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*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.*



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(54) Title: VIP54 PROTEIN AND RELATED MATERIALS

(57) Abstract: "VIP54" protein was identified by yeast two-hybrid screening using *H.pylori* VacA as bait. VIP54 is not detected in neurons, but is detected in neuroblastoma cells removed from a tumour. Furthermore, VIP54 co-distributes with vimentin and decorates intermediate filaments with a dotted pattern. The invention provides proteins comprising the amino acid sequence of VIP54, as well as related peptides, nucleic acid and antibodies. These are useful as diagnostic reagents for neuroblastoma, as markers for intermediate filaments, and for the inhibition of the VIP54/VacA interaction.

INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C07K14/47 C07K16/18 G01N33/53 C12Q1/68
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 C12N C07K G01N C12Q 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)

EPO-Internal, EMBL, STRAND, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 00 58473 A (CURAGEN CORPORATION (US); SHIMKETS RICHARD A.; LEACH MARTIN) 5 October 2000 (2000-10-05) page 34 -page 43 page 46 -page 49 SEQ ID NO:3079,3080 page 202 page 2295 -page 2298 page 5503 -page 5507; claims ---	1-12,15
E	WO 00 60077 A (CORIXA CORPORATION (US); REED S.G.; LODES M.J.; MOHAMATH R; SECRIST H.) 12 October 2000 (2000-10-12) SEQ ID NO:387 page 18 page 69; claim 1 --- -/--	2-7, 9-13,15

☒ 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

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03.08.01

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INTERNATIONAL SEARCH REPORT

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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	DATABASE EMBL [Online] ID: HSZZ27884; Accession number: AA322751, 18 April 1997 (1997-04-18) XP002172521 abstract	7,9-11
X	--- DATABASE EMBL [Online] ID: MM1306105; Accession number: AA512461, 9 July 1997 (1997-07-09) XP002172519 abstract	7,9-11
X	--- DATABASE EMBL [Online] ID: AI614106; Accession number: AI614106, 26 April 1999 (1999-04-26) XP002172520 abstract	7,9-11
P,X	--- DE BERNARD M. ET AL.: "The VacA toxin of Helicobacter pylori identifies a new intermediate filament-interacting protein" THE EMBO JOURNAL, vol. 19, no. 1, 4 January 2000 (2000-01-04), pages 48-56, XP002172517 cited in the application the whole document	1-5, 7-13,15
P,X	--- SANO K. ET AL.: "Novel SH3 protein encoded by the AF3p21 gene is fused to the mixed lineage leukemia protein in a therapy-related leukemia with (3;11)(p21;q23)" BLOOD, vol. 95, no. 3, 1 February 2000 (2000-02-01), pages 1066-1068, XP002172518 the whole document	2-4,7, 9-12
A	--- WO 93 18150 A (SCLAVO S.P.A. (IT); BUGNOLI MASSIMO) 16 September 1993 (1993-09-16) cited in the application page 4; figure 2 -----	13

INTERNATIONAL SEARCH REPORT

International application No.
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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.: 14
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 Nos.: 14

Present claim 14 relates to a reagent defined by reference to a desirable characteristic or property (its capability to inhibit the interaction between *H. pylori* VacA and the polypeptide of present invention, named VIP54) without giving a true technical characterization.

Moreover, no specific agents are defined in the application.

In consequence, the scope of said claim is ambiguous and vague, and its subject-matter is not sufficiently disclosed and supported (Articles 5 and 6 PCT).

No search can be carried out for such purely speculative claim whose wording is, in fact, a mere recitation of the result to be achieved.

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

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0058473	A	05-10-2000	AU 3774500 A	16-10-2000
WO 0060077	A	12-10-2000	AU 4185100 A	23-10-2000
WO 9318150	A	16-09-1993	IT 1262895 B	22-07-1996
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