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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: EXTRACELLULAR MESSENGERS

(57) Abstract: Various embodiments of the invention provide human extracellular messengers (EXMES) and polynucleotides which identify and encode EXMES. Embodiments of the invention also provide expression vectors, host cells, antibodies, agonists, and antagonists. Other embodiments provide methods for diagnosing, treating, or preventing disorders associated with aberrant expression of EXMES.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/27213

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 45/00; C07K 14/00; C12P 21/04

US CL : 424/85.2; 530/351; 435/69.52

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)

U.S. : 424/85.2; 530/351; 435/69.52

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 practicable, search terms used)
Please See Continuation Sheet**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X	Database GenBank on NCBI, US National Library of Medicine, (Bethesda, MD, USA), No. AA91336, NCI-CGAP, unpublished, 10 June, 1998.	1-7, 9, 12, 13
X	US 5,830,451 A (DEVERGNE et al.) 3 November 1998 (03.11.1998), column 2, lines 7-22, lines 52-58, column 3, lines 11-66, column 4, lines 1-5, column 13, lines 35-66, column 14, lines 34-65, column 29, column 30.	1-10, 12-29, 47-55



Further documents are listed in the continuation of Box C.



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 application or patent 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

25 March 2003 (25.03.2003)

Date of mailing of the international search report

28 APR 2003

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/27213

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

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

1. ☐ Claim Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claim 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. ☐ Claim 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:
Please See Continuation 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.: 1-10, 12-29, 47-55, 70, 98
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.

INTERNATIONAL SEARCH REPORT

PCT/US02/27213

Continuation of B. FIELDS SEARCHED Item 3:

STN, EAST

search terms: interleukin 12

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

Group I, claim(s) 1, 2, 17-27, and 56, drawn to the polypeptide of SEQ ID NO: 1 and methods of use.

Group II, claim(s) 1, 2, 17-27, and 57, drawn to the polypeptide of SEQ ID NO: 2 and methods of use.

Group III, claim(s) 1, 2, 17-27, and 58, drawn to the polypeptide of SEQ ID NO: 3 and methods of use.

Group IV, claim(s) 1, 2, 17-27, and 59, drawn to the polypeptide of SEQ ID NO: 4 and methods of use.

Group V, claim(s) 1, 2, 17-27, and 60, drawn to the polypeptide of SEQ ID NO: 5 and methods of use.

Group VI, claim(s) 1, 2, 17-27, and 61, drawn to the polypeptide of SEQ ID NO: 6 and methods of use.

Group VII, claim(s) 1, 2, 17-27, and 62, drawn to the polypeptide of SEQ ID NO: 7 and methods of use.

Group VIII, claim(s) 1, 2, 17-27, and 63, drawn to the polypeptide of SEQ ID NO: 8 and methods of use.

Group IX, claim(s) 1, 2, 17-27, and 64, drawn to the polypeptide of SEQ ID NO: 9 and methods of use.

Group X, claim(s) 1, 2, 17-27, and 65, drawn to the polypeptide of SEQ ID NO: 10 and methods of use.

Group XI, claim(s) 1, 2, 17-27, and 66, drawn to the polypeptide of SEQ ID NO: 11 and methods of use.

Group XII, claim(s) 1, 2, 17-27, and 67, drawn to the polypeptide of SEQ ID NO: 12 and methods of use.

Group XIII, claim(s) 1, 2, 17-27, and 68, drawn to the polypeptide of SEQ ID NO: 13 and methods of use.

Group XIV, claim(s) 1, 2, 17-27, and 69, drawn to the polypeptide of SEQ ID NO: 14 and methods of use.

Group XV, claim(s) 1, 2, 17-27, and 70, drawn to the polypeptide of SEQ ID NO: 15 and methods of use.

Group XVI, claim(s) 1, 2, 17-27, and 71, drawn to the polypeptide of SEQ ID NO: 16 and methods of use.

Group XVII, claim(s) 1, 2, 17-27, and 72, drawn to the polypeptide of SEQ ID NO: 17 and methods of use.

Group XVIII, claim(s) 1, 2, 17-27, and 73, drawn to the polypeptide of SEQ ID NO: 18 and methods of use.

Group XIX, claim(s) 1, 2, 17-27, and 74, drawn to the polypeptide of SEQ ID NO: 19 and methods of use.

Group XX, claim(s) 1, 2, 17-27, and 75, drawn to the polypeptide of SEQ ID NO: 20 and methods of use.

Group XXI, claim(s) 1, 2, 17-27, and 76, drawn to the polypeptide of SEQ ID NO: 21 and methods of use.

Group XXII, claim(s) 1, 2, 17-27, and 77, drawn to the polypeptide of SEQ ID NO: 22 and methods of use.

Group XXIII, claim(s) 1, 2, 17-27, and 78, drawn to the polypeptide of SEQ ID NO: 23 and methods of use.

Group XXIV, claim(s) 1, 2, 17-27, and 79, drawn to the polypeptide of SEQ ID NO: 24 and methods of use.

Group XXV, claim(s) 1, 2, 17-27, and 80, drawn to the polypeptide of SEQ ID NO: 25 and methods of use.

Group XXVI, claim(s) 1, 2, 17-27, and 81, drawn to the polypeptide of SEQ ID NO: 26 and methods of use.

Group XXVII, claim(s) 1, 2, 17-27, and 82, drawn to the polypeptide of SEQ ID NO: 27 and methods of use.

INTERNATIONAL SEARCH REPORT

PCT/US02/27213

Group XXVIII, claim(s) 1, 2, 17-27, and 83, drawn to the polypeptide of SEQ ID NO: 28 and methods of use.

Group XXIX, claim(s) 3-10, 12-16, 28, 29, 46-55, and 84, drawn to the polynucleotide of SEQ ID NO: 29 and methods of use.

Group XXX, claim(s) 3-10, 12-16, 28, 29, 46-55, and 85, drawn to the polynucleotide of SEQ ID NO: 30 and methods of use.

Group XXXI, claim(s) 3-10, 12-16, 28, 29, 46-55, and 86, drawn to the polynucleotide of SEQ ID NO: 31 and methods of use.

Group XXXII, claim(s) 3-10, 12-16, 28, 29, 46-55, and 87, drawn to the polynucleotide of SEQ ID NO: 32 and methods of use.

Group XXXIII, claim(s) 3-10, 12-16, 28, 29, 46-55, and 88, drawn to the polynucleotide of SEQ ID NO: 33 and methods of use.

Group XXXIV, claim(s) 3-10, 12-16, 28, 29, 46-55, and 89, drawn to the polynucleotide of SEQ ID NO: 34 and methods of use.

Group XXXV, claim(s) 3-10, 12-16, 28, 29, 46-55, and 90, drawn to the polynucleotide of SEQ ID NO: 35 and methods of use.

Group XXXVI, claim(s) 3-10, 12-16, 28, 29, 46-55, and 91, drawn to the polynucleotide of SEQ ID NO: 36 and methods of use.

Group XXXVII, claim(s) 3-10, 12-16, 28, 29, 46-55, and 92, drawn to the polynucleotide of SEQ ID NO: 37 and methods of use.

Group XXXVIII, claim(s) 3-10, 12-16, 28, 29, 46-55, and 93, drawn to the polynucleotide of SEQ ID NO: 38 and methods of use.

Group XXXIX, claim(s) 3-10, 12-16, 28, 29, 46-55, and 94, drawn to the polynucleotide of SEQ ID NO: 39 and methods of use.

Group XL, claim(s) 3-10, 12-16, 28, 29, 46-55, and 95, drawn to the polynucleotide of SEQ ID NO: 40 and methods of use.

Group XLI, claim(s) 3-10, 12-16, 28, 29, 46-55, and 96, drawn to the polynucleotide of SEQ ID NO: 41 and methods of use.

Group XLII, claim(s) 3-10, 12-16, 28, 29, 46-55, and 97, drawn to the polynucleotide of SEQ ID NO: 42 and methods of use.

Group XLIII, claim(s) 3-10, 12-16, 28, 29, 46-55, and 98, drawn to the polynucleotide of SEQ ID NO: 43 and methods of use.

Group XLIV, claim(s) 3-10, 12-16, 28, 29, 46-55, and 99, drawn to the polynucleotide of SEQ ID NO: 44 and methods of use.

Group XLV, claim(s) 3-10, 12-16, 28, 29, 46-55, and 100, drawn to the polynucleotide of SEQ ID NO: 45 and methods of use.

Group XLVI, claim(s) 3-10, 12-16, 28, 29, 46-55, and 101, drawn to the polynucleotide of SEQ ID NO: 46 and methods of use.

Group XLVII, claim(s) 3-10, 12-16, 28, 29, 46-55, and 102, drawn to the polynucleotide of SEQ ID NO: 47 and methods of use.

Group XLVIII, claim(s) 3-10, 12-16, 28, 29, 46-55, and 103, drawn to the polynucleotide of SEQ ID NO: 48 and methods of use.

Group XLIX, claim(s) 3-10, 12-16, 28, 29, 46-55, and 104, drawn to the polynucleotide of SEQ ID NO: 49 and methods of use.

Group L, claim(s) 3-10, 12-16, 28, 29, 46-55, and 105, drawn to the polynucleotide of SEQ ID NO: 50 and methods of use.

Group LI, claim(s) 3-10, 12-16, 28, 29, 46-55, and 106, drawn to the polynucleotide of SEQ ID NO: 51 and methods of use.

Group LII, claim(s) 3-10, 12-16, 28, 29, 46-55, and 107, drawn to the polynucleotide of SEQ ID NO: 52 and methods of use.

Group LIII, claim(s) 3-10, 12-16, 28, 29, 46-55, and 108, drawn to the polynucleotide of SEQ ID NO: 53 and methods of use.

Group LIV, claim(s) 3-10, 12-16, 28, 29, 46-55, and 109, drawn to the polynucleotide of SEQ ID NO: 54 and methods of use.

Group LV, claim(s) 3-10, 12-16, 28, 29, 46-55, and 110, drawn to the polynucleotide of SEQ ID NO: 55 and methods of use.

Group LVI, claim(s) 3-10, 12-16, 28, 29, 46-55, and 111, drawn to the polynucleotide of SEQ ID NO: 56 and methods of use.

Group LVII, claim(s) 11 and 30-45, drawn to antibodies against the polypeptide of SEQ ID NO: 1 and methods of use.

Group LVIII, claim(s) 11 and 30-45, drawn to antibodies against the polypeptide of SEQ ID NO: 2 and methods of use.

INTERNATIONAL SEARCH REPORT

PCT/US02/27213

Group LIX, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 3 and methods of use.

Group LX, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 4 and methods of use.

Group LXI, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 5 and methods of use.

Group LXII, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 6 and methods of use.

Group LXIII, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 7 and methods of use.

Group LXIV, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 8 and methods of use.

Group LXV, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 9 and methods of use.

Group LXVI, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 10 and methods of use.

Group LXVII, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 11 and methods of use.

Group LXVIII, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 12 and methods of use.

Group LXIX, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 13 and methods of use.

Group LXX, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 14 and methods of use.

Group LXXI, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 15 and methods of use.

Group LXXII, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 16 and methods of use.

Group LXXIII, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 17 and methods of use.

Group LXXIV, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 18 and methods of use.

Group LXXV, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 19 and methods of use.

Group LXXVI, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 20 and methods of use.

Group LXXVII, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 21 and methods of use.

Group LXXVIII, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 22 and methods of use.

Group LXXIX, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 23 and methods of use.

Group LXXX, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 24 and methods of use.

Group LXXXI, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 25 and methods of use.

Group LXXXII, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 26 and methods of use.

Group LXXXIII, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 27 and methods of use.

Group LXXXIV, claim(s) 11 and 30-45. drawn to antibodies against the polypeptide of SEQ ID NO: 28 and methods of use.

Claims appear in more than one group if they encompass more than one invention.

Claims appear in more than one group if they encompass more than one invention.

The inventions listed as groups I-LXXXIV do not relate to a single general inventive concept under PCT rule 13.1 because, under PCT rule 13.2, they lack the same or corresponding technical feature for the following reasons: the different polypeptides and polynucleotides have different sequences. Antibodies against them also have different sequences. They thus represent different solutions to the problem posed. Additionally, the different types of molecules are unrelated in both structure and function.