

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
15 November 2001 (15.11.2001)

PCT

(10) International Publication Number
WO 01/85765 A3

- (51) International Patent Classification⁷: C12N 15/12, 15/62, C07K 14/47, 16/18, G01N 33/68
- (21) International Application Number: PCT/EP01/05372
- (22) International Filing Date: 11 May 2001 (11.05.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
00110089.0 12 May 2000 (12.05.2000) EP
- (71) Applicant (for all designated States except US): **MERCK PATENT GMBH** [DE/DE]; Frankfurter Strasse 250, 64293 Darmstadt (DE).
- (74) Common Representative: **MERCK PATENT GMBH**; Frankfurter Strasse 250, 64293 Darmstadt (DE).
- (81) Designated States (national): CA, JP, US.
- (84) Designated States (regional): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).
- Published:
— with international search report

(88) Date of publication of the international search report:
4 April 2002

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **RODES GUBERN, Blanca** [ES/ES]; Calle Jaume Font, 3-2^o, E-08849 Sant Climent de Llobregat (ES). **MESSEGUER PEYPOCH, Ramon** [ES/ES]; Calle Printor Pau Roig, 37,1^o-2a,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 01/85765 A3

(54) Title: IDENTIFICATION OF MFQ-110, A HUMAN C2H2-TYPE ZINC FINGER PROTEIN

(57) Abstract: MFQ-110, C2H2-type zinc finger polypeptides and polynucleotides and methods for producing such polypeptides by recombinant techniques are disclosed. Also disclosed are methods for utilizing C2H2-type zinc finger polypeptides and polynucleotides in diagnostic assays.

INTERNATIONAL SEARCH REPORT

International Application No

PC/EP 01/05372

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C12N15/62 C07K14/47 C07K16/18 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 C12N G01N

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)

EMBL, BIOSIS, PAJ, WPI Data, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>NAKAMURA TAKURO ET AL: "Evi9 encodes a novel zinc finger protein that physically interacts with BCL6, a known human B-cell proto-oncogene product." MOLECULAR AND CELLULAR BIOLOGY, vol. 20, no. 9, 25 April 2000 (2000-04-25), pages 3178-3186, XP002181728 ISSN: 0270-7306 cited in the application page 3179, left-hand column page 3181; figure 2 -& DATABASE EMBL 'Online! Hinxton, GB; Accession ID: AF169037, 27 April 2000 (2000-04-27) NAKAMURA T. ET AL: "Mus musculus ecotropic viral integration site 9 isoform C (Evi9) mRNA, complete cds" -/--</p>	1,4,6-11

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

5 November 2001

Date of mailing of the international search report

10/12/2001

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

Schmitz, T

INTERNATIONAL SEARCH REPORT

International Application No

PC1/EP 01/05372

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>XP002181730 SEQ ID NO:5: 96.5% identity in 723 nt overlap. SEQ:6: 97.9% in 240 aa overlap. abstract -& DATABASE EMBL 'Online! Hinxton, GB; Accession ID: AF051525, 2 January 2000 (2000-01-02) NAKAMURA T., YAMAZAKI Y., JENKINS N.A., COPELAND N.G.: "Mus musculus C2H2-type zinc-finger protein (Evi9) mRNA, complete cds" XP002181731 SEQ ID NO:1: 96% identity in 2322 nt overlap. SEQ ID NO2: 98.9% identity in 773 aa overlap. SEQ ID NO: 3: 96% identity in 2322 nt overlap. SEQ ID NO:4: 99% identity in 773 aa overlap. abstract</p> <p style="text-align: center;">---</p> <p>AVRAM DORINA ET AL: "Isolation of a novel family of C2H2 zinc finger proteins implicated in transcriptional repression mediated by chicken ovalbumin upstream promoter transcription factor (COUP-TF) orphan nuclear receptors." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 275, no. 14, 7 April 2000 (2000-04-07), pages 10315-10322, XP002181729 ISSN: 0021-9258 cited in the application & DATABASE SWALL 'Online! Accession ID: Q9JIT4, 1 October 2000 (2000-10-01) AVRAM D. ET AL: "CTIP1 protein" SEQ ID NO:6: 98.6% identity in 215 aa overlap. SEQ ID NO:4: 98.8% identity in 749 aa overlap. abstract & DATABASE EMBL 'Online! Hinxton, GB; Accession ID: AF186018, 14 April 2000 (2000-04-14) AVRAM D. ET AL: "Mus musculus CTIP1 protein (Ctip1) mRNA, complete cds" SEQ ID NO:5: 96% identity in 633 nt overlap. abstract</p> <p style="text-align: center;">---</p> <p style="text-align: center;">-/--</p>	<p>1,4,6-9, 11</p>

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 01/05372

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>NAGASE T. ET AL: "Prediction of the coding sequences of unidentified human genes. XX. The complete sequence of 100 new cDNA clones from brain which code for large proteins in vitro" DNA RESEARCH, vol. 8, no. 2, 27 April 2001 (2001-04-27), pages 85-95, XP001030942 & DATABASE EMBL 'Online! Hinxton, GB; Accession ID: AB058712, 10 May 2001 (2001-05-10) OHARA, NAGASE, KIKUNO: "Homo sapiens mRNA for KIAA1809 protein, partial cds" SEQ ID NO:2: 100% identity in 773 aa overlap. SEQ ID NO:4: 99.8% identity in 773 aa overlap. SEQ ID NO:1: 99.9% identity in 2322 nt overlap. abstract ---</p>	1,4,6-9, 11
P,X	<p>----- DATABASE EMBL 'Online! Hinxton, GB; Accession ID: HSA404613, 3 December 2000 (2000-12-03) WILLIS T.G.: "Homo sapiens mRNA for B-cell lymphoma/leukemia 11A short form (BCL11A-S gene)" XP002181734 SEQ ID NO:5: 99.5% identity (99.7% ungapped) in 723 nt overlap. SEQ ID NO:6: codes for aa with 99.5% (full length). abstract -----</p>	1,4