

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
10 May 2002 (10.05.2002)

PCT

(10) International Publication Number
WO 2002/036070 A3

(51) International Patent Classification:

C07K 14/00 (2006.01) *A61K 38/00* (2006.01)
C07K 16/24 (2006.01) *A61K 45/00* (2006.01)
C12N 15/00 (2006.01) *A61K 48/00* (2006.01)
A61K 39/00 (2006.01)

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(21) International Application Number:

PCT/US2001/045366

(81) Designated States (*national*): AE, AG (patent), AL, AM, AT, AU (patent), AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM (patent), EC, EE, ES, FI, GB, GD (patent), GE, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC (patent), LK, LR, LS, LT, LU, LV (patent), MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI (patent), SK, SL, TJ, TM, TR, TT, TZ (patent), UA, UG, US, UZ, VN, YU, ZA (patent), ZW.

(22) International Filing Date:

30 October 2001 (30.10.2001)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/244,315 30 October 2000 (30.10.2000) US

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(84) Designated States (*regional*): ARIPO (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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Published:

— with international search report (*Art. 21(3)*)

(88) Date of publication of the international search report:

12 January 2012



WO 2002/036070 A3

(54) Title: NOVEL FISH CHEMOKINE AND METHODS FOR USE

(57) Abstract: The present invention relates to a novel chemokine, referred to herein as chemokine-2 or CK-2, including particular embodiments which are derived from fish such as rainbow trout (*Oncorhynchus mykiss*). The invention provides novel polypeptides corresponding to CK-2 chemokines, as well as nucleic acids that encode a CK-2 chemokine and antibodies that specifically bind to a CK-2 chemokine. Therapeutic methods for using the novel CK-2 chemokines are also provided. In particular, the invention provides pharmaceutical compositions, such as vaccines, comprising a CK-2 chemokine and an immunogen. The pharmaceutical compositions may be administered to an organism to enhance or activate an immune response to the immunogen. In another embodiment, the invention also relates to a novel screening method for identifying and/or isolating genes whose mRNA is rapidly degraded in a cell by identifying and/or isolating nucleic acids (for example, from a cDNA library) having one or more sequence motifs that are recognized by an endonuclease. The screening methods are particularly useful for identifying and/or isolating genes that encode novel chemokines, cytokines or oncogenes.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/45366

A. CLASSIFICATION OF SUBJECT MATTER				
IPC(7) : C07K 14/00, 16/24; C12N 15/00; A61K 39/00, 38/00, 45/00, 48/00 US CL : 530/351, 387.1; 435/69.1; 514/2, 44; 424/85.1, 134.1 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. : 530/350, 351, 387.1; 435/69.1, 325, 320.1; 514/2, 44; 536/23.5; 424/85.1, 134.1, 184.1, 93.1				
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 --- Y, E	PARDIGOL et al. Proc. Natl. Acad. Sci. USA. May 1998, Vol 95. pages 6308-6313, especially pages 6309 and 6311. US 6,448,054 B1 (POZNANSKY et al.) 10 September 2002 (10.09.2002), abstract; column 1, lines 20-35; column 3, lines 15-34; column 10, line 65-column 11, line 11; column 13, lines 49-60; column 15, lines 10-55; column 24, lines 9-18; column 26, lines 17-18; column 28, lines 38-50; column 28, line 52-column 29, line 67.	1, 14, 26, 27 ----- 12, 13, 28, 29		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.				
* Special categories of cited documents: <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"> "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 </td> <td style="width: 50%;"> "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 </td> </tr> </table>			"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
"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 27 May 2003 (27.05.2003)		Date of mailing of the international search report 30 MAY 2003		
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230		Authorized officer Regina M. DeBerry Telephone No. (703) 308-0196		

INTERNATIONAL SEARCH REPORT

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y, E	<p>PARDIGOL et al. Proc. Natl. Acad. Sci. USA. May 1998, Vol 95. pages 6308-6313, especially pages 6309 and 6311.</p> <p>US 6,359,118 B2 (MARGOLIN et al.) 19 March 2002 (19.03.2002), abstract; column 3, lines 25-51, column 5, lines 19-25 and column 10, lines 60-67.</p>	<p>1, 14</p> <p>-----</p> <p>30-32 and 38-40</p>
Y	LILJEQVIST et al. Journal of Biotechnology 1999 Vol 73. pages 1-33, especially pages 3-8 and 13-19.	34-37, 42-44, 46-48, 50-52 and 54-59
X	US 5,654,188 A (ELLMIEIER et al.) 05 August 1997 (05.08.1997), column 2, lines 38-59; column 11, lines 43-50 and column 12, line 54-column 13, line 20.	60-62

INTERNATIONAL SEARCH REPORT

PCT/US01/45366

Continuation of B. FIELDS SEARCHED Item 3:

WEST, key words: ck-2, chemokine-2, hcc-2, vector, antibody, vaccine, fish, motif with half life and endonuclease. Sequence search using databases EST, Geneseq, SwissProt, SPTREMBL