



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(21) International Application Number: PCT/US99/17577 (22) International Filing Date: 4 August 1999 (04.08.99) (30) Priority Data: 60/095,269 4 August 1998 (04.08.98) US 60/099,973 11 September 1998 (11.09.98) US (71) Applicant (for all designated States except US): IMMUNEX CORPORATION [US/US]; 51 University Street, Seattle, WA 98101 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): VIRCA, G., Duke [US/US]; 16690 S.E. 50th Place, Bellevue, WA 98006 (US). BIRD, Timothy, Andrew [US/US]; 10804 Olallie Lane, N.E., Bainbridge Island, WA 98110 (US). ANDERSON, Dirk, M. [US/US]; 3616 N.W. 64th Street, Seattle, WA 98107 (US). MARKEN, John, S. [US/US]; 11804 9th Avenue, S.W., Seattle, WA 98146 (US). (74) Agent: GARRETT, Arthur, S.; Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., 1300 I Street, N.W., Washington, DC 20005-3315 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> (88) Date of publication of the international search report: 15 June 2000 (15.06.00)	
(54) Title: MURINE DNA MOLECULES ENCODING POLYPEPTIDES HAVING KINASE FUNCTIONS			
(57) Abstract The invention is directed to purified and isolated murine polypeptides having kinase function, the nucleic acids encoding such polypeptides, processes for production of recombinant forms of such polypeptides, antibodies generated against these polypeptides, fragmented peptides derived from these polypeptides, the use of such polypeptides and fragmented peptides in phosphorylation reactions and as molecular weight markers, the use of such polypeptides and fragmented peptides as controls for peptide fragmentation, and kits comprising these reagents.			

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 99/17577

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/55 C12N9/12 C07K16/40 G01N27/447

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	BEN-DAVID Y. ET AL.: "A MAMMALIAN PROTEIN KINASE WITH POTENTIAL FOR SERINE/THREONINE AND TYROSINE PHOSPHORYLATION IS RELATED TO CELL CYCLE REGULATORS" EMBO JOURNAL, GB, OXFORD UNIVERSITY PRESS, SURREY, vol. 10, no. 2, page 317-325 XP002053900 ISSN: 0261-4189 the whole document -----	1-34

☐ Further documents are listed in the continuation of box C.

☐ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
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- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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Date of the actual completion of the international search

20 December 1999

Date of mailing of the international search report

31.03.00

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 99/ 17577

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
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because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-34 partially

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

1. Claims: 1-34 (partially)

An isolated nucleic acid comprising the DNA of SEQ.ID.1 and allelic variants or species homologs thereof; a nucleic acid hybridizing thereto; recombinant vectors containing said nucleic acid; a host cell containing said vectors; an isolated polypeptide encoded by the nucleic acid of SEQ.ID.1 (SEQ.ID.5) in glycosylated or non-glycosylated form; a method for the production of said polypeptide; antibodies binding to said polypeptide; and a method and a kit for determining the molecular weight of a sample protein or peptide fragments of a sample protein.

2. Claims: 1-34 (partially)

An isolated nucleic acid comprising the DNA of SEQ.ID.2 and allelic variants or species homologs thereof; a nucleic acid hybridizing thereto; recombinant vectors containing said nucleic acid; a host cell containing said vectors; an isolated polypeptide encoded by the nucleic acid of SEQ.ID.2 (SEQ.ID.6) in glycosylated or non-glycosylated form; a method for the production of said polypeptide; antibodies binding to said polypeptide; and a method and a kit for determining the molecular weight of a sample protein or peptide fragments of a sample protein.

3. Claims: 1-34 (partially)

An isolated nucleic acid comprising the DNA of SEQ.ID.3 and allelic variants or species homologs thereof; a nucleic acid hybridizing thereto; recombinant vectors containing said nucleic acid; a host cell containing said vectors; an isolated polypeptide encoded by the nucleic acid of SEQ.ID.3 (SEQ.ID.7) in glycosylated or non-glycosylated form; a method for the production of said polypeptide; antibodies binding to said polypeptide; and a method and a kit for determining the molecular weight of a sample protein or peptide fragments of a sample protein.

4. Claims: 1-34 (partially)

An isolated nucleic acid comprising the DNA of SEQ.ID.4 or 9 and allelic variants or species homologs thereof; a nucleic acid hybridizing thereto; recombinant vectors containing said nucleic acid; a host cell containing said vectors; an isolated polypeptide encoded by the nucleic acid of SEQ.ID.4 or 9 (SEQ.ID.8 or 10) in glycosylated or non-glycosylated form; a method for the production of said polypeptide; antibodies binding to said polypeptide; and a method and a kit for determining the molecular weight of a sample protein or peptide fragments of a sample protein.