

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 March 2002 (28.03.2002)

PCT

(10) International Publication Number
WO 02/024907 A3

(51) International Patent Classification⁷: **C12N 15/12**,
C07K 14/705, C12N 15/62, C07K 16/28, G01N 33/68

(21) International Application Number: PCT/EP01/10702

(22) International Filing Date:
17 September 2001 (17.09.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
00120585.5 20 September 2000 (20.09.2000) EP

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, 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, MZ, NO, NZ, PH, 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, MZ, 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, TR), OAPI patent (BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
TG).

Published:

— with international search report

(88) Date of publication of the international search report:
3 October 2002

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: G-PROTEIN COUPLED RECEPTOR HFRBN63

(57) Abstract: GPCR-HFRBN63 polypeptides and polynucleotides and methods for producing such polypeptides by recombinant techniques are disclosed. Also disclosed are methods for utilizing GPCR-HFRBN63 polypeptides and polynucleotides in diagnostic assays.



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INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 01/10702

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C07K14/705 C12N15/62 C07K16/28 G01N33/68

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, WPI Data, BIOSIS, 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	DATABASE WPI Section Ch, Week 200027 Derwent Publications Ltd., London, GB; Class B04, AN 2000-317946 XP002198746 & WO 00 21999 A (CHUGAI RES INST MOLECULAR MEDICINE INC), 20 April 2000 (2000-04-20) abstract -& EP 1 120 426 A (CHUGAI RES INST FOR MOLECULAR) 1 August 2001 (2001-08-01) claims --- -/--	1-11



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Patent family members are listed in annex.

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Date of the actual completion of the international search

21 May 2002

Date of mailing of the international search report

05/06/2002

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 01/10702

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 EM_HTG 'Online! EMBL; 24 January 2000 (2000-01-24) BIRREN ET AL: "Homo sapiens chromosome 11, clone RP11-645I8" Database accession no. AC021935 XP002198745 Nucleotides 18761-19660 abstract ----	4,5
X	GOODENOUGH P W: "The molecular biology of olfactory perception" INTERNATIONAL JOURNAL OF FOOD SCIENCE AND TECHNOLOGY, BLACKWELL SCIENTIFIC PUBLICATIONS, OXFORD, GB, vol. 33, 1998, pages 63-77, XP002189387 ISSN: 0950-5423 the whole document ----	1-11
X	LEFKOWITZ R J: "VARIATIONS ON A THEME" NATURE, MACMILLAN JOURNALS LTD. LONDON, GB, vol. 351, 1991, pages 353-354, XP002066094 ISSN: 0028-0836 cited in the application the whole document ----	1-11
X	WILSON S ET AL: "ORPHAN G-PROTEIN-COUPLED RECEPTORS: THE NEXT GENERATION OF DRUG TARGETS?" BRITISH JOURNAL OF PHARMACOLOGY, BASINGSTOKE, HANTS, GB, vol. 125, no. 7, December 1998 (1998-12), pages 1387-1392, XP001010584 ISSN: 0007-1188 the whole document ----	1-11
A	MALNIC BETTINA ET AL: "Combinatorial receptor codes for odors" CELL, CELL PRESS, CAMBRIDGE, NA, US, vol. 96, no. 5, 5 March 1999 (1999-03-05), pages 713-723, XP002188611 ISSN: 0092-8674 cited in the application Mouse odorant receptor S18, Genebank accession NO: AF121975 the whole document ----	1-11
P,X	WO 01 27158 A (FUCHS TANIA ;GLUSMAN GUSTAVO (IL); LANCET DORON (IL); YEDA RES & D) 19 April 2001 (2001-04-19) SEQ ID NO: 1514, SEQ ID NO: 582 (pages 789, 790 and 237 of Sequence Listings) claims ----- -/--	1-11

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 01/10702

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 01 88135 A (BAUMGARTNER JASON C ;BURGESS CATHERINE E (US); MACDOUGALL JOHN R () 22 November 2001 (2001-11-22) page 25 -page 27; claims -----	1-11

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 01/10702

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 0021999	A	20-04-2000	AU	6006399 A	01-05-2000
			EP	1120426 A1	01-08-2001
			WO	0021999 A1	20-04-2000
WO 0127158	A	19-04-2001	AU	1326201 A	13-02-2001
			AU	2903701 A	23-04-2001
			AU	6118100 A	13-02-2001
			WO	0107093 A1	01-02-2001
			WO	0107094 A1	01-02-2001
			WO	0127158 A2	19-04-2001
WO 0188135	A	22-11-2001	AU	6806001 A	26-11-2001
			WO	0188135 A2	22-11-2001
			AU	6805901 A	26-11-2001