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8 September 2000 (08.09.00)

(54) Title: IMMUNOGLOBULIN SUPERFAMILY PROTEINS

(57) Abstract

The invention provides human immunoglobulin superfamily proteins (IGFAM) and polynucleotides which identify and encode IGFAM. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also provides methods for diagnosing, treating, or preventing disorders associated with expression of IGFAM.

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INTERNATIONAL SEARCH REPORT

Inte onal Application No
PCT/US 99/27566

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12N15/12 C12N5/10 C07K14/705 C07K16/28 C12Q1/68
G01N33/50 A61K38/17

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 C12Q G01N A61K

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.
X	DATABASE GENBANK [Online] Accession No. Y14736, 8 January 1998 (1998-01-08) PATERSON T.: ". sapiens mRNA for immunoglobulin kappa light chain" XP002132529 identical to seq. ID 20 ---	1-16,19
X	WO 97 49809 A (ROTKREUZSTIFTUNG ZENTRALLAB ;MIESCHER SYLVIA (CH); VOGEL MONIQUE () 31 December 1997 (1997-12-31) abstract seq. IDs 8,20 --- -/--	1-16,19

[X] Further documents are listed in the continuation of box C.

[X] 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

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
8 March 2000	26. 06. 2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Galli, I

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Form PCT/ISA/210 (second sheet) (July 1992)

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 23613 A (CELLTECH THERAPEUTICS LTD ;BEBBINGTON CHRISTOPHER ROBERT (GB); LAW) 3 July 1997 (1997-07-03) abstract seq. IDs 33,37,39,41,43 ---	1-16,19
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A	COLONNA M ET AL: "CLONING OF IMMUNOGLOBULIN-SUPERFAMILY MEMBERS ASSOCIATED WITH HLA-CAND HLA-B RECOGNITION BY HUMAN NATURAL KILLER CELLS" SCIENCE,US,AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE,, vol. 268, 21 April 1995 (1995-04-21), pages 405-408, XP002067321 ISSN: 0036-8075 abstract --- -/--	1-16,19

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INTERNATIONAL SEARCH REPORT

Inter ›nal Application No
PCT/US 99/27566

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	LI S ET AL: "A COMPUTER SCREENING APPROACH TO IMMUNOGLOBULIN SUPERFAMILY STRUCTURES AND INTERACTIONS: DISCOVERY OF SMALL NON-PEPTIDIC CD4 INHIBITORS AS NOVEL IMMUNOTHERAPEUTICS" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA,US,NATIONAL ACADEMY OF SCIENCE. WASHINGTON, vol. 94, 1 January 1997 (1997-01-01), pages 73-78, XP000619663 ISSN: 0027-8424 abstract ----	1-16,19

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 99/27566

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. [X] Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Claims 19,20 are directed to a method of treatment of the human/animal body. The search, if at all possible, has been carried out and based on the alleged effects of the compound/composition.

2. [X] Claims Nos.: 17,18,20
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:

see FURTHER INFORMATION sheet PCT/ISA/210

3. [ ] Claims Nos.:
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:

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. [X] 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.:

see additional sheet, invention 1.

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

Continuation of Box I.2

Claims Nos.: 17,18,20

Claims 17,18,20 refer to agonists and antagonists of the polypeptides claimed without giving a true technical characterization. Moreover, no such compounds are defined in the application. In consequence, the scope of said claims is ambiguous and vague, and their subject-matter is not sufficiently disclosed and supported (Art. 4 and 5 PCT). No search can be carried out for such purely speculative claims whose wording is, in fact, a mere recitation of the results to be achieved.

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

1. Claims: (1-20) - partially

A substantially purified polypeptide comprising the amino acid sequence of seq ID 1 or fragments thereof.

Corresponding nucleic acids (seq. ID 20), vectors, recominant host cells, screening and detection methods, antibodies, antagonists and agonists, pharmaceutical compositions; therapeutic uses thereof.

2. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 2 and 21.

3. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 3 and 22.

4. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 4 and 23.

5. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 5 and 24.

6. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 6 and 25.

7. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 7 and 26.

8. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 8 and 27.

9. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 9 and 28.

10. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 10 and 29.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

11. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 11 and 30.

12. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 12 and 31.

13. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 13 and 32.

14. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 14 and 33.

15. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 15 and 34.

16. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 16 and 35.

17. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 17 and 36.

18. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 18 and 37.

19. Claims: (1-20) - partially

Idem as subject-matter 1, but limited to seq. IDs 19 and 38.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inter ɔnal Application No
PCT/US 99/27566

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