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(54) Title: ANGIOGENIC FACTOR AND INHIBITORS THEREOF

(57) Abstract: The present invention relates to inhibitors of a novel angiogenic factor, SEP, and soluble derivatives thereof and to their use in pharmaceutical compositions.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/006265

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07K14/47 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 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, BIOSIS, WPI Data, PAJ, EMBASE, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/053737 A (NAGANO YUKIKO ; HONDA GOICHI (JP); MATSUDA AKIO (JP); MURAMATSU SHUJI) 11 July 2002 (2002-07-11) SEQ ID NO's 169 & 170 pages 1-58	1-9, 11-15, 17-19
Y	same passages	1-19
X	WO 99/06552 A (GENSET SA ; LACROIX BRUNO (FR); DUCLERT AYMERIC (FR); DUMAS MILNE EDWA) 11 February 1999 (1999-02-11) SEQ ID NO: 153 pages 1-12 examples 43,62,63	1-9, 11-15, 17-19
Y	same passages	1-19
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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.
- * & * document member of the same patent family

Date of the actual completion of the international search

29 October 2004

Date of mailing of the international search report

25/11/2004

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/006265

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>DATABASE EMBL EBI; 4 January 2002 (2002-01-04), STRAUSBERG RL ET AL.: "Mus musculus RIKEN cDNA D430028G21 gene, mRNA (cDNA clone MGC:25836 IMAGE:4190175), complete cds." XP002297872 Database accession no. BC020006 abstract; sequences</p> <p>-----</p>	1-19
Y	<p>DATABASE EMBL EBI; 30 January 2003 (2003-01-30), STRAUSBERG RL ET AL.: "Homo sapiens KIAA1271 protein, mRNA (cDNA clone MGC:50830 IMAGE:5751684), complete cds." XP002297873 Database accession no. BC0044952 abstract; sequences</p> <p>-----</p>	1-19
Y	<p>MATSUDA AKIO ET AL: "Large-scale identification and characterization of human genes that activate NF-kappaB and MAPK signaling pathways." ONCOGENE. 22 MAY 2003, vol. 22, no. 21, 22 May 2003 (2003-05-22), pages 3307-3318, XP002297871 ISSN: 0950-9232 Clone 031N page 3309, left-hand column; table 4</p> <p>-----</p>	1-19
Y	<p>THOMPSON J D: "Applications of antisense and siRNAs during preclinical drug development" DRUG DISCOVERY TODAY, ELSEVIER SCIENCE LTD, GB, vol. 7, no. 17, 1 September 2002 (2002-09-01), pages 912-917, XP002236964 ISSN: 1359-6446 the whole document</p> <p>-----</p>	6
P,X	<p>WO 03/048202 A (MATSUDA AKIO ; MURAMATSU SHUJI (JP); ASAHI CHEMICAL IND (JP)) 12 June 2003 (2003-06-12) SEQ ID NO's 43-46 pages 1-64</p> <p>-----</p>	1-9, 11-15, 17-19

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2004/006265

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 12-18 are directed to a diagnostic method practised on 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:

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.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2004/006265

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:

a. type of material

a sequence listing

table(s) related to the sequence listing

b. format of material

in written format

in computer readable form

c. time of filing/furnishing

contained in the international application as filed

filed together with the international application in computer readable form


furnished subsequently to this Authority for the purpose of search

2. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

3. Additional comments:

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
 /EP2004/006265

Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
WO 02053737	A	11-07-2002	EP 1354950 A1	22-10-2003
			WO 02053737 A1	11-07-2002
			US 2003170719 A1	11-09-2003
			US 2004081986 A1	29-04-2004
WO 9906552	A	11-02-1999	US 6222029 B1	24-04-2001
			AU 8555598 A	22-02-1999
			CA 2296667 A1	11-02-1999
			EP 1000150 A2	17-05-2000
			WO 9906552 A2	11-02-1999
			JP 2001512015 T	21-08-2001
WO 03048202	A	12-06-2003	WO 03048202 A2	12-06-2003