 2510

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<212> PRT

<213> Zea mays

<400> 2510

Arg Ser Arg Ala Lys Tyr Ser Arg Leu Leu Leu Val Val Leu Asp Ala
 1 5 10 15

Ala Met Leu Ala Leu Val Thr Pro Gly Ala Ser Ala Ala Ala Ala Ile
 20 25 30

Val Tyr Leu Ala His Lys Gly Asn Val Arg Ala Asn Trp Leu Ala Ile
 35 40 45

Cys Gln Gln Phe Asp Ser Phe Cys Glu Arg Ile Ser Gly Cys Leu Ile
 50 55 60

Gly Ser Phe Gly Ala Met Val Met Leu Val Leu Leu
 65 70 75

<210> 2511

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<212> PRT

<213> Zea mays

<400> 2511

Met Ser Ala Leu Gly Thr Leu Ser Gly Gly Ala Ala Gly Val Ser Gly
 1 5 10 15

Leu Leu Arg Leu Arg Arg Arg Ala Ala Pro Ala Pro Ala Ile Ala Ala
 20 25 30

Pro Ser His Leu Pro Ala Gly Thr Val Lys Cys Ala Ala Ala Val Pro
 35 40 45

Asp Ala Ala Pro Ile Val Trp Gly Arg Gln Leu Arg Pro Ala Leu Leu
 50 55 60

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Leu Pro Ala Ala Leu Leu Pro Ser Leu Gln Pro Ala Arg Arg His Thr
65 70 75 80

Leu Gln Pro Pro Ala Ala Ala Ala Glu Ser Ala Gly Glu Ala Lys Ser
85 90 95

Val Gly Phe Leu Glu Lys Tyr Pro Ala Leu Val Thr Gly Phe Phe Phe
100 105 110

Phe Met Trp Tyr Phe Leu Asn Val Ile Phe Asn Ile Leu Asn Lys Lys
115 120 125

Ile Tyr Asn Tyr Phe Pro Tyr Pro Tyr Phe Val Ser Leu Ile His Leu
130 135 140

Val Val Gly Val Val Tyr Cys
145 150

<210> 2512

<211> 76

<212> PRT

<213> Oryza sativa

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Met Asp Arg Leu Leu Ala Cys Leu Leu Gly Phe Leu Leu Ile Ala Ser
1 5 10 15

Val Gly Ser His Ala Ala Arg Thr Pro Glu Gln Tyr Trp Lys Ser Ala
20 25 30

Leu Pro Asn Ser Pro Ile Pro Ser Ser Leu Ser Gln Leu Leu Ser Thr
35 40 45

Ala Gly Gly Gly Thr Ser Val Asn Val Gly Gly Gly Gly Val His Val
50 55 60

Asp Ala Gly His Gly Lys Pro Gly Gly Thr Thr Val
65 70 75

<210> 2513

<211> 101

<212> PRT

<213> Zea mays

<400> 2513

Met Ser Pro Ala Pro Ser Arg Pro Arg Ile Arg Pro Trp Leu Val Val
1 5 10 15

Gly Asp Leu Ala Leu Ala Ala Ala Trp Val Cys Ala Gly Ala Leu Val
20 25 30

Lys Leu Leu Val Tyr Gly Gly Leu Gly Leu Gly Gly Arg Pro Glu Ala
35 40 45

Glu Ala Val Lys Val Ser Leu Ser Leu Val Tyr Met Phe Leu Phe Ala
50 55 60

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Trp Leu Glu Ala Ala Ser Gly Gly Ala Ser Tyr Asn Pro Leu Thr Val
65 70 75 80

Leu Ala Ala Ala Leu Ala Ser His Gly Gly Pro Ala Val Tyr Leu Phe
85 90 95

Thr Ala Phe Ala Arg
100

<210> 2514

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<212> PRT

<213> Oryza sativa

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Met Gln Pro Tyr Leu Gln Leu Ala Ser Leu Arg Leu Ala Thr Thr Ile
1 5 10 15

Pro Leu Ala Pro Arg Leu Tyr Asp Ala Asn Leu Leu Ala Ala Ser Gly
20 25 30

Ala Ala Met Ala Ser Ser Met Ala Tyr Ile Ala Leu Leu Cys Ala Ala
35 40 45

Leu Ala Ala Val Val Ala Leu Leu Arg Trp Ala Tyr Arg Trp Ser His
50 55 60

Pro Arg Ser Asn Gly Arg Leu Pro Pro Gly Ser Leu Gly Leu Pro Val
65 70 75 80

Ile Gly Glu Thr Leu Gln Phe Phe Ala Pro Asn Pro Thr Cys Asp Leu
85 90 95

Ser Pro Phe Val Lys
100

<210> 2515

<211> 101

<212> PRT

<213> Solanum lycopersicum

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Gly Pro Ser Ile Ala Val Ile Ser Ile Phe Leu Ser Tyr Ser Val Ile
1 5 10 15

Pro Phe Gly Asp His Leu Val Leu Ala Asp Leu Ser Ile Gly Val Phe
20 25 30

Phe Trp Ile Ala Ile Ser Ser Ile Ala Pro Val Gly Leu Leu Met Ser
35 40 45

Gly Tyr Gly Ser Asn Asn Lys Tyr Ser Phe Leu Gly Gly Leu Arg Ala
50 55 60

Ala Ala Gln Ser Ile Ser Tyr Glu Ile Pro Leu Ala Leu Cys Val Leu
65 70 75 80

Ser Ile Ser Leu Leu Ser Asn Ser Leu Ser Thr Val Asp Ile Val Glu
85 90 95

Ala Gln Ser Lys Tyr
100

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<211> 76
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<213> Oryza sativa

<400> 2516
Met Asp Ala Phe Tyr Ser Thr Ser Ser Ala Tyr Gly Ala Ala Ala Ser
1 5 10 15

Gly Trp Gly Tyr Asp Ser Leu Lys Asn Phe Arg Gln Ile Ser Pro Ala
20 25 30

Val Gln Ser His Leu Lys Leu Val Tyr Leu Thr Leu Cys Val Ala Leu
35 40 45

Ala Ala Ser Ala Val Gly Ala Tyr Leu His Val Ala Leu Asn Ile Gly
50 55 60

Gly Met Leu Thr Met Leu Gly Cys Val Gly Ser Ile
65 70 75

<210> 2517
<211> 126
<212> PRT
<213> Zea mays

<400> 2517
Met Ala Met Gly Ala Thr Val Arg Ala Ala Ala Ala Asp Ala Val Val
1 5 10 15

Thr Phe Leu Trp Val Leu Cys Ala Ser Ala Leu Gly Ala Ser Thr Ala
20 25 30

Ala Val Thr Ser Tyr Leu Gly Val Gln Glu Gly Ala Gly His Tyr Ala
35 40 45

Leu Leu Val Thr Thr Ser Leu Leu Ser Val Leu Leu Phe Thr Phe Asp
50 55 60

Leu Leu Cys Gly Ala Leu Gly Gly Ala Ser Phe Asn Pro Thr Asp Phe
65 70 75 80

Ala Ala Ser Tyr Ala Ala Gly Leu Asp Ser Pro Ser Leu Phe Ser Val
85 90 95

Ala Leu Arg Phe Pro Ala Gln Ala Ala Gly Ala Val Gly Gly Ala Leu
100 105 110

Ala Ile Ser Glu Leu Met Pro Ala Gln Tyr Lys His Thr Leu

115

120

125

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<211> 76

<212> PRT

<213> Oryza sativa

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Phe Ile Phe Phe Val Val Ala Tyr Ala Val Ala Ala Ala Tyr Ser Leu
 1 5 10 15

Leu Val Leu Ala Val Pro Ala Gly Ser Ala Leu Ser Arg Leu Ala Leu
 20 25 30

Thr Thr Asp Val Val Leu Gly Met Val Leu Ala Gly Ala Val Ala Ser
 35 40 45

Ala Gly Ala Ile Ser Asp Ile Ala Lys Asn Gly Asn Ser His Ala Gly
 50 55 60

Trp Leu Pro Val Cys Gly Gln Ile His Ala Tyr Cys
 65 70 75

<210> 2519

<211> 100

<212> PRT

<213> Gallus gallus

<400> 2519

Leu Gln Gln Ile Ala Thr Asp Gly Ser Phe Ala Phe Thr Ala Leu Asp
 1 5 10 15

Ile Arg Asn Leu Ala Ala Leu Arg Glu Leu Leu Leu Pro Asn Ile Val
 20 25 30

Gly Val Ala Gln Arg Leu Ile Leu Leu Glu Ala Pro Thr Ile Val Thr
 35 40 45

Glu Val Ile Glu Val Asn Lys Lys Asp Ile Val Phe Leu Ile Asp Gly
 50 55 60

Ser Thr Ala Leu Gly Thr Gly Pro Phe Asn Ser Ile Arg Asp Phe Val
 65 70 75 80

Ala Lys Ile Val Gln Arg Leu Glu Val Gly Pro Asp Leu Ile Gln Val
 85 90 95

Ala Val Ala Gln
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<210> 2520

<211> 102

<212> PRT

<213> Gallus gallus

<400> 2520

Ile Glu Glu Ala Val Pro Gln Ile Leu Val Leu Ile Ser Gly Gly Glu
 1 5 10 15

Ser Ser Asp Asp Ile Arg Glu Gly Leu Leu Ala Val Lys Gln Ala Ser
20 25 30
Ile Phe Ser Phe Ser Ile Gly Val Leu Asn Ala Asp Ser Ala Glu Leu
35 40 45
Gln Gln Ile Ala Thr Asp Gly Ser Phe Ala Phe Thr Ala Leu Asp Ile
50 55 60
Arg Asn Leu Ala Ala Leu Arg Glu Leu Leu Leu Pro Asn Ile Val Gly
65 70 75 80
Val Ala Gln Arg Leu Ile Leu Leu Glu Ala Pro Thr Ile Val Thr Glu
85 90 95
Val Ile Glu Val Asn Lys
100

<210> 2521
<211> 102
<212> PRT
<213> Bos taurus-Gallus gallus-Bos taurus-Gallus gallus

<400> 2521
Ala Leu Thr Val Ile Asp Phe Thr Glu Asp Glu Val Glu Asp Leu Leu
1 5 10 15
Ser Ile Val Ala Ser Val Leu His Leu Thr Val Leu Ser Asp Leu Ile
20 25 30
Pro Glu Ile Glu Tyr Val Val Ser Ile Ala Ser Tyr Asp Glu Val Glu
35 40 45
Glu Ser Leu Ala Leu Thr Val Ile Asp Phe Thr Glu Asp Glu Val Glu
50 55 60
Asp Leu Leu Ser Ile Val Ala Ser Val Leu His Leu Asn Glu Ile Ile
65 70 75 80
Leu Gln Val Cys Ser Gly Val Asp Glu Gln Leu Gly Glu Leu Val Ser
85 90 95
Gly Glu Glu Val Val Glu
100

<210> 2522
<211> 100
<212> PRT
<213> Gallus gallus

<400> 2522
Lys Val His Lys Leu Gln Ile Glu Val Glu Asn Val Thr Ser Leu Leu
1 5 10 15
Asn Glu Ala Glu Ser Lys Asn Ile Lys Leu Thr Lys Asp Val Ala Thr
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20

25

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Leu Gly Ser Gln Leu Gln Asp Thr Gln Glu Leu Leu Gln Glu Glu Thr
 35 40 45

Arg Gln Lys Leu Asn Val Thr Thr Lys Leu Arg Gln Leu Glu Asp Asp
 50 55 60

Lys Asn Ser Leu Gln Glu Gln Leu Asp Glu Glu Val Glu Ala Lys Gln
 65 70 75 80

Asn Leu Glu Arg His Ile Ser Thr Leu Thr Ile Gln Leu Ser Asp Ser
 85 90 95

Lys Lys Lys Leu
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<210> 2523

<211> 100

<212> PRT

<213> Bos taurus

<400> 2523

Glu Glu Glu Glu Glu Ala Arg Arg Ser Leu Glu Lys Gln Leu Gln Ala
 1 5 10 15

Leu Gln Ala Gln Leu Thr Asp Thr Lys Lys Lys Val Asp Asp Asp Leu
 20 25 30

Gly Thr Ile Glu Asn Leu Glu Glu Ala Lys Lys Lys Leu Leu Lys Asp
 35 40 45

Val Glu Val Leu Ser Gln Arg Leu Glu Glu Lys Ala Leu Ala Tyr Asp
 50 55 60

Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu Leu Asp Asp Leu
 65 70 75 80

Leu Val Asp Leu Asp His Gln Arg Gln Ile Val Ser Asn Leu Glu Lys
 85 90 95

Lys Gln Lys Lys
 100

<210> 2524

<211> 101

<212> PRT

<213> Pisum sativum-Bos taurus-Bos taurus-Gallus gallus

<400> 2524

Ile Lys Thr Val Thr Ser Leu Asp Leu Pro Val Leu Arg Trp Leu Lys
 1 5 10 15

Leu Ser Ala Glu His Gly Ser Leu His Lys Asp Gly Lys Leu Val Ser
 20 25 30

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Ile Ile Ala Glu Leu Leu Ser Thr Lys Thr Asp Met Val Glu Lys Ala
35 40 45

Leu Leu Tyr Arg Gln Lys Leu Gln Leu Glu Lys Val Thr Ala Glu Ala
50 55 60

Lys Ile Lys Lys Met Glu Glu Glu Ile Leu Leu Leu Lys Val Thr Thr
65 70 75 80

Glu Ala Lys Leu Lys Lys Leu Glu Glu Asp Val Ile Val Leu Glu Asp
85 90 95

Gln Asn Leu Lys Leu
100

<210> 2525
<211> 50
<212> PRT
<213> Gallus gallus

<400> 2525
Ala Phe Thr Ala Leu Asp Ile Arg Asn Leu Ala Ala Leu Arg Glu Leu
1 5 10 15

Leu Leu Pro Asn Ile Val Gly Val Ala Gln Arg Leu Ile Leu Leu Glu
20 25 30

Ala Pro Thr Ile Val Thr Glu Val Ile Glu Val Asn Lys Lys Asp Ile
35 40 45

Val Phe
50

<210> 2526
<211> 50
<212> PRT
<213> Bos taurus

<400> 2526
Lys Leu Leu Ile Leu Thr Cys Leu Val Ala Val Ala Leu Ala Arg Pro
1 5 10 15

Lys His Pro Ile Lys His Gln Gly Leu Pro Gln Glu Val Leu Asn Glu
20 25 30

Asn Leu Leu Arg Phe Phe Val Ala Pro Phe Pro Glu Val Phe Gly Lys
35 40 45

Glu Lys
50

<210> 2527
<211> 50
<212> PRT
<213> Bos taurus

<400> 2527
Leu Leu Ile Leu Thr Cys Leu Val Ala Val Ala Leu Ala Arg Pro Lys

1 5 10 15
 His Pro Ile Lys His Gln Gly Leu Pro Gln Glu Val Leu Asn Glu Asn
 20 25 30
 Leu Leu Arg Phe Phe Val Ala Pro Phe Pro Glu Val Phe Gly Lys Glu
 35 40 45
 Lys Val
 50
 <210> 2528
 <211> 50
 <212> PRT
 <213> Bos taurus
 <400> 2528
 Leu Ile Leu Thr Cys Leu Val Ala Val Ala Leu Ala Arg Pro Lys His
 1 5 10 15
 Pro Ile Lys His Gln Gly Leu Pro Gln Glu Val Leu Asn Glu Asn Leu
 20 25 30
 Leu Arg Phe Phe Val Ala Pro Phe Pro Glu Val Phe Gly Lys Glu Lys
 35 40 45
 Val Asn
 50
 <210> 2529
 <211> 50
 <212> PRT
 <213> Bos taurus
 <400> 2529
 Ile Leu Thr Cys Leu Val Ala Val Ala Leu Ala Arg Pro Lys His Pro
 1 5 10 15
 Ile Lys His Gln Gly Leu Pro Gln Glu Val Leu Asn Glu Asn Leu Leu
 20 25 30
 Arg Phe Phe Val Ala Pro Phe Pro Glu Val Phe Gly Lys Glu Lys Val
 35 40 45
 Asn Glu
 50
 <210> 2530
 <211> 50
 <212> PRT
 <213> Bos taurus
 <400> 2530
 Leu Thr Cys Leu Val Ala Val Ala Leu Ala Arg Pro Lys His Pro Ile
 1 5 10 15
 Lys His Gln Gly Leu Pro Gln Glu Val Leu Asn Glu Asn Leu Leu Arg
 20 25 30

Phe Phe Val Ala Pro Phe Pro Glu Val Phe Gly Lys Glu Lys Val Asn
35 40 45

Glu Leu
50

<210> 2531
<211> 50
<212> PRT
<213> Bos taurus

<400> 2531
Ser Ile Ser Ser Ser Glu Glu Ile Val Pro Asn Ser Val Glu Gln Lys
1 5 10 15

His Ile Gln Lys Glu Asp Val Pro Ser Glu Arg Tyr Leu Gly Tyr Leu
20 25 30

Glu Gln Leu Leu Arg Leu Lys Lys Tyr Lys Val Pro Gln Leu Glu Ile
35 40 45

Val Pro
50

<210> 2532
<211> 50
<212> PRT
<213> Bos taurus

<400> 2532
Ile Val Pro Asn Ser Val Glu Gln Lys His Ile Gln Lys Glu Asp Val
1 5 10 15

Pro Ser Glu Arg Tyr Leu Gly Tyr Leu Glu Gln Leu Leu Arg Leu Lys
20 25 30

Lys Tyr Lys Val Pro Gln Leu Glu Ile Val Pro Asn Ser Ala Glu Glu
35 40 45

Arg Leu
50

<210> 2533
<211> 90
<212> PRT
<213> Phaseolus angularis

<400> 2533
Ala Ala Asp Cys Asn Gly Ala Cys Ser Pro Phe Gln Met Pro Pro Cys
1 5 10 15

Gly Ser Thr Asp Cys Leu Cys Ile Pro Ala Gly Leu Leu Phe Val Gly
20 25 30

Tyr Cys Thr Tyr Pro Ser Gly Leu Ser Ser Val Ala Lys Met Ile Asp
35 40 45

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Glu His Pro Asn Leu Cys Gln Ser Asp Asp Glu Cys Met Lys Lys Gly
50 55 60

Ser Gly Asn Phe Cys Ala Arg Tyr Pro Asn Asn Tyr Met Asp Tyr Gly
65 70 75 80

Trp Cys Phe Asp Ser Asp Ser Glu Ala Leu
85 90

<210> 2534

<211> 322

<212> PRT

<213> Gallus gallus

<400> 2534

Ala Asp Ala Cys Ser Gly Leu Gln Gly Phe Leu Ile Phe His Ser Phe
1 5 10 15

Gly Gly Gly Thr Gly Ser Gly Phe Thr Ser Leu Leu Met Glu Arg Leu
20 25 30

Ser Val Asp Tyr Gly Lys Lys Ser Lys Leu Glu Phe Ala Ile Tyr Pro
35 40 45

Ala Pro Gln Val Ser Thr Ala Val Val Glu Pro Tyr Asn Ser Ile Leu
50 55 60

Thr Thr His Thr Thr Leu Glu His Ser Asp Cys Ala Phe Met Val Asp
65 70 75 80

Asn Glu Ala Ile Tyr Asp Ile Cys Cys Arg Asn Leu Asp Ile Glu Arg
85 90 95

Pro Thr Tyr Thr Asn Leu Asn Arg Leu Ile Ser Gln Ile Val Ser Ser
100 105 110

Ile Thr Ala Ser Leu Arg Phe Asp Gly Ala Leu Asn Val Asp Leu Thr
115 120 125

Glu Phe Gln Thr Asn Leu Val Pro Tyr Pro Arg Ile His Phe Pro Leu
130 135 140

Val Thr Tyr Ala Pro Ile Ile Ser Ser Glu Arg Ala Tyr His Glu Gln
145 150 155 160

Leu Ser Val Ala Glu Ile Thr Ser Ser Cys Phe Glu Pro Asn Asn Gln
165 170 175

Met Val Lys Cys Asp Pro Arg His Gly Lys Tyr Met Ala Cys Cys Met
180 185 190

Leu Tyr Arg Gly Asp Val Val Pro Lys Asp Val Asn Val Ala Ile Ala
195 200 205

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Ala Ile Lys Thr Lys Arg Asn Ile Gln Phe Val Asp Trp Cys Pro Thr
210 215 220

Gly Val Lys Val Gly Ile Asn Tyr Gln Pro Pro Thr Val Val Pro Gly
225 230 235 240

Gly Asp Leu Ala Gln Val Gln Arg Ala Val Cys Met Leu Ser Asn Thr
245 250 255

Thr Ala Ile Ala Glu Ala Trp Ala Arg Leu Asp His Lys Phe Asp Leu
260 265 270

Met Tyr Ala Lys Arg Ala Phe Val His Trp Tyr Val Ser Glu Gly Met
275 280 285

Glu Glu Gly Glu Phe Ala Glu Ala Arg Glu Asp Leu Ala Ala Leu Glu
290 295 300

Lys Asp Tyr Glu Glu Val Gly Thr Asp Ser Phe Glu Asp Glu Asn Asp
305 310 315 320

Glu Glu

<210> 2535
<211> 50
<212> PRT
<213> Bos taurus

<400> 2535
Leu Glu Tyr Ser Arg Glu Gly Leu Val Trp Glu Asp Ile Asp Trp Ile
1 5 10 15

Asp Asn Gly Glu Cys Leu Asp Leu Ile Glu Lys Lys Leu Gly Leu Leu
20 25 30

Ala Leu Ile Asn Glu Glu Ser His Phe Pro Gln Ala Thr Asp Ser Thr
35 40 45

Leu Leu
50

<210> 2536
<211> 51
<212> PRT
<213> Gallus gallus

<400> 2536
Leu Gln Gln Gln Phe Asn Met His Val Phe Lys Leu Glu Gln Glu Glu
1 5 10 15

Tyr Met Lys Glu Gln Ile Pro Trp Thr Leu Ile Asp Phe Tyr Asp Asn
20 25 30

Gln Pro Cys Ile Asn Leu Ile Glu Ala Lys Met Gly Val Leu Asp Leu
35 40 45

Leu Asp Glu
50

<210> 2537
<211> 58
<212> PRT
<213> Sus scrofa

<400> 2537
Leu Cys Ile Asn Phe Ala Asn Glu His Leu Gln Gln Phe Phe Val Arg
1 5 10 15

His Val Phe Lys Leu Glu Gln Glu Glu Tyr Asp Leu Glu Ser Ile Asp
20 25 30

Trp Leu His Ile Glu Phe Thr Asp Asn Gln Asp Ala Leu Asp Met Ile
35 40 45

Ala Asn Lys Pro Met Asn Ile Ile Ser Leu
50 55

<210> 2538
<211> 100
<212> PRT
<213> Gallus gallus

<400> 2538
Asn Trp Ile Val Asp His Val Asn Lys Ala Leu His Ser Thr Val Lys
1 5 10 15

Gln His Ser Phe Ile Gly Val Leu Asp Ile Tyr Gly Phe Glu Thr Phe
20 25 30

Glu Ile Asn Ser Phe Glu Gln Phe Cys Ile Asn Tyr Ala Asn Glu Lys
35 40 45

Leu Gln Gln Gln Phe Asn Met His Val Phe Lys Leu Glu Gln Glu Glu
50 55 60

Tyr Met Lys Glu Gln Ile Pro Trp Thr Leu Ile Asp Phe Tyr Asp Asn
65 70 75 80

Gln Pro Cys Ile Asn Leu Ile Glu Ala Lys Met Gly Val Leu Asp Leu
85 90 95

Leu Asp Glu Glu
100

<210> 2539
<211> 101
<212> PRT
<213> Sus scrofa

<400> 2539
Glu Val Lys Asn Pro Arg Arg Ser Ile Gly Leu Leu Asp Ile Phe Gly
1 5 10 15

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Phe Glu Asn Phe Ala Val Asn Ser Phe Glu Gln Leu Cys Ile Asn Phe
20 25 30

Ala Asn Glu His Leu Gln Gln Phe Phe Val Arg His Val Phe Lys Leu
35 40 45

Glu Gln Glu Glu Tyr Asp Leu Glu Ser Ile Asp Trp Leu His Ile Glu
50 55 60

Phe Thr Asp Asn Gln Asp Ala Leu Asp Met Ile Ala Asn Lys Pro Met
65 70 75 80

Asn Ile Ile Ser Leu Ile Asp Glu Glu Ser Lys Phe Pro Lys Gly Thr
85 90 95

Asp Thr Thr Met Leu
100

<210> 2540
<211> 51
<212> PRT
<213> Gallus gallus

<400> 2540
Leu Leu Gly Leu Leu Leu Ala Trp Leu Leu Leu Gly Leu Leu Phe
1 5 10 15

Gly Leu Ile Ala Leu Ala Glu Glu Val Arg Lys Leu Lys Ser Arg Val
20 25 30

Asp Asn Leu Glu Lys Ile Asn His Ser Phe Leu Thr Val Asn Gln Gly
35 40 45

Asn Pro Tyr
50

<210> 2541
<211> 53
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2541
Arg Pro Leu Leu Thr Leu Ser Ser Ala Thr Arg Ser Val Leu Phe Ser
1 5 10 15

Leu Leu Ala Ser Asp Met Ser Ile Ile Leu Ser Ile Ser Pro Asn Thr
20 25 30

Gly Ile Leu Leu Cys Ile Gly His Leu Leu Ala Ser Asp Ile Glu Asp
35 40 45

Val Val Ile Val Leu
50

<210> 2542
<211> 52
<212> PRT

<213> Bos taurus

<400> 2542

Ile Leu Ala Ala Ile Leu His Leu Gly Asn Leu Lys Phe Val Val Asp
 1 5 10 15

Gly Asp Thr Thr Leu Ile Glu Asp Gly Lys Leu Val Ser Ile Ile Ala
 20 25 30

Glu Leu Leu Ser Thr Lys Thr Asp Met Val Glu Lys Ala Leu Leu Tyr
 35 40 45

Arg Thr Val Ala
 50

<210> 2543

<211> 51

<212> PRT

<213> Bos taurus

<400> 2543

Lys Leu Leu Lys Asp Val Glu Val Leu Ser Gln Arg Leu Glu Glu Lys
 1 5 10 15

Ala Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln
 20 25 30

Glu Leu Asp Asp Leu Leu Val Asp Leu Asp His Gln Arg Gln Ile Val
 35 40 45

Ser Asn Leu
 50

<210> 2544

<211> 51

<212> PRT

<213> Gallus gallus

<400> 2544

Leu His Leu Pro Phe Leu Phe Asp Ser Gln Trp His Lys Leu Met Ile
 1 5 10 15

Ser Val Glu Thr Thr Ser Val Thr Leu Phe Ile Asp Cys Ile Lys Val
 20 25 30

Glu Thr Leu Asn Ile Lys Pro Lys Gly Lys Ile Ser Val Asp Gly Phe
 35 40 45

Ser Val Leu
 50

<210> 2545

<211> 52

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2545

Met Ile His Gly Gly Val Arg Tyr Leu Glu Lys Ala Phe Trp Glu Phe
 1 5 10 15

Ser Lys Ala Gln Leu Asp Leu Val Ile Glu Ala Leu Asn Glu Arg Lys
20 25 30

His Leu Ile Asn Thr Ala Pro His Leu Cys Thr Val Leu Pro Ile Leu
35 40 45

Ile Pro Ile Tyr
50

<210> 2546
<211> 52
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2546
Leu Ile Met Lys Arg Asn Phe Leu Ser Trp Lys Arg Gly Leu Gln Leu
1 5 10 15

Asn Tyr Asn Val Thr Arg Leu Glu Glu Trp Cys Lys Thr His Gly Leu
20 25 30

Thr Asp Gly Thr Glu Cys Leu Gln His Leu Ile Gln Thr Ala Lys Leu
35 40 45

Leu Gln Val Arg
50

<210> 2547
<211> 53
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2547
Leu Tyr Leu Glu Glu Val Ser Lys Asn Leu Val Glu Ile Asn Pro Leu
1 5 10 15

Lys Leu Glu Val Lys Ala Lys Pro Trp Phe Val Tyr Thr Pro Met His
20 25 30

Gly Val Gly Phe Asp Ile Phe Ser Thr Ile Val Lys Lys Thr Leu Cys
35 40 45

Leu Val Glu Gly Lys
50

<210> 2548
<211> 51
<212> PRT
<213> *Zea mays*

<400> 2548
Glu Met Leu Val Asn Leu Gly Val Pro Trp Val Ile Leu Gly His Ser
1 5 10 15

Glu Arg Arg Ala Leu Leu Gly Glu Ser Asn Glu Phe Val Gly Asp Lys
20 25 30

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Val Ala Tyr Ala Leu Ser Gln Gly Leu Lys Val Ile Ala Cys Val Gly
35 40 45

Glu Thr Leu
50

<210> 2549
<211> 51
<212> PRT
<213> Gallus gallus

<400> 2549
Gly Val Asp Gly Ser Leu Gln Thr Ala Ser Phe Leu His Leu Pro Phe
1 5 10 15

Leu Phe Asp Ser Gln Trp His Lys Leu Met Ile Ser Val Glu Thr Thr
20 25 30

Ser Val Thr Leu Phe Ile Asp Cys Ile Lys Val Glu Thr Leu Asn Ile
35 40 45

Lys Pro Lys
50

<210> 2550
<211> 103
<212> PRT
<213> Bos taurus

<400> 2550
Leu Leu Trp Ala Leu Ala Ala Ala Leu Gln Arg Arg Glu Pro Asn Leu
1 5 10 15

Val Ser Arg Leu Glu Arg His Gly Val Glu Leu Lys Val Ala Lys Ala
20 25 30

Glu Val Glu Leu Ser Val Lys Arg Leu Arg Ala Trp Gly Ala Arg Val
35 40 45

Gln Ala Gln Gly Cys Ala Leu Gln Val Ala Glu Leu Arg Gly Pro Val
50 55 60

Leu Arg Leu Arg Glu Pro Leu Gly Val Leu Ala Ile Val Cys Pro Asp
65 70 75 80

Glu Trp Pro Leu Leu Ala Phe Val Ser Leu Leu Ala Pro Ala Leu Ala
85 90 95

His Gly Asn Thr Val Val Leu
100

<210> 2551
<211> 102
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2551

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Leu Thr Leu Ile Tyr Leu Asn Asp Leu Glu Asn Glu Thr Leu Lys Val
1 5 10 15

Phe Asp Lys Ile Tyr Ser Thr Trp Leu Val Lys Phe Met Lys His Ala
20 25 30

Ser Ala His Ile Glu Ile Phe Asp Met Val Leu Asn Glu Lys Leu Phe
35 40 45

Lys Asn Ser Gly Asp Glu Lys Phe Ala Lys Leu Phe Thr Phe Leu Asn
50 55 60

Glu Phe Asp Ala Val Leu Cys Lys Phe Gln Val Val Asp Ser Met His
65 70 75 80

Thr Lys Ile Phe Asn Asp Thr Leu Lys Tyr Leu Asn Val Met Leu Phe
85 90 95

Asn Asp Leu Ile Thr Lys
100

<210> 2552
<211> 101
<212> PRT
<213> Bos taurus

<400> 2552
Val Leu Met Arg Asn Val Ala Leu Pro Glu Asp Ile Arg Gly Lys Cys
1 5 10 15

Thr Ala Leu Leu Gln Leu Tyr Asp Ala Ser Asn Ser Glu Trp Gln Leu
20 25 30

Gly Lys Thr Lys Val Phe Leu Arg Glu Ser Leu Glu Gln Lys Leu Glu
35 40 45

Lys Arg Gln Glu Glu Glu Val Thr Arg Ala Ala Met Val Ile Arg Ala
50 55 60

His Val Leu Gly Tyr Leu Ala Arg Lys Gln Tyr Lys Lys Val Leu Asp
65 70 75 80

Cys Val Val Ile Ile Gln Lys Asn Tyr Arg Ala Phe Leu Leu Arg Arg
85 90 95

Arg Phe Leu His Leu
100

<210> 2553
<211> 101
<212> PRT
<213> Ovis aries

<400> 2553
Trp Leu Leu Leu Cys Asn Pro Gly Leu Ala Glu Leu Ile Ala Glu Lys
1 5 10 15

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Ile Gly Glu Asp Tyr Val Lys Asp Leu Ser Gln Leu Thr Lys Leu Asn
20 25 30

Ser Phe Leu Gly Asp Asp Ile Phe Leu Arg Glu Ile Ser Asn Val Lys
35 40 45

Gln Glu Asn Lys Leu Lys Phe Ser Gln Phe Leu Glu Lys Glu Tyr Lys
50 55 60

Val Lys Ile Asn Pro Ser Ser Met Phe Asp Val Gln Val Lys Arg Ile
65 70 75 80

His Glu Tyr Lys Arg Gln Leu Leu Asn Cys Leu His Val Val Thr Met
85 90 95

Tyr Asn Arg Ile Lys
100

<210> 2554
<211> 102
<212> PRT
<213> Sus scrofa

<400> 2554
Leu Asp Thr Gln Lys Val Ala Gly Thr Trp His Thr Val Ala Met Ala
1 5 10 15

Val Ser Asp Val Ser Leu Leu Asp Ala Lys Ser Ser Pro Leu Lys Ala
20 25 30

Tyr Val Glu Gly Leu Lys Pro Thr Pro Glu Gly Asp Leu Glu Ile Leu
35 40 45

Leu Gln Lys Arg Glu Asn Asp Lys Cys Ala Gln Glu Val Leu Leu Ala
50 55 60

Lys Lys Thr Asp Ile Pro Ala Val Phe Lys Ile Asn Ala Leu Asp Glu
65 70 75 80

Asn Gln Leu Phe Leu Leu Asp Thr Asp Tyr Asp Ser His Leu Leu Leu
85 90 95

Cys Met Glu Asn Ser Ala
100

<210> 2555
<211> 102
<212> PRT
<213> Bos taurus

<400> 2555
Ser Leu Trp Ala Lys Val Asn Val Glu Val Val Gly Gly Glu Ser Leu
1 5 10 15

Ala Arg Leu Leu Ile Val Cys Pro Trp Thr Gln Arg Phe Phe Asp Ser
20 25 30

Phe Gly Asn Leu Tyr Ser Glu Ser Ala Ile Met Gly Asn Pro Lys Val
35 40 45

Lys Val Tyr Gly Arg Lys Val Leu Asn Ser Phe Gly Asn Ala Ile Lys
50 55 60

His Met Asp Asp Leu Lys Gly Thr Phe Ala Asp Leu Ser Glu Leu His
65 70 75 80

Cys Asp Lys Leu His Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn
85 90 95

Met Ile Leu Ile Val Leu
100

<210> 2556
<211> 106
<212> PRT
<213> Sus scrofa

<400> 2556
Leu Leu Asn Arg Leu Ala Asp Leu Ile Glu Arg Asp Arg Thr Tyr Leu
1 5 10 15

Ala Ala Leu Glu Thr Leu Asp Asn Gly Lys Pro Tyr Val Ile Ser Tyr
20 25 30

Leu Val Asp Leu Asp Met Val Leu Lys Cys Leu Arg Tyr Tyr Ala Gly
35 40 45

Trp Ala Asp Lys Tyr His Gly Lys Thr Leu Pro Ile Asp Gly Asp Tyr
50 55 60

Phe Ser Tyr Thr Arg His Glu Pro Val Gly Val Cys Gly Gln Ile Ile
65 70 75 80

Pro Trp Asn Phe Pro Leu Leu Met Gln Ala Trp Lys Leu Gly Pro Ala
85 90 95

Leu Ala Thr Gly Asn Val Val Val Met Lys
100 105

<210> 2557
<211> 202
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2557
Gln Val Lys Pro Lys Leu Val Asn Val Ile Arg Arg Glu Ser Gly Asn
1 5 10 15

Pro Asp Leu Leu Glu Leu Leu Met Asp Leu Asn Cys Tyr Thr Leu Glu
20 25 30

Val Thr Glu Gly Tyr Leu Lys Lys Val Asn Val Thr Glu Val Asn Gly
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35

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45

Asp Asn Val Leu Gly Pro Ile His Val Ile Thr Thr Val Val Ser Ser
50 55 60

Leu Val Arg Asn Gly Leu Leu Ile Gln Ser Ser Lys Phe Ile Ser Lys
65 70 75 80

Val Leu Leu Thr Val Glu Ser Ile Val Met Ser Leu Pro Lys Asp Glu
85 90 95

Thr Met Leu Gly Gly Ile Phe Trp Leu Ser Asn Leu Ser Arg Leu Pro
100 105 110

Ala Phe Ala Ala Asn Gln Lys Thr Leu Tyr Glu Ala Asn Gly Gly Asp
115 120 125

Glu Lys Asp Lys Leu Thr Leu Ile Tyr Leu Asn Asp Leu Glu Asn Glu
130 135 140

Thr Leu Lys Val Phe Asp Lys Ile Tyr Ser Thr Trp Leu Val Lys Phe
145 150 155 160

Met Lys His Ala Ser Ala His Ile Glu Ile Phe Asp Met Val Leu Asn
165 170 175

Glu Lys Leu Phe Lys Asn Ser Gly Asp Glu Lys Phe Ala Lys Leu Phe
180 185 190

Thr Phe Leu Asn Glu Phe Asp Ala Val Leu
195 200

<210> 2558

<211> 202

<212> PRT

<213> Oryza sativa

<400> 2558

His Val Pro Arg Ala Val Leu Met Asp Leu Glu Pro Gly Thr Met Asp
1 5 10 15

Ser Leu Arg Ser Gly Pro Ile Gly Gly Ile Phe Arg Pro Asp Asn Phe
20 25 30

Val Phe Gly Gln Ser Gly Ala Gly Asn Asn Trp Ala Lys Gly His Tyr
35 40 45

Thr Glu Gly Ala Glu Leu Ile Asp Ser Val Leu Asp Val Val Arg Lys
50 55 60

Glu Ala Glu Asn Cys Asp Cys Leu Gln Gly Phe Gln Val Cys His Ser
65 70 75 80

Leu Gly Gly Gly Thr Gly Ser Gly Met Gly Thr Leu Leu Ile Ser Lys
85 90 95

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Ile Arg Glu Glu Tyr Pro Asp Arg Met Met Leu Thr Phe Ser Val Phe
100 105 110

Pro Ser Pro Lys Val Ser Asp Thr Val Val Glu Pro Tyr Asn Ala Thr
115 120 125

Leu Ser Val His Gln Leu Val Glu Asn Ala Asp Glu Cys Met Val Leu
130 135 140

Asp Asn Glu Ala Leu Tyr Asp Ile Cys Phe Arg Thr Leu Lys Leu Thr
145 150 155 160

Asn Pro Ser Phe Gly Asp Leu Asn His Leu Ile Ser Ala Thr Met Ser
165 170 175

Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn Ser Asp Leu
180 185 190

Arg Lys Leu Ala Val Asn Leu Ile Pro Phe
195 200

<210> 2559
<211> 105
<212> PRT
<213> Salmo trutta

<400> 2559
Arg Asn Gln Pro Thr Ala Ala Leu Gly His Leu Leu Pro Glu Gly Thr
1 5 10 15

Pro Val Pro Leu Ile Pro Val Leu Ile Ile Ile Glu Thr Ile Ser Leu
20 25 30

Phe Ile Arg Pro Leu Ala Leu Gly Val Arg Leu Thr Ala Asn Leu Thr
35 40 45

Ala Gly His Leu Leu Ile Gln Leu Ile Ala Thr Ala Ala Phe Val Leu
50 55 60

Leu Pro Met Met Pro Thr Val Ala Ile Leu Thr Ser Ile Val Leu Phe
65 70 75 80

Leu Leu Thr Leu Leu Glu Ile Ala Val Ala Met Ile Gln Ala Tyr Val
85 90 95

Phe Val Leu Leu Leu Ser Leu Tyr Leu
100 105

<210> 2560
<211> 58
<212> PRT
<213> Brassica tournefortii

<400> 2560
Gly Phe Ala Trp Thr Met Leu Cys Met Asn Glu Ile Phe Tyr Phe Ile
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1 5 10 15

Gly Ala Leu Gly₂₀ Pro Leu Phe Ile Val₂₅ Leu Ala Leu Thr Gly₃₀ Leu Glu

Leu Gly Val₃₅ Ala Ile Leu Gln Ala₄₀ Tyr Val Phe Thr Ile₄₅ Leu Ile Cys

Ile Tyr₅₀ Leu Asn Asp Ala Ile₅₅ Asn Leu His

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<210> 2561
<211> 50
<212> PRT
<213> Gallus gallus
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<400> 2561
Leu Glu Phe Leu Ser Met Ile Asn Val Asn Leu Leu Ser Ile Ser Asn
1 5 10 15

Leu Pro Lys Leu Asn Lys Leu Arg Lys Leu Glu Leu Ser Asp Asn Arg
20 25 30

Ile Ser Gly Gly Leu Glu Val Leu Ala Glu Arg Thr Pro Asn Leu Thr
35 40 45

His Leu
50

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<210> 2562
<211> 50
<212> PRT
<213> Gallus gallus
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<400> 2562
Phe Leu Ser Met Ile Asn Val Asn Leu Leu Ser Ile Ser Asn Leu Pro
1 5 10 15

Lys Leu Asn Lys Leu Arg Lys Leu Glu Leu Ser Asp Asn Arg Ile Ser
20 25 30

Gly Gly Leu Glu Val Leu Ala Glu Arg Thr Pro Asn Leu Thr His Leu
35 40 45

Asn Leu
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<210> 2563
<211> 50
<212> PRT
<213> Gallus gallus
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<400> 2563
Leu Ser Met Ile Asn Val Asn Leu Leu Ser Ile Ser Asn Leu Pro Lys
1 5 10 15

Leu Asn Lys Leu Arg Lys Leu Glu Leu Ser Asp Asn Arg Ile Ser Gly
20 25 30

Gly Leu Glu Val Leu Ala Glu Arg Thr Pro Asn Leu Thr His Leu Asn
35 40 45

Leu Ser
50

<210> 2564
<211> 146
<212> PRT
<213> Gallus gallus

<400> 2564
Met Glu Met Lys Lys Arg Leu Thr Leu Glu Leu Arg Asn Lys Lys Pro
1 5 10 15

Gly Glu Val Lys Glu Leu Val Leu Asp Asn Cys Arg Ser Asp Asp Gly
20 25 30

Lys Ile Val Gly Leu Ser Ser Asp Phe Glu Asn Leu Glu Phe Leu Ser
35 40 45

Met Ile Asn Val Asn Leu Leu Ser Ile Ser Asn Leu Pro Lys Leu Asn
50 55 60

Lys Leu Arg Lys Leu Glu Leu Ser Asp Asn Arg Ile Ser Gly Gly Leu
65 70 75 80

Glu Val Leu Ala Glu Arg Thr Pro Asn Leu Thr His Leu Asn Leu Ser
85 90 95

Gly Asn Lys Ile Lys Asp Ile Asn Thr Leu Glu Pro Leu Lys Lys Leu
100 105 110

Pro Asn Leu His Ser Leu Asp Leu Phe Asn Cys Glu Val Thr Met Leu
115 120 125

Ile Asn Tyr Arg Glu Ser Val Phe Thr Leu Leu Pro Gln Leu Thr Tyr
130 135 140

Leu Asp
145

<210> 2565
<211> 147
<212> PRT
<213> Gallus gallus

<400> 2565
Met Glu Met Lys Lys Arg Leu Thr Leu Glu Leu Arg Asn Lys Lys Pro
1 5 10 15

Gly Glu Val Lys Glu Leu Val Leu Asp Asn Cys Arg Ser Asp Asp Gly
20 25 30

Lys Ile Val Gly Leu Ser Ser Asp Phe Glu Asn Leu Glu Phe Leu Ser

35

40

45

Met Ile Asn Val Asn Leu Leu Ser Ile Ser Asn Leu Pro Lys Leu Asn
 50 55 60

Lys Leu Arg Lys Leu Glu Leu Ser Asp Asn Arg Ile Ser Gly Gly Leu
 65 70 75 80

Glu Val Leu Ala Glu Arg Thr Pro Asn Leu Thr His Leu Asn Leu Ser
 85 90 95

Gly Asn Lys Ile Lys Asp Ile Asn Thr Leu Glu Pro Leu Lys Lys Leu
 100 105 110

Pro Asn Leu His Ser Leu Asp Leu Phe Asn Cys Glu Val Thr Met Leu
 115 120 125

Ile Asn Tyr Arg Glu Ser Val Phe Thr Leu Leu Pro Gln Leu Thr Tyr
 130 135 140

Leu Asp Gly
 145

<210> 2566

<211> 148

<212> PRT

<213> Gallus gallus

<400> 2566

Met Glu Met Lys Lys Arg Leu Thr Leu Glu Leu Arg Asn Lys Lys Pro
 1 5 10 15

Gly Glu Val Lys Glu Leu Val Leu Asp Asn Cys Arg Ser Asp Asp Gly
 20 25 30

Lys Ile Val Gly Leu Ser Ser Asp Phe Glu Asn Leu Glu Phe Leu Ser
 35 40 45

Met Ile Asn Val Asn Leu Leu Ser Ile Ser Asn Leu Pro Lys Leu Asn
 50 55 60

Lys Leu Arg Lys Leu Glu Leu Ser Asp Asn Arg Ile Ser Gly Gly Leu
 65 70 75 80

Glu Val Leu Ala Glu Arg Thr Pro Asn Leu Thr His Leu Asn Leu Ser
 85 90 95

Gly Asn Lys Ile Lys Asp Ile Asn Thr Leu Glu Pro Leu Lys Lys Leu
 100 105 110

Pro Asn Leu His Ser Leu Asp Leu Phe Asn Cys Glu Val Thr Met Leu
 115 120 125

Ile Asn Tyr Arg Glu Ser Val Phe Thr Leu Leu Pro Gln Leu Thr Tyr
 130 135 140

Leu Asp Gly Phe
145

<210> 2567
<211> 149
<212> PRT
<213> Gallus gallus

<400> 2567
Met Glu Met Lys Lys Arg Leu Thr Leu Glu Leu Arg Asn Lys Lys Pro
1 5 10 15

Gly Glu Val Lys Glu Leu Val Leu Asp Asn Cys Arg Ser Asp Asp Gly
20 25 30

Lys Ile Val Gly Leu Ser Ser Asp Phe Glu Asn Leu Glu Phe Leu Ser
35 40 45

Met Ile Asn Val Asn Leu Leu Ser Ile Ser Asn Leu Pro Lys Leu Asn
50 55 60

Lys Leu Arg Lys Leu Glu Leu Ser Asp Asn Arg Ile Ser Gly Gly Leu
65 70 75 80

Glu Val Leu Ala Glu Arg Thr Pro Asn Leu Thr His Leu Asn Leu Ser
85 90 95

Gly Asn Lys Ile Lys Asp Ile Asn Thr Leu Glu Pro Leu Lys Lys Leu
100 105 110

Pro Asn Leu His Ser Leu Asp Leu Phe Asn Cys Glu Val Thr Met Leu
115 120 125

Ile Asn Tyr Arg Glu Ser Val Phe Thr Leu Leu Pro Gln Leu Thr Tyr
130 135 140

Leu Asp Gly Phe Asp
145

<210> 2568
<211> 150
<212> PRT
<213> Gallus gallus

<400> 2568
Met Glu Met Lys Lys Arg Leu Thr Leu Glu Leu Arg Asn Lys Lys Pro
1 5 10 15

Gly Glu Val Lys Glu Leu Val Leu Asp Asn Cys Arg Ser Asp Asp Gly
20 25 30

Lys Ile Val Gly Leu Ser Ser Asp Phe Glu Asn Leu Glu Phe Leu Ser
35 40 45

Met Ile Asn Val Asn Leu Leu Ser Ile Ser Asn Leu Pro Lys Leu Asn

50

55

60

Lys Leu Arg Lys Leu Glu Leu Ser Asp Asn Arg Ile Ser Gly Gly Leu
65 70 75 80

Glu Val Leu Ala Glu Arg Thr Pro Asn Leu Thr His Leu Asn Leu Ser
85 90 95

Gly Asn Lys Ile Lys Asp Ile Asn Thr Leu Glu Pro Leu Lys Lys Leu
100 105 110

Pro Asn Leu His Ser Leu Asp Leu Phe Asn Cys Glu Val Thr Met Leu
115 120 125

Ile Asn Tyr Arg Glu Ser Val Phe Thr Leu Leu Pro Gln Leu Thr Tyr
130 135 140

Leu Asp Gly Phe Asp Ala
145 150

<210> 2569

<211> 151

<212> PRT

<213> Gallus gallus

<400> 2569

Met Glu Met Lys Lys Arg Leu Thr Leu Glu Leu Arg Asn Lys Lys Pro
1 5 10 15

Gly Glu Val Lys Glu Leu Val Leu Asp Asn Cys Arg Ser Asp Asp Gly
20 25 30

Lys Ile Val Gly Leu Ser Ser Asp Phe Glu Asn Leu Glu Phe Leu Ser
35 40 45

Met Ile Asn Val Asn Leu Leu Ser Ile Ser Asn Leu Pro Lys Leu Asn
50 55 60

Lys Leu Arg Lys Leu Glu Leu Ser Asp Asn Arg Ile Ser Gly Gly Leu
65 70 75 80

Glu Val Leu Ala Glu Arg Thr Pro Asn Leu Thr His Leu Asn Leu Ser
85 90 95

Gly Asn Lys Ile Lys Asp Ile Asn Thr Leu Glu Pro Leu Lys Lys Leu
100 105 110

Pro Asn Leu His Ser Leu Asp Leu Phe Asn Cys Glu Val Thr Met Leu
115 120 125

Ile Asn Tyr Arg Glu Ser Val Phe Thr Leu Leu Pro Gln Leu Thr Tyr
130 135 140

Leu Asp Gly Phe Asp Ala Asp
145 150

<210> 2570

<211> 152

<212> PRT

<213> Gallus gallus

<400> 2570

Met Glu Met Lys Lys Arg Leu Thr Leu Glu Leu Arg Asn Lys Lys Pro
 1 5 10 15

Gly Glu Val Lys Glu Leu Val Leu Asp Asn Cys Arg Ser Asp Asp Gly
 20 25 30

Lys Ile Val Gly Leu Ser Ser Asp Phe Glu Asn Leu Glu Phe Leu Ser
 35 40 45

Met Ile Asn Val Asn Leu Leu Ser Ile Ser Asn Leu Pro Lys Leu Asn
 50 55 60

Lys Leu Arg Lys Leu Glu Leu Ser Asp Asn Arg Ile Ser Gly Gly Leu
 65 70 75 80

Glu Val Leu Ala Glu Arg Thr Pro Asn Leu Thr His Leu Asn Leu Ser
 85 90 95

Gly Asn Lys Ile Lys Asp Ile Asn Thr Leu Glu Pro Leu Lys Lys Leu
 100 105 110

Pro Asn Leu His Ser Leu Asp Leu Phe Asn Cys Glu Val Thr Met Leu
 115 120 125

Ile Asn Tyr Arg Glu Ser Val Phe Thr Leu Leu Pro Gln Leu Thr Tyr
 130 135 140

Leu Asp Gly Phe Asp Ala Asp Glu
 145 150

<210> 2571

<211> 153

<212> PRT

<213> Gallus gallus

<400> 2571

Met Glu Met Lys Lys Arg Leu Thr Leu Glu Leu Arg Asn Lys Lys Pro
 1 5 10 15

Gly Glu Val Lys Glu Leu Val Leu Asp Asn Cys Arg Ser Asp Asp Gly
 20 25 30

Lys Ile Val Gly Leu Ser Ser Asp Phe Glu Asn Leu Glu Phe Leu Ser
 35 40 45

Met Ile Asn Val Asn Leu Leu Ser Ile Ser Asn Leu Pro Lys Leu Asn
 50 55 60

Lys Leu Arg Lys Leu Glu Leu Ser Asp Asn Arg Ile Ser Gly Gly Leu
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<212> PRT

<213> Gallus gallus

<400> 2573

Met Glu Met Lys Lys Arg Leu Thr Leu Glu Leu Arg Asn Lys Lys Pro
 1 5 10 15

Gly Glu Val Lys Glu Leu Val Leu Asp Asn Cys Arg Ser Asp Asp Gly
 20 25 30

Lys Ile Val Gly Leu Ser Ser Asp Phe Glu Asn Leu Glu Phe Leu Ser
 35 40 45

Met Ile Asn Val Asn Leu Leu Ser Ile Ser Asn Leu Pro Lys Leu Asn
 50 55 60

Lys Leu Arg Lys Leu Glu Leu Ser Asp Asn Arg Ile Ser Gly Gly Leu
 65 70 75 80

Glu Val Leu Ala Glu Arg Thr Pro Asn Leu Thr His Leu Asn Leu Ser
 85 90 95

Gly Asn Lys Ile Lys Asp Ile Asn Thr Leu Glu Pro Leu Lys Lys Leu
 100 105 110

Pro Asn Leu His Ser Leu Asp Leu Phe Asn Cys Glu Val Thr Met Leu
 115 120 125

Ile Asn Tyr Arg Glu Ser Val Phe Thr Leu Leu Pro Gln Leu Thr Tyr
 130 135 140

Leu Asp Gly Phe Asp Ala Asp Glu Gln Glu Ala Pro Asp Ser Asp Pro
 145 150 155 160

Glu

<210> 2574

<211> 105

<212> PRT

<213> Bos Taurus

<400> 2574

Tyr Leu Lys Leu Arg His Trp Gln Trp Trp Arg Val Phe Thr Lys Val
 1 5 10 15

Lys Pro Leu Leu Gln Val Thr Arg Gln Glu Glu Glu Leu Gln Ala Lys
 20 25 30

Asp Glu Glu Leu Leu Lys Val Lys Glu Lys Gln Thr Lys Val Glu Gly
 35 40 45

Glu Leu Glu Glu Met Glu Arg Lys His Gln Gln Leu Leu Glu Glu Lys
 50 55 60

Asn Ile Leu Ala Glu Gln Leu Gln Ala Glu Thr Glu Leu Phe Ala Glu

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 65 70 75 80
 Ala Glu Glu Met Arg 85 Ala Arg Leu Ala Ala 90 Lys Lys Gln Glu Leu 95 Glu
 Glu Ile Leu His 100 Asp Leu Glu Ser Arg 105
 <210> 2575
 <211> 50
 <212> PRT
 <213> Bos Taurus
 <400> 2575
 Leu Glu Glu Ala Lys 5 Lys Lys Leu Leu Lys 10 Asp Val Glu Val Leu Ser 15
 Gln Arg Leu Glu 20 Glu Lys Ala Leu Ala 25 Tyr Asp Lys Leu Glu 30 Lys Thr
 Lys Thr Arg 35 Leu Gln Gln Glu Leu 40 Asp Asp Leu Leu Val 45 Asp Leu Asp
 His Gln 50
 <210> 2576
 <211> 50
 <212> PRT
 <213> Bos Taurus
 <400> 2576
 Gly Thr Ile Glu Asn 5 Leu Glu Glu Ala Lys 10 Lys Lys Leu Leu Lys 15 Asp
 Val Glu Val Leu 20 Ser Gln Arg Leu Glu 25 Glu Lys Ala Leu Ala 30 Tyr Asp
 Lys Leu Glu 35 Lys Thr Lys Thr Arg 40 Leu Gln Gln Glu Leu 45 Asp Asp Leu
 Leu Val 50
 <210> 2577
 <211> 70
 <212> PRT
 <213> Bos Taurus
 <400> 2577
 Gln Leu Gln Ala Lys 5 Gln Ala Gln Leu Thr 10 Asp Thr Lys Lys Lys Val 15
 Asp Asp Asp Leu 20 Gly Thr Ile Glu Asn 25 Leu Glu Glu Ala Lys 30 Lys Lys
 Leu Leu Lys 35 Asp Val Glu Val Leu 40 Ser Gln Arg Leu Glu 45 Glu Glu Lys Ala

Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu
50 55 60

Leu Asp Asp Leu Leu Val
65 70

<210> 2578
<211> 55
<212> PRT
<213> Bos Taurus

<400> 2578
Lys Lys Leu Leu Lys Asp Val Glu Val Leu Ser Gln Arg Leu Glu Glu
1 5 10 15

Lys Ala Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln
20 25 30

Gln Glu Leu Asp Asp Leu Leu Val Asp Leu Asp His Gln Arg Gln Ile
35 40 45

Val Ser Asn Leu Glu Lys Lys
50 55

<210> 2579
<211> 65
<212> PRT
<213> Bos Taurus

<400> 2579
Lys Lys Leu Leu Lys Asp Val Glu Val Leu Ser Gln Arg Leu Glu Glu
1 5 10 15

Lys Ala Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln
20 25 30

Gln Glu Leu Asp Asp Leu Leu Val Asp Leu Asp His Gln Arg Gln Ile
35 40 45

Val Ser Asn Leu Glu Lys Lys Gln Lys Lys Phe Asp Gln Leu Leu Ala
50 55 60

Glu
65

<210> 2580
<211> 55
<212> PRT
<213> Bos Taurus

<400> 2580
Gly Thr Ile Glu Asn Leu Glu Glu Ala Lys Lys Lys Leu Leu Lys Asp
1 5 10 15

Val Glu Val Leu Ser Gln Arg Leu Glu Glu Lys Ala Leu Ala Tyr Asp
20 25 30

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Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu Leu Asp Asp Leu
35 40 45

Leu Val Asp Leu Asp His Gln
50 55

<210> 2581
<211> 50
<212> PRT
<213> Bos Taurus

<400> 2581
Lys Lys Leu Leu Lys Asp Val Glu Val Leu Ser Gln Arg Leu Glu Glu
1 5 10 15

Lys Ala Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln
20 25 30

Gln Glu Leu Asp Asp Leu Leu Val Asp Leu Asp His Gln Arg Gln Ile
35 40 45

Val Ser
50

<210> 2582
<211> 65
<212> PRT
<213> Bos Taurus

<400> 2582
Asp Thr Lys Lys Lys Val Asp Asp Asp Leu Gly Thr Ile Glu Asn Leu
1 5 10 15

Glu Glu Ala Lys Lys Lys Leu Leu Lys Asp Val Glu Val Leu Ser Gln
20 25 30

Arg Leu Glu Glu Lys Ala Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys
35 40 45

Thr Arg Leu Gln Gln Glu Leu Asp Asp Leu Leu Val Asp Leu Asp His
50 55 60

Gln
65

<210> 2583
<211> 60
<212> PRT
<213> Bos Taurus

<400> 2583
Leu Glu Glu Ala Lys Lys Lys Leu Leu Lys Asp Val Glu Val Leu Ser
1 5 10 15

Gln Arg Leu Glu Glu Lys Ala Leu Ala Tyr Asp Lys Leu Glu Lys Thr
20 25 30

Lys Thr Arg Leu Gln Gln Glu Leu Asp Asp Leu Leu Val Asp Leu Asp
 35 40 45

His Gln Arg Gln Ile Val Ser Asn Leu Glu Lys Lys
 50 55 60

<210> 2584
 <211> 50
 <212> PRT
 <213> Bos Taurus

<400> 2584
 Glu Lys Ala Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu
 1 5 10 15

Gln Gln Glu Leu Asp Asp Leu Leu Val Asp Leu Asp His Gln Arg Gln
 20 25 30

Ile Val Ser Asn Leu Glu Lys Lys Gln Lys Lys Phe Asp Gln Leu Leu
 35 40 45

Ala Glu
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<210> 2585
 <211> 60
 <212> PRT
 <213> Bos Taurus

<400> 2585
 Asp Thr Lys Lys Lys Val Asp Asp Asp Leu Gly Thr Ile Glu Asn Leu
 1 5 10 15

Glu Glu Ala Lys Lys Lys Leu Leu Lys Asp Val Glu Val Leu Ser Gln
 20 25 30

Arg Leu Glu Glu Lys Ala Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys
 35 40 45

Thr Arg Leu Gln Gln Glu Leu Asp Asp Leu Leu Val
 50 55 60

<210> 2586
 <211> 100
 <212> PRT
 <213> Bos Taurus

<400> 2586
 Arg Ser Leu Glu Lys Gln Leu Gln Ala Leu Gln Ala Gln Leu Thr Asp
 1 5 10 15

Thr Lys Lys Lys Val Asp Asp Asp Leu Gly Thr Ile Glu Asn Leu Glu
 20 25 30

Glu Ala Lys Lys Lys Leu Leu Lys Asp Val Glu Val Leu Ser Gln Arg
 35 40 45

Leu Glu Glu Lys Ala Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys Thr
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50	55	60

Arg Leu Gln Gln Glu Leu Asp Asp Leu Leu Val Asp Leu Asp His Gln
65 70 75 80

Arg Gln Ile Val Ser Asn Leu Glu Lys Lys Gln Lys Lys Phe Asp Gln
85 90 95

Leu Leu Ala Glu
100

<210> 2587
<211> 100
<212> PRT
<213> Bos Taurus

<400> 2587
Gln Leu Gln Ala Leu Gln Ala Gln Leu Thr Asp Thr Lys Lys Lys Val
1 5 10 15

Asp Asp Asp Leu Gly Thr Ile Glu Asn Leu Glu Glu Ala Lys Lys Lys
20 25 30

Leu Leu Lys Asp Val Glu Val Leu Ser Gln Arg Leu Glu Glu Lys Ala
35 40 45

Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu
50 55 60

Leu Asp Asp Leu Leu Val Asp Leu Asp His Gln Arg Gln Ile Val Ser
65 70 75 80

Asn Leu Glu Lys Lys Gln Lys Lys Phe Asp Gln Leu Leu Ala Glu Glu
85 90 95

Lys Asn Ile Ser
100

<210> 2588
<211> 100
<212> PRT
<213> Bos Taurus

<400> 2588
Asp Thr Lys Lys Lys Val Asp Asp Asp Leu Gly Thr Ile Glu Asn Leu
1 5 10 15

Glu Glu Ala Lys Lys Lys Leu Leu Lys Asp Val Glu Val Leu Ser Gln
20 25 30

Arg Leu Glu Glu Lys Ala Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys
35 40 45

Thr Arg Leu Gln Gln Glu Leu Asp Asp Leu Leu Val Asp Leu Asp His
50 55 60

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Gln Arg Gln Ile Val Ser Asn Leu Glu Lys Lys Gln Lys Lys Phe Asp
65 70 75 80

Gln Leu Leu Ala Glu Glu Lys Asn Ile Ser Ala Arg Tyr Ala Glu Glu
85 90 95

Arg Asp Arg Ala
100

<210> 2589
<211> 112
<212> PRT
<213> Bos Taurus

<400> 2589
Asp Thr Lys Lys Lys Val Asp Asp Asp Leu Gly Thr Ile Glu Asn Leu
1 5 10 15

Glu Glu Ala Lys Lys Lys Leu Leu Lys Asp Val Glu Val Leu Ser Gln
20 25 30

Arg Leu Glu Glu Lys Ala Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys
35 40 45

Thr Arg Leu Gln Gln Glu Leu Asp Asp Leu Leu Val Asp Leu Asp His
50 55 60

Gln Arg Gln Ile Val Ser Asn Leu Glu Lys Lys Gln Lys Lys Phe Asp
65 70 75 80

Gln Leu Leu Ala Glu Glu Lys Asn Ile Ser Ala Arg Tyr Ala Glu Glu
85 90 95

Arg Asp Arg Ala Glu Ala Glu Ala Arg Glu Lys Glu Thr Lys Ala Leu
100 105 110

<210> 2590
<211> 51
<212> PRT
<213> Bos Taurus

<400> 2590
Gln Asn Lys Glu Leu Lys Ala Lys Leu Gln Glu Leu Glu Gly Ala Val
1 5 10 15

Lys Ser Lys Phe Lys Ala Thr Ile Ser Ala Leu Glu Ala Lys Ile Gly
20 25 30

Gln Leu Glu Glu Gln Leu Glu Gln Glu Ala Lys Glu Arg Ala Ala Ala
35 40 45

Asn Lys Leu
50

<210> 2591
<211> 99
<212> PRT

<213> Bos Taurus

<400> 2591

Glu Leu Leu Asn Asp Arg Phe Arg Lys Thr Thr Leu Gln Val Asp Thr
 1 5 10 15

Leu Asn Thr Glu Leu Ala Ala Glu Arg Ser Ala Ala Gln Lys Ser Asp
 20 25 30

Asn Ala Arg Gln Gln Leu Glu Arg Gln Asn Lys Glu Leu Lys Ala Lys
 35 40 45

Leu Gln Glu Leu Glu Gly Ala Val Lys Ser Lys Phe Lys Ala Thr Ile
 50 55 60

Ser Ala Leu Glu Ala Lys Ile Gly Gln Leu Glu Glu Gln Leu Glu Gln
 65 70 75 80

Glu Ala Lys Glu Arg Ala Ala Ala Asn Lys Leu Val Arg Arg Thr Glu
 85 90 95

Lys Lys Leu

<210> 2592

<211> 110

<212> PRT

<213> Gallus gallus

<400> 2592

Ile Leu Val Leu Ile Ser Gly Gly Glu Ser Ser Asp Asp Ile Arg Glu
 1 5 10 15

Gly Leu Leu Ala Val Lys Gln Ala Ser Ile Phe Ser Phe Ser Ile Gly
 20 25 30

Val Leu Asn Ala Asp Ser Ala Glu Leu Gln Gln Ile Ala Thr Asp Gly
 35 40 45

Ser Phe Ala Phe Thr Ala Leu Asp Ile Arg Asn Leu Ala Ala Leu Arg
 50 55 60

Glu Leu Leu Leu Pro Asn Ile Val Gly Val Ala Gln Arg Leu Ile Leu
 65 70 75 80

Leu Glu Ala Pro Thr Ile Val Thr Glu Val Ile Glu Val Asn Lys Lys
 85 90 95

Asp Ile Val Phe Leu Ile Asp Gly Ser Thr Ala Leu Gly Thr
 100 105 110

<210> 2593

<211> 105

<212> PRT

<213> Gallus gallus

<400> 2593

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Ile Leu Val Leu Ile Ser Gly Gly Glu Ser Ser Asp Asp Ile Arg Glu
1 5 10 15

Gly Leu Leu Ala Val Lys Gln Ala Ser Ile Phe Ser Phe Ser Ile Gly
20 25 30

Val Leu Asn Ala Asp Ser Ala Glu Leu Gln Gln Ile Ala Thr Asp Gly
35 40 45

Ser Phe Ala Phe Thr Ala Leu Asp Ile Arg Asn Leu Ala Ala Leu Arg
50 55 60

Glu Leu Leu Leu Pro Asn Ile Val Gly Val Ala Gln Arg Leu Ile Leu
65 70 75 80

Leu Glu Ala Pro Thr Ile Val Thr Glu Val Ile Glu Val Asn Lys Lys
85 90 95

Asp Ile Val Phe Leu Ile Asp Gly Ser
100 105

<210> 2594
<211> 118
<212> PRT
<213> Gallus gallus

<400> 2594
Tyr Ser Thr Lys Ala Asp Val Leu Asp Ala Val Lys Ala Leu Ser Phe
1 5 10 15

Arg Gly Gly Lys Glu Ala Asn Thr Gly Ala Ala Leu Glu Tyr Val Val
20 25 30

Glu Asn Leu Phe Thr Gln Ala Gly Gly Ser Arg Ile Glu Glu Ala Val
35 40 45

Pro Gln Ile Leu Val Leu Ile Ser Gly Gly Glu Ser Ser Asp Asp Ile
50 55 60

Arg Glu Gly Leu Leu Ala Val Lys Gln Ala Ser Ile Phe Ser Phe Ser
65 70 75 80

Ile Gly Val Leu Asn Ala Asp Ser Ala Glu Leu Gln Gln Ile Ala Thr
85 90 95

Asp Gly Ser Phe Ala Phe Thr Ala Leu Asp Ile Arg Asn Leu Ala Ala
100 105 110

Leu Arg Glu Leu Leu Leu
115

<210> 2595
<211> 65
<212> PRT
<213> Bos Taurus

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<400> 2595

Ala Leu Gln Glu Ala His Gln Gln Thr Leu Asp Asp Leu Gln Ala Glu
1 5 10 15

Glu Asp Lys Val Asn Thr Leu Thr Lys Ala Lys Thr Lys Leu Glu Gln
20 25 30

Gln Val Asp Asp Leu Glu Gly Ser Leu Glu Gln Glu Lys Lys Leu Arg
35 40 45

Met Asp Leu Glu Arg Ala Lys Arg Lys Leu Glu Gly Asp Leu Lys Leu
50 55 60

Ala
65

<210> 2596

<211> 50

<212> PRT

<213> Bos Taurus

<400> 2596

Glu Glu Asp Lys Val Asn Thr Leu Thr Lys Ala Lys Thr Lys Leu Glu
1 5 10 15

Gln Gln Val Asp Asp Leu Glu Gly Ser Leu Glu Gln Glu Lys Lys Leu
20 25 30

Arg Met Asp Leu Glu Arg Ala Lys Arg Lys Leu Glu Gly Asp Leu Lys
35 40 45

Leu Ala
50

<210> 2597

<211> 50

<212> PRT

<213> Bos Taurus

<400> 2597

Leu Glu Gln Glu Lys Lys Leu Arg Met Asp Leu Glu Arg Ala Lys Arg
1 5 10 15

Lys Leu Glu Gly Asp Leu Lys Leu Ala Gln Glu Ser Thr Met Asp Ile
20 25 30

Glu Asn Asp Lys Gln Gln Leu Asp Glu Lys Leu Lys Lys Lys Glu Phe
35 40 45

Glu Met
50

<210> 2598

<211> 50

<212> PRT

<213> Bos Taurus

<400> 2598

1005_005_PCT_SL17083606

Asp Leu Glu Gly Ser Leu Glu Gln Glu Lys Lys Leu Arg Met Asp Leu
1 5 10 15

Glu Arg Ala Lys Arg Lys Leu Glu Gly Asp Leu Lys Leu Ala Gln Glu
20 25 30

Ser Thr Met Asp Ile Glu Asn Asp Lys Gln Gln Leu Asp Glu Lys Leu
35 40 45

Lys Lys
50

<210> 2599
<211> 115
<212> PRT
<213> Bos Taurus

<400> 2599
Ser Glu Leu Lys Lys Asp Ile Asp Asp Leu Glu Leu Thr Leu Ala Lys
1 5 10 15

Val Glu Lys Glu Lys His Ala Thr Glu Asn Lys Val Lys Asn Leu Thr
20 25 30

Glu Glu Met Ala Gly Leu Asp Glu Thr Ile Ala Lys Leu Thr Lys Glu
35 40 45

Lys Lys Ala Leu Gln Glu Ala His Gln Gln Thr Leu Asp Asp Leu Gln
50 55 60

Ala Glu Glu Asp Lys Val Asn Thr Leu Thr Lys Ala Lys Thr Lys Leu
65 70 75 80

Glu Gln Gln Val Asp Asp Leu Glu Gly Ser Leu Glu Gln Glu Lys Lys
85 90 95

Leu Arg Met Asp Leu Glu Arg Ala Lys Arg Lys Leu Glu Gly Asp Leu
100 105 110

Lys Leu Ala
115

<210> 2600
<211> 270
<212> PRT
<213> Bos Taurus

<400> 2600
Ser Glu Gly Asp Arg Leu Arg Val Glu Leu Ala Glu Lys Ala Asn Lys
1 5 10 15

Leu Gln Asn Glu Leu Asp Asn Val Ser Thr Leu Leu Glu Glu Ala Glu
20 25 30

Lys Lys Gly Ile Lys Phe Ala Lys Asp Ala Ala Gly Leu Glu Ser Gln
35 40 45

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Leu Gln Asp Thr Gln Glu Leu Leu Gln Glu Glu Thr Arg Gln Lys Leu
 50 55 60
 Asn Leu Ser Ser Arg Ile Arg Gln Leu Glu Glu Glu Arg Ser Ser Leu
 65 70 75 80
 Gln Glu Gln Gln Glu Glu Glu Glu Glu Ala Arg Arg Ser Leu Glu Lys
 85 90 95
 Gln Leu Gln Ala Leu Gln Ala Gln Leu Thr Asp Thr Lys Lys Lys Val
 100 105 110
 Asp Asp Asp Leu Gly Thr Ile Glu Asn Leu Glu Glu Ala Lys Lys Lys
 115 120 125
 Leu Leu Lys Asp Val Glu Val Leu Ser Gln Arg Leu Glu Glu Lys Ala
 130 135 140
 Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu
 145 150 155 160
 Leu Asp Asp Leu Leu Val Asp Leu Asp His Gln Arg Gln Ile Val Ser
 165 170 175
 Asn Leu Glu Lys Lys Gln Lys Lys Phe Asp Gln Leu Leu Ala Glu Glu
 180 185 190
 Lys Asn Ile Ser Ala Arg Tyr Ala Glu Glu Arg Asp Arg Ala Glu Ala
 195 200 205
 Glu Ala Arg Glu Lys Glu Thr Lys Ala Leu Ser Leu Ala Arg Ala Leu
 210 215 220
 Glu Glu Ala Leu Glu Ala Arg Glu Glu Ala Glu Arg Gln Asn Lys Gln
 225 230 235 240
 Leu Arg Ala Asp Met Glu Asp Leu Met Ser Ser Lys Asp Asp Val Gly
 245 250 255
 Lys Asn Val His Glu Leu Glu Lys Ser Lys Arg Ala Leu Glu
 260 265 270
 <210> 2601
 <211> 53
 <212> PRT
 <213> Arabidopsis thaliana
 <400> 2601
 Val Arg Asp Thr Glu Phe Val His Gln Ile Thr Asn Val Ile Lys Leu
 1 5 10 15
 Arg Arg Ala Glu Pro Leu Arg Arg Ser Leu Lys Pro Tyr Glu Cys Lys
 20 25 30

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Phe Lys Thr Asp His Leu Ile Trp Val Leu Met Lys Ile Lys Cys Asp
 35 40 45

Tyr Arg Leu Val Leu
 50

<210> 2602

<211> 113

<212> PRT

<213> Arabidopsis thaliana

<400> 2602

Lys Leu Glu His Gly Val His Val Val Ser Gly Thr Pro Gly Arg Val
 1 5 10 15

Cys Asp Met Ile Lys Arg Arg Ser Leu Arg Thr Arg Ala Ile Lys Leu
 20 25 30

Leu Ile Leu Asp Glu Ser Asp Glu Met Leu Ser Arg Gly Phe Lys Asp
 35 40 45

Gln Ile Tyr Asp Val Tyr Arg Tyr Leu Pro Pro Asp Leu Gln Val Cys
 50 55 60

Leu Val Ser Ala Thr Leu Pro His Glu Ile Leu Glu Met Thr Ser Lys
 65 70 75 80

Phe Met Thr Glu Pro Val Lys Ile Leu Val Lys Arg Asp Glu Leu Thr
 85 90 95

Leu Glu Gly Ile Lys Gln Phe Phe Val Ala Val Glu Lys Glu Glu Trp
 100 105 110

Lys

<210> 2603

<211> 73

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2603

Leu Val Leu Gly Ala Leu Leu Asp Thr Ser His Lys Phe Arg Asn Leu
 1 5 10 15

Asp Lys Asp Leu Cys Glu Lys Cys Ala Lys Cys Ile Ser Met Ile Gly
 20 25 30

Val Leu Asp Val Thr Lys His Glu Phe Lys Arg Thr Thr Tyr Ser Glu
 35 40 45

Asn Glu Val Tyr Asp Leu Asn Asp Ser Val Gln Thr Ile Lys Phe Leu
 50 55 60

Ile Trp Val Ile Asn Asp Ile Leu Val
 65 70

<210> 2604

<211> 90

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2604

Leu Val Leu Gly Ala Leu Leu Asp Thr Ser His Lys Phe Arg Asn Leu
 1 5 10 15

Asp Lys Asp Leu Cys Glu Lys Cys Ala Lys Cys Ile Ser Met Ile Gly
 20 25 30

Val Leu Asp Val Thr Lys His Glu Phe Lys Arg Thr Thr Tyr Ser Glu
 35 40 45

Asn Glu Val Tyr Asp Leu Asn Asp Ser Val Gln Thr Ile Lys Phe Leu
 50 55 60

Ile Trp Val Ile Asn Asp Ile Leu Val Pro Ala Phe Trp Gln Ser Glu
 65 70 75 80

Asn Pro Ser Lys Gln Leu Phe Val Ala Leu
 85 90

<210> 2605

<211> 70

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2605

Leu Val Leu Gly Ala Leu Leu Asp Thr Ser His Lys Phe Arg Asn Leu
 1 5 10 15

Asp Lys Asp Leu Cys Glu Lys Cys Ala Lys Cys Ile Ser Met Ile Gly
 20 25 30

Val Leu Asp Val Thr Lys His Glu Phe Lys Arg Thr Thr Tyr Ser Glu
 35 40 45

Asn Glu Val Tyr Asp Leu Asn Asp Ser Val Gln Thr Ile Lys Phe Leu
 50 55 60

Ile Trp Val Ile Asn Asp
 65 70

<210> 2606

<211> 75

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2606

Thr Leu Val Leu Gly Ala Leu Leu Asp Thr Ser His Lys Phe Arg Asn
 1 5 10 15

Leu Asp Lys Asp Leu Cys Glu Lys Cys Ala Lys Cys Ile Ser Met Ile
 20 25 30

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Gly Val Leu Asp Val Thr Lys His Glu Phe Lys Arg Thr Tyr Ser
 35 40 45

Glu Asn Glu Val Tyr Asp Leu Asn Asp Ser Val Gln Thr Ile Lys Phe
 50 55 60

Leu Ile Trp Val Ile Asn Asp Ile Leu Val Pro
 65 70 75

<210> 2607

<211> 76

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2607

Leu Val Leu Gly Ala Leu Leu Asp Thr Ser His Lys Phe Arg Asn Leu
 1 5 10 15

Asp Lys Asp Leu Cys Glu Lys Cys Ala Lys Cys Ile Ser Met Ile Gly
 20 25 30

Val Leu Asp Val Thr Lys His Glu Phe Lys Arg Thr Thr Tyr Ser Glu
 35 40 45

Asn Glu Val Tyr Asp Leu Asn Asp Ser Val Gln Thr Ile Lys Phe Leu
 50 55 60

Ile Trp Val Ile Asn Asp Ile Leu Val Pro Ala Phe
 65 70 75

<210> 2608

<211> 74

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2608

Ile Thr Leu Val Leu Gly Ala Leu Leu Asp Thr Ser His Lys Phe Arg
 1 5 10 15

Asn Leu Asp Lys Asp Leu Cys Glu Lys Cys Ala Lys Cys Ile Ser Met
 20 25 30

Ile Gly Val Leu Asp Val Thr Lys His Glu Phe Lys Arg Thr Thr Tyr
 35 40 45

Ser Glu Asn Glu Val Tyr Asp Leu Asn Asp Ser Val Gln Thr Ile Lys
 50 55 60

Phe Leu Ile Trp Val Ile Asn Asp Ile Leu
 65 70

<210> 2609

<211> 76

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2609

Ser Asp Ile Thr Leu Val Leu Gly Ala Leu Leu Asp Thr Ser His Lys

1 5 10 15
 Phe Arg Asn Leu Asp Lys Asp Leu Cys Glu Lys Cys Ala Lys Cys Ile
 20 25 30
 Ser Met Ile Gly Val Leu Asp Val Thr Lys His Glu Phe Lys Arg Thr
 35 40 45
 Thr Tyr Ser Glu Asn Glu Val Tyr Asp Leu Asn Asp Ser Val Gln Thr
 50 55 60
 Ile Lys Phe Leu Ile Trp Val Ile Asn Asp Ile Leu
 65 70 75

 <210> 2610
 <211> 386
 <212> PRT
 <213> Gallus gallus

 <400> 2610
 Met Gly Ser Ile Gly Ala Ala Ser Met Glu Phe Cys Phe Asp Val Phe
 1 5 10 15

 Lys Glu Leu Lys Val His His Ala Asn Glu Asn Ile Phe Tyr Cys Pro
 20 25 30

 Ile Ala Ile Met Ser Ala Leu Ala Met Val Tyr Leu Gly Ala Lys Asp
 35 40 45

 Ser Thr Arg Thr Gln Ile Asn Lys Val Val Arg Phe Asp Lys Leu Pro
 50 55 60

 Gly Phe Gly Asp Ser Ile Glu Ala Gln Cys Gly Thr Ser Val Asn Val
 65 70 75 80

 His Ser Ser Leu Arg Asp Ile Leu Asn Gln Ile Thr Lys Pro Asn Asp
 85 90 95

 Val Tyr Ser Phe Ser Leu Ala Ser Arg Leu Tyr Ala Glu Glu Arg Tyr
 100 105 110

 Pro Ile Leu Pro Glu Tyr Leu Gln Cys Val Lys Glu Leu Tyr Arg Gly
 115 120 125

 Gly Leu Glu Pro Ile Asn Phe Gln Thr Ala Ala Asp Gln Ala Arg Glu
 130 135 140

 Leu Ile Asn Ser Trp Val Glu Ser Gln Thr Asn Gly Ile Ile Arg Asn
 145 150 155 160

 Val Leu Gln Pro Ser Ser Val Asp Ser Gln Thr Ala Met Val Leu Val
 165 170 175

 Asn Ala Ile Val Phe Lys Gly Leu Trp Glu Lys Ala Phe Lys Asp Glu
 180 185 190

Asp Thr Gln Ala Met Pro Phe Arg Val Thr Glu Gln Glu Ser Lys Pro
195 200 205

Val Gln Met Met Tyr Gln Ile Gly Leu Phe Arg Val Ala Ser Met Ala
210 215 220

Ser Glu Lys Met Lys Ile Leu Glu Leu Pro Phe Ala Ser Gly Thr Met
225 230 235 240

Ser Met Leu Val Leu Leu Pro Asp Glu Val Ser Gly Leu Glu Gln Leu
245 250 255

Glu Ser Ile Ile Asn Phe Glu Lys Leu Thr Glu Trp Thr Ser Ser Asn
260 265 270

Val Met Glu Glu Arg Lys Ile Lys Val Tyr Leu Pro Arg Met Lys Met
275 280 285

Glu Glu Lys Tyr Asn Leu Thr Ser Val Leu Met Ala Met Gly Ile Thr
290 295 300

Asp Val Phe Ser Ser Ser Ala Asn Leu Ser Gly Ile Ser Ser Ala Glu
305 310 315 320

Ser Leu Lys Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn
325 330 335

Glu Ala Gly Arg Glu Val Val Gly Ser Ala Glu Ala Gly Val Asp Ala
340 345 350

Ala Ser Val Ser Glu Glu Phe Arg Ala Asp His Pro Phe Leu Phe Cys
355 360 365

Ile Lys His Ile Ala Thr Asn Ala Val Leu Phe Phe Gly Arg Cys Val
370 375 380

Ser Pro
385

<210> 2611
<211> 178
<212> PRT
<213> Bos taurus

<400> 2611
Met Lys Cys Leu Leu Leu Ala Leu Ala Leu Thr Cys Gly Ala Gln Ala
1 5 10 15

Leu Ile Val Thr Gln Thr Met Lys Gly Leu Asp Ile Gln Lys Val Ala
20 25 30

Gly Thr Trp Tyr Ser Leu Ala Met Ala Ala Ser Asp Ile Ser Leu Leu
35 40 45

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Asp Ala Gln Ser Ala Pro Leu Arg Val Tyr Val Glu Glu Leu Lys Pro
50 55 60

Thr Pro Glu Gly Asp Leu Glu Ile Leu Leu Gln Lys Trp Glu Asn Gly
65 70 75 80

Glu Cys Ala Gln Lys Lys Ile Ile Ala Glu Lys Thr Lys Ile Pro Ala
85 90 95

Val Phe Lys Ile Asp Ala Leu Asn Glu Asn Lys Val Leu Val Leu Asp
100 105 110

Thr Asp Tyr Lys Lys Tyr Leu Leu Phe Cys Met Glu Asn Ser Ala Glu
115 120 125

Pro Glu Gln Ser Leu Ala Cys Gln Cys Leu Val Arg Thr Pro Glu Val
130 135 140

Asp Asp Glu Ala Leu Glu Lys Phe Asp Lys Ala Leu Lys Ala Leu Pro
145 150 155 160

Met His Ile Arg Leu Ser Phe Asn Pro Thr Gln Leu Glu Glu Gln Cys
165 170 175

His Ile

<210> 2612
<211> 147
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2612
Met Ser Ser Asn Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ala Leu Phe Asp Lys Asp Asn Asn Gly Ser Ile Ser Ser Ser Glu
20 25 30

Leu Ala Thr Val Met Arg Ser Leu Gly Leu Ser Pro Ser Glu Ala Glu
35 40 45

Val Asn Asp Leu Met Asn Glu Ile Asp Val Asp Gly Asn His Gln Ile
50 55 60

Glu Phe Ser Glu Phe Leu Ala Leu Met Ser Arg Gln Leu Lys Ser Asn
65 70 75 80

Asp Ser Glu Gln Glu Leu Leu Glu Ala Phe Lys Val Phe Asp Lys Asn
85 90 95

Gly Asp Gly Leu Ile Ser Ala Ala Glu Leu Lys His Val Leu Thr Ser
100 105 110

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Ile	Gly	Glu	Lys	Leu	Thr	Asp	Ala	Glu	Val	Asp	Asp	Met	Leu	Arg	Glu
		115						120				125			

Val	Ser	Asp	Gly	Ser	Gly	Glu	Ile	Asn	Ile	Gln	Gln	Phe	Ala	Ala	Leu
	130					135					140				

Leu Ser Lys
145

<210> 2613
 <211> 73
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 2613
 Leu Val Leu Gly Ala Leu Leu Asp Thr Ser His Lys Phe Arg Asn Leu
 1 5 10 15

Asp	Lys	Asp	Leu	Cys	Glu	Lys	Cys	Ala	Lys	Cys	Ile	Ser	Met	Ile	Gly
			20					25					30		

Val	Leu	Asp	Val	Thr	Lys	His	Glu	Phe	Lys	Arg	Thr	Thr	Tyr	Ser	Glu
		35					40					45			

Asn	Glu	Val	Tyr	Asp	Leu	Asn	Asp	Ser	Val	Gln	Thr	Ile	Lys	Phe	Leu
	50					55					60				

Ile Trp Val Ile Asn Asp Ile Leu Val
65 70

<210> 2614
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 2614
 Met Gly Ser Ser His His His His His His Ser Ser Gly Leu Val Pro
 1 5 10 15

Arg Gly Ser His
20

<210> 2615
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 2615
 Met Gly Ser His His His His His His His His
 1 5 10

<210> 2616

<211> 4
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2616
Leu Ala Leu Ala
1

<210> 2617
<211> 4
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2617
Leu Leu Leu Asp
1

<210> 2618
<211> 4
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2618
Pro Ser Glu Ala
1

<210> 2619
<211> 4
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2619
Ile Ala Glu Phe
1

<210> 2620
<211> 4
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2620
Ile Gln Gln Phe
1

<210> 2621
<211> 4
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2621
Tyr Asp Lys Leu
1

<210> 2622
<211> 4
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2622
Ala Glu Phe Lys
1

<210> 2623
<211> 5

<212> PRT
<213> Saccharomyces cerevisiae

<400> 2623
Ser Asn Leu Thr Glu
1 5

<210> 2624
<211> 4
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2624
Leu Lys His Val
1

<210> 2625
<211> 5
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2625
Glu Leu Leu Glu Ala
1 5

<210> 2626
<211> 5
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2626
Ser Ser Ser Glu Leu
1 5

<210> 2627
<211> 5
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2627
Glu Glu Leu Ala Leu
1 5

<210> 2628
<211> 4
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2628
Phe Lys Val Phe
1

<210> 2629
<211> 5
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2629
Asp Asp Leu Leu Leu
1 5

<210> 2630
<211> 5
<212> PRT

<213> Saccharomyces cerevisiae

<400> 2630

Ala Glu Leu Lys His
1 5

<210> 2631

<211> 5

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2631

Leu Ala Tyr Asp Lys
1 5

<210> 2632

<211> 5

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2632

Leu Lys His Val Leu
1 5

<210> 2633

<211> 5

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2633

Thr Lys Thr Arg Leu
1 5

<210> 2634

<211> 5

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2634

Phe Lys Glu Ala Phe
1 5

<210> 2635

<211> 5

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2635

Asp Leu Asp His Gln
1 5

<210> 2636

<211> 7

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2636

Asn Gly Ser Ile Ser Ser Ser
1 5

<210> 2637

<211> 6

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2637
Gly Thr Leu Glu Asn Leu
1 5

<210> 2638
<211> 7
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2638
Ser Leu Gly Leu Ser Pro Ser
1 5

<210> 2639
<211> 6
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2639
Glu Lys Leu Thr Asp Ala
1 5

<210> 2640
<211> 6
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2640
Gly Glu Lys Leu Thr Asp
1 5

<210> 2641
<211> 6
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2641
Ala Glu Val Asp Asp Met
1 5

<210> 2642
<211> 6
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2642
Glu Leu Ala Thr Val Met
1 5

<210> 2643
<211> 6
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2643
Leu Asp Asp Leu Leu Leu
1 5

<210> 2644
<211> 7
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2644
Gly Ser Gly Glu Ile Asn Ile
1 5

<210> 2645
<211> 6
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2645
Leu Asp Leu Asp His Gln
1 5

<210> 2646
<211> 7
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2646
Arg Ser Leu Gly Leu Ser Pro
1 5

<210> 2647
<211> 6
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2647
Asp Leu Lys Lys Lys Leu
1 5

<210> 2648
<211> 6
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2648
Glu Leu Lys His Val Leu
1 5

<210> 2649
<211> 6
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2649
Lys Thr Lys Thr Arg Leu
1 5

<210> 2650
<211> 7
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2650
Lys Leu Thr Asp Ala Glu Val
1 5

<210> 2651
<211> 6
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2651

Ser Gln Arg Leu Glu Glu
1 5

<210> 2652
<211> 6
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2652
Phe Lys Val Phe Asp Lys
1 5

<210> 2653
<211> 7
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2653
Ala Glu Val Asp Asp Met Leu
1 5

<210> 2654
<211> 7
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2654
Ala Glu Val Asp Asp Met Leu
1 5

<210> 2655
<211> 7
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2655
Gln Gln Glu Leu Asp Asp Leu
1 5

<210> 2656
<211> 7
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2656
Asp Ala Glu Val Asp Asp Met
1 5

<210> 2657
<211> 7
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2657
Leu Glu Lys Thr Lys Thr Arg
1 5

<210> 2658
<211> 7
<212> PRT
<213> Saccharomyces cerevisiae

<400> 2658
Ala Glu Leu Lys His Val Leu

1

5

<210> 2659
 <211> 7
 <212> PRT
 <213> Saccharomyces cerevisiae

<400> 2659
 Leu Glu Lys Thr Lys Thr Arg
 1 5

<210> 2660
 <211> 8
 <212> PRT
 <213> Saccharomyces cerevisiae

<400> 2660
 His Val Leu Thr Ser Ile Gly Glu
 1 5

<210> 2661
 <211> 8
 <212> PRT
 <213> Saccharomyces cerevisiae

<400> 2661
 Gly Thr Leu Glu Asn Leu Glu Glu
 1 5

<210> 2662
 <211> 8
 <212> PRT
 <213> Saccharomyces cerevisiae

<400> 2662
 Ser Ile Gly Glu Lys Leu Thr Asp
 1 5

<210> 2663
 <211> 8
 <212> PRT
 <213> Saccharomyces cerevisiae

<400> 2663
 Gln Gln Glu Leu Asp Asp Leu Leu
 1 5

<210> 2664
 <211> 9
 <212> PRT
 <213> Saccharomyces cerevisiae

<400> 2664
 Arg Ser Leu Gly Leu Ser Pro Ser Glu
 1 5

<210> 2665
 <211> 10
 <212> PRT
 <213> Saccharomyces cerevisiae

<400> 2665
 Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln
 1 5 10

<210> 2666
 <211> 9
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 2666
 Val Leu Thr Ser Ile Gly Glu Lys Leu
 1 5

<210> 2667
 <211> 11
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 2667
 Ser Arg Gln Leu Lys Ser Asn Asp Ser Glu Gln
 1 5 10

<210> 2668
 <211> 9
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 2668
 Thr Ser Ile Gly Glu Lys Leu Thr Asp
 1 5

<210> 2669
 <211> 11
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 2669
 Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu Leu
 1 5 10

<210> 2670
 <211> 9
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 2670
 His Val Leu Thr Ser Ile Gly Glu Lys
 1 5

<210> 2671
 <211> 11
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 2671
 Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu
 1 5 10

<210> 2672
 <211> 9
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 2672
 Ala Glu Leu Lys His Val Leu Thr Ser
 1 5

<210> 2673

<211> 13

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2673

Leu	Ala	Tyr	Asp	Lys	Leu	Glu	Lys	Thr	Lys	Thr	Arg	Leu
1				5					10			

<210> 2674

<211> 10

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2674

Arg	Ser	Leu	Gly	Leu	Ser	Pro	Ser	Glu	Ala
1				5					10

<210> 2675

<211> 13

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2675

Glu	Glu	Leu	Lys	Lys	Lys	Leu	Leu	Lys	Asp	Leu	Glu	Leu
1				5					10			

<210> 2676

<211> 10

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2676

Ser	Ser	Asn	Leu	Thr	Glu	Glu	Gln	Ile	Ala
1				5					10

<210> 2677

<211> 14

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2677

Glu	Glu	Leu	Lys	Lys	Lys	Leu	Leu	Lys	Asp	Leu	Glu	Leu	Leu
1				5					10				

<210> 2678

<211> 11

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2678

Arg	Ser	Leu	Gly	Leu	Ser	Pro	Ser	Glu	Ala	Glu
1				5					10	

<210> 2679

<211> 16

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2679

Ala	Glu	Leu	Lys	His	Val	Leu	Thr	Ser	Ile	Gly	Glu	Lys	Leu	Thr	Asp
1				5					10					15	

<210> 2680

<211> 13

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2680

Lys Val Phe Asp Lys Asn Gly Asp Gly Leu Ile Ser Ala
1 5 10

<210> 2681

<211> 15

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2681

Met Gly Ser His His His His His His Ser Ser Asn Leu
1 5 10 15

<210> 2682

<211> 14

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2682

Phe Asp Lys Asp Asn Asn Gly Ser Ile Ser Ser Ser Glu Leu
1 5 10

<210> 2683

<211> 16

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2683

Leu Arg Glu Val Ser Asp Gly Ser Gly Glu Ile Asn Ile Gln Gln Phe
1 5 10 15

<210> 2684

<211> 14

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2684

Arg Glu Val Ser Asp Gly Ser Gly Glu Ile Asn Ile Gln Gln
1 5 10

<210> 2685

<211> 17

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2685

Ala Ala Glu Leu Lys His Val Leu Thr Ser Ile Gly Glu Lys Leu Thr
1 5 10 15

Asp

<210> 2686

<211> 13

<212> PRT

<213> Saccharomyces cerevisiae

<400> 2686

Asp Val Asp Gly Asn His Gln Ile Glu Phe Ser Glu Phe

1

5

10

<210> 2687

<211> 18

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2687

Ala Glu Leu Lys His Val Leu Thr Ser Ile Gly Glu Lys Leu Thr Asp
1 5 10 15

Ala Glu

<210> 2688

<211> 15

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2688

Leu Arg Glu Val Ser Asp Gly Ser Gly Glu Ile Asn Ile Gln Gln
1 5 10 15

<210> 2689

<211> 16

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2689

Ala Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu Leu
1 5 10 15

<210> 2690

<211> 15

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2690

Arg Glu Val Ser Asp Gly Ser Gly Glu Ile Asn Ile Gln Gln Phe
1 5 10 15

<210> 2691

<211> 19

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2691

Ala Ala Glu Leu Lys His Val Leu Thr Ser Ile Gly Glu Lys Leu Thr
1 5 10 15

Asp Ala Glu

<210> 2692

<211> 21

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 2692

Leu Arg Glu Val Ser Asp Gly Ser Gly Glu Ile Asn Ile Gln Gln Phe
1 5 10 15

Ala Ala Leu Leu Ser
20

<210> 2693
<211> 17
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2693
Leu Glu Asn Leu Glu Glu Leu Lys Lys Lys Leu Leu Lys Asp Leu Glu
1 5 10 15

Leu

<210> 2694
<211> 17
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2694
Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu Leu Asp Asp Leu
1 5 10 15

Leu

<210> 2695
<211> 18
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2695
Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu Leu Asp Asp
1 5 10 15

Leu Leu

<210> 2696
<211> 20
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2696
Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu
1 5 10 15

Leu Asp Asp Leu
20

<210> 2697
<211> 22
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 2697
Leu Ala Leu Ala Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln
1 5 10 15

Gln Glu Leu Asp Asp Leu

<210> 2698
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<212> PRT
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 1 5 10

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Gly	Ser	His	His	His	His	His	His	His	His	Leu	Val	Leu	Gly
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Met	Gly	Ser	His	His	His	His	His	His	His	His	Leu	Val	Leu
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Lys	Arg	Thr	Thr	Tyr	Ser	Glu	Asn	Glu	Val	Tyr	Asp	Leu	Asn
1				5					10				