

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 January 2002 (03.01.2002)

PCT

(10) International Publication Number
WO 02/000710 A3

(51) International Patent Classification⁷: **C12N 15/12**,
C07K 14/705, 16/28, A61K 38/17, G01N 33/53, C12N
15/86, A01K 67/027

Henry, J. [US/US]; 21827 Parvin Drive, Santa Clarita,
CA 91350 (US). **CHUTE, Hilary, T.** [US/US]; 26005-F
Alizia Canyon Drive, Calabasas, CA 91350 (US).

(21) International Application Number: PCT/US01/20719

(74) Agent: **ZUHN, Donald, L.**; McDonnell Boehnen Hulbert
& Berghoff, Suite 3200, 300 South Wacker Drive, Chicago,
IL 60606 (US).

(22) International Filing Date: 28 June 2001 (28.06.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/214,512 28 June 2000 (28.06.2000) US
09/729,264 28 November 2000 (28.11.2000) US

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, 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, MA, MD, MG, MK, MN, MW, MX,
MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL,
TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(63) Related by continuation (CON) or continuation-in-part
(CIP) to earlier applications:

US	09/729,264 (CON)
Filed on	28 November 2000 (28.11.2000)
US	60/214,512 (CON)
Filed on	28 June 2000 (28.06.2000)

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, 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, TR), OAPI patent (BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **AMGEN,
INC.** [US/US]; One Amgen Center Drive, Thousand Oaks,
CA 91320 (US).

Published:

— with international search report

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **WELCHER, An-
drew, A.** [US/US]; 1175 Church Street, Ventura, CA
93001 (US). **SARMIENTO, Ulla, M.** [CA/US]; 11340
Broadview Drive, Moorpark, CA 93021 (US). **SCHULTZ,**

(88) Date of publication of the international search report:
26 September 2002

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: B7-LIKE MOLECULES AND USES THEREOF

(57) Abstract: The present invention provides B7-Like (B7-L) polypeptides and nucleic acid molecules encoding the same. The invention also provides selective binding agents, vectors, host cells, and methods for producing B7-L polypeptides. The invention further provides pharmaceutical compositions and methods for the diagnosis, treatment, amelioration, and/or prevention of diseases, disorders, and conditions associated with B7-L polypeptides.



WO 02/000710 A3

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/20719

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C07K14/705 C07K16/28 A61K38/17 G01N33/53
C12N15/86 A01K67/027

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 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)

BIOSIS, MEDLINE, EPO-Internal

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 8 May 2000 (2000-05-08) HATTORI M ET AL.: "Homo sapiens chromosome 21 segment HS21C080" Database accession no. AL163280 XP002201581 nt 268445-268842 are 93% identical to nt 42-434 in SEQ 1 ---	1-3
A	WO 00 08057 A (BAUM PETER ROBERT; IMMUNEX CORPORATION) 17 February 2000 (2000-02-17) the whole document --- -/--	1-55



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

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.

Z document member of the same patent family

Date of the actual completion of the international search

7 June 2002

Date of mailing of the international search report

26/06/2002

Name and mailing address of the ISA

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

Authorized officer

Cupido, M

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/20719

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	DATABASE SWISS-PROT 1 October 2000 (2000-10-01) "IGSF5 protein (fragment)" Database accession no. Q9NSI5 XP002201582 Q9NSI5 is 99.6% identical to aa 10-324 in SEQ 2 -----	13-17

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 01/20719

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:
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. ☐ 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.:

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 18 and 19 a binding agent or fragment thereof that specifically binds the B7-like molecules of the application, without giving a true technical characterisation of such a binding agent. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating antibodies specific for these B7-like molecules.

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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/20719

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0008057 A	17-02-2000	AU 5550499 A	28-02-2000
		EP 1108042 A2	20-06-2001
		WO 0008057 A2	17-02-2000
