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(54) Title: IL-1 β BINDING ANTIBODIES AND FRAGMENTS THEREOF

(57) Abstract: An IL- 1 β binding antibody or IL- 1 β binding fragment thereof comprising the amino acid sequence of SEQ ID NO: 2, and related nucleic acids, vectors, cells, and compositions, as well as method of using same to treat or prevent a disease, and a method of preparing an affinity matured IL- 1 β binding polypeptide. IL- 1 β binding antibodies or IL- 1 β binding fragments thereof are provided which have desirable affinity and potency.



WO 2007/002261 A3

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER		
INV. C07K16/24 C12N15/85	C07K16/00	A61P37/06
		A61K39/395
		C12N5/12
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) C07K		
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) EPO-Internal, Sequence Search, CHEM ABS Data, WPI Data, BIOSIS		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/026806 A1 (WITTE ALISON [US] ET AL) 6 February 2003 (2003-02-06) the whole document	1-59
X	WO 2004/067568 A (APPLIED MOLECULAR EVOLUTION IN [US]; DICKINSON CRAIG DUANE [US]; VASSE) 12 August 2004 (2004-08-12) the whole document	1-59
X	WO 03/010282 A (LILLY CO ELI [US]; BRIGHT STUART WILLIS [US]; JIA AUDREY YUNHUA [US];) 6 February 2003 (2003-02-06) the whole document	1-59
X	WO 02/16436 A (NOVARTIS AG [CH]; NOVARTIS ERFIND VERWALT GMBH [AT]; GRAM HERMANN [DE]) 28 February 2002 (2002-02-28) the whole document	1-59
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family 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 2 March 2007		Date of mailing of the international search report 22/05/2007
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International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 935 343 A1 (ALLISON ANTHONY C [US] ET AL) 19 June 1990 (1990-06-19) the whole document -----	1-59

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/024261

Box II Observations where certain claims were found unsearchable (Continuation of item 2 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:

Although claims 53-59 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/composition.
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:
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 III Observations where unity of invention is lacking (Continuation of item 3 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.:

1-59

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

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-59

IL-1beta antibodies or IL-1beta binding fragments thereof as defined in claims 1, 7, 8, 9, 25, 26, 35, 36; a nucleic acid encoding said antibodies or fragments; a vector comprising said nucleic acid; a cell comprising said nucleic acid or vector; a transgenic animal comprising said cell; a hybridoma that produces said antibody; a composition comprising said antibodies or fragments, nucleic acid or vector; a method of treating or preventing an IL-1 related disease or condition using said antibody or fragment, nucleic acid, vector or composition.

2. claims: 60-66

A method of preparing an affinity matured IL-1beta binding polypeptide.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2006/024261
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