

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
14 September 2000 (14.09.2000)

PCT

(10) International Publication Number
WO 00/53216 A3

(51) International Patent Classification⁷: **A61K 38/17**,
39/395, C07K 14/705, A61P 35/00, A61K 39/00, 48/00,
C07K 16/28, G01N 33/68, C12Q 1/68, C12N 15/12

(21) International Application Number: PCT/EP00/01587

(22) International Filing Date: 28 February 2000 (28.02.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
9905124.5 5 March 1999 (05.03.1999) GB

(71) Applicant (*for all designated States except US*):
SMITHKLINE BEECHAM BIOLOGICALS S.A.
[BE/BE]; Rue de l'Institut 89, B-1330 Rixensart (BE).

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **VINALS y de BAS-**
SOLS, Carlota [BE/BE]; SmithKline Beecham Biologi-
cals S.A., Rue de l'Institut 89, B-1330 Rixensart (BE).

(74) Agent: **PRIVETT, Kathryn, Louise**; SmithKline
Beecham, Corporate Intellectual Property, Two New
Horizons Court, Brentford, Middlesex TW8 9EP (GB).

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

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

Published:

— *With international search report.*

(88) Date of publication of the international search report:
11 January 2001

*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.*

(54) Title: USE OF CASB616 POLYPEPTIDES AND POLYNUCLEOTIDES FOR CANCER TREATMENT

(57) Abstract: Use of CASB616 polypeptides and polynucleotides in diagnostics, and vaccines for prophylactic and therapeutic treatment of cancers, particularly colon cancers, autoimmune diseases, and related conditions.

WO 00/53216 A3



INTERNATIONAL SEARCH REPORT

Ir. .ational Application No
PCT/EP 00/01587

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K38/17 A61K39/395 C07K14/705 A61P35/00 A61K39/00
A61K48/00 C07K16/28 G01N33/68 C12Q1/68 C12N15/12

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)

IPC 7 A61K 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, WPI Data, PAJ, BIOSIS, MEDLINE, STRAND

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KIYOKAWA E ET AL: "OVEREXPRESSION OF ERK AN EPH FAMILY RECEPTOR PROTEIN TYROSINE KINASE IN VARIOUS HUMAN TUMORS" CANCER RESEARCH, US, AMERICAN ASSOCIATION FOR CANCER RESEARCH, BALTIMORE, MD, vol. 54, 15 July 1994 (1994-07-15), pages 3645-3650, XP002070092 ISSN: 0008-5472	14, 16
Y	the whole document ----- -/--	1-7



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

10 October 2000

Date of mailing of the international search report

26/10/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Noë, V

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/01587

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CHEN YING ET AL: "DNA vaccines encoding full-length or truncated Neu induce protective immunity against Neu-expressing mammary tumors." CANCER RESEARCH, vol. 58, no. 9, 1 May 1998 (1998-05-01), pages 1965-1971, XP002149613 ISSN: 0008-5472 abstract page 1965, column 1, last paragraph -column 2, paragraph 3 page 1967, column 2, last paragraph -page 1969, column 1, paragraph 2; figures 4-6 ---	1-7
A	IWASE T ET AL: "IDENTIFICATION OF PROTEIN-TYROSINE KINASE GENES PREFERENTIALLY EXPRESSED IN EMBRYO STOMACH AND GASTRIC CANCER" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS,US,ACADEMIC PRESS INC. ORLANDO, FL, vol. 194, no. 2, 30 July 1993 (1993-07-30), pages 698-705, XP002014925 ISSN: 0006-291X abstract figures 1,3B page 704, paragraph 2 - paragraph 3 page 704, last paragraph ---	1-4,7,9, 10,12, 14,16
A	IKEGAKI NAOHIKO ET AL: "Molecular characterization and chromosomal localization of DRT (EPHT3): A developmentally regulated human protein-tyrosine kinase gene of the EPH family." HUMAN MOLECULAR GENETICS, vol. 4, no. 11, 1995, pages 2033-2045, XP000946771 ISSN: 0964-6906 abstract figure 1 page 2037, column 1, paragraph 2 -page 2038, column 1, paragraph 1 page 2042, column 1, paragraph 3 -column 2, paragraph 1 --- -/--	1-4,7,9, 12-16

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/01587

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FOX GARY M ET AL: "CDNA cloning and tissue distribution of five human EPH-like receptor protein-tyrosine kinases." ONCOGENE, vol. 10, no. 5, 1995, pages 897-905, XP000946743 ISSN: 0950-9232 abstract page 898, column 1, line 2 - line 6 page 902, column 1, line 15 - line 17 figure 1 -----	1-4,7,9, 10,12-16

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 11,12 (a and c)

Present claims 11,12(a and c) relate to compounds defined by reference to a desirable characteristic or property, namely Erk agonist or antagonist and nucleic acids modulating Erk expression.

The claims cover all products having these characteristics, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such products. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the products by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to Erk polypeptides and polynucleotides.

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.