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(54) Title: THYMIC STROMAL LYMPHOPOIETIN RECEPTOR MOLECULES AND USES THEREOF

(57) Abstract: The present invention provides Thymic Stromal Lymphopoietin Receptor (TSLPR) polypeptides and nucleic acid molecules encoding the same. The invention also provides selective binding agents, vectors, host cells, and methods for producing TSLPR polypeptides. The invention further provides pharmaceutical compositions and methods for the diagnosis, treatment, amelioration, and/or prevention of diseases, disorders, and conditions associated with TSLPR polypeptides.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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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 C07K A61K C12N

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)

BIOISIS, EPO-Internal, MEDLINE, EMBL, WPI Data, PAJ, EMBASE, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL 'Online! Accession number AB039945, 14 March 2000 (2000-03-14) HIROYOMA ET AL: "Mus musculus CRLM2 mRNA for cytokine receptor like molecule 2, complete cds" XP002193896 sequence	1-57
X	-& HIROYAMA TAKASHI ET AL: "Molecular cloning and characterization of CRLM-2, a novel type I cytokine receptor preferentially expressed in hematopoietic cells" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 272, no. 1, 27 May 2000 (2000-05-27), pages 224-229, XP002194487 page 225, left-hand column, paragraph 2 page 229, left-hand column, last paragraph -/--	1-57

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

Special categories of cited documents:

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INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 01/20730

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>page 226; figure 1 ----- DATABASE EMBL 'Online! Accession number AB031333, KITAMURA AND FUJIO: "Mus musculus mRNA for cytokine receptor delta1, complete cds" XP002193897 sequence</p>	1-57
X	<p>-&amp; FUJIO KEISHI ET AL: "Molecular cloning of a novel type 1 cytokine receptor similar to the common gamma chain" BLOOD, vol. 95, no. 7, 1 April 2000 (2000-04-01), pages 2204-2211, XP002194488 page 2205, left-hand column, paragraph 5 page 2205, right-hand column, paragraph 3 page 2206, right-hand column, last paragraph; figure 1 page 2207, right-hand column, last paragraph page 2209, right-hand column, last line -page 2210, right-hand column, last paragraph</p>	1-57
X	<p>----- ISAKSEN D E ET AL: "Requirement for stat5 in thymic stromal lymphopoietin-mediated signal transduction." JOURNAL OF IMMUNOLOGY, (1999 DEC 1) 163 (11) 5971-7. , XP002193893 page 5972, left-hand column, paragraph 1 page 5972, right-hand column, paragraph 2 page 5973, right-hand column, paragraph 2 -page 5974, left-hand column, paragraph 2 Acknowledgments</p>	1-57
A	<p>----- LEVIN S D ET AL: "Thymic stromal lymphopoietin: a cytokine that promotes the development of IgM + B cells in vitro and signals via a novel mechanism." JOURNAL OF IMMUNOLOGY, (1999 JAN 15) 162 (2) 677-83. , XP002193894</p>	
A	<p>----- KUMAKI S ET AL: "CLONING OF THE MOUSE INTERLEUKIN 2 RECEPTOR GAMMA CHAIN: DEMONSTRATION OF FUNCTIONAL DIFFERENCES BETWEEN THE MOUSE AND HUMAN RECEPTORS" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, ACADEMIC PRESS INC. ORLANDO, FL, US, vol. 193, no. 1, 28 May 1993 (1993-05-28), pages 356-363, XP002928874 ISSN: 0006-291X -----</p>	

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/20730

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>PARK LINDA S ET AL: "Cloning of the murine thymic stromal lymphopoietin (TSLP) receptor: Formation of a functional heteromeric complex requires interleukin 7 receptor."                      JOURNAL OF EXPERIMENTAL MEDICINE,                      vol. 192, no. 5,                      4 September 2000 (2000-09-04), pages                      659-669, XP002193895                      ISSN: 0022-1007                      page 663; figure 3                      -----</p>	1-57

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

## Continuation of Box I.1

Although claim 49 is directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound.

Although claims 33, 48, 53 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound.

## Continuation of Box I.2

Claims Nos.: 18,19, 30-32, 34, 35, 40, 41

Present claims 18, 19, 30-32, 34, 35, 40, 41 relate to products and compounds defined by reference to a desirable characteristic or property, namely, the selective binding to the TSLPR or a chemical reactivity to covalently modify the TSLPR polypeptide.

The claims cover almost all products and compounds having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such products and compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the product and compounds by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to antibodies or fragment thereof raised against the TSLPR polypeptide (page 6, lines 30-33) (claims 18, 19, 30-32, 34, 35) and to N-linked or O-linked carbohydrates, sugars, phosphates, polyethylene glycol, mono-(C1-C10), alkoxy-, or aryloxy-polyethylene glycol, monomethoxy-polyethylene glycol, dextran, cellulose, poly-(N-vinyl pyrrolidone) polyethylene glycol, propylene glycol homopolymers, polypropylene oxide/ethylene oxide co-polymers, polyoxyethylated polyols, polyvinyl alcohol, polyethylene glycol propionaldehyde, biotin and dinitrophenol or trinitrophenol (pages 50-52) (claims 40 and 41).

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.