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(54) Title: 23686, A NOVEL HUMAN AMINOTRANSFERASE AND USES THEREFOR

(57) Abstract: The invention provides isolated aminotransferase nucleic acids molecules, designated 23686 nucleic acid molecules, which encode novel 23686 family members. The invention also provides antisense nucleic acid molecules, recombinant expression vectors containing 23686 nucleic acid molecules, host cells into which the expression vectors have been introduced, and nonhuman transgenic animals in which a 23686 gene has been introduced or disrupted. The invention still further provides isolated 23686 proteins, fusion proteins, antigenic peptides and anti-23686 antibodies. Diagnostic methods utilizing compositions of the invention are also provided.

INTERNATIONAL SEARCH REPORT

Int ional Application No
PCT/US 01/13786

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12N9/10 C12N15/54 C12N5/10 C12Q1/48

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

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)
BIOSIS, EPO-Internal, MEDLINE, CHEM ABS Data, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	DATABASE EMBL/GENBANK 'Online! Accession No.: HSA292204, 22 January 2001 (2001-01-22) JENNE D.E.: "The human ortholog for rat alanine-glyoxylate aminotransferase 2" XP002186744 the whole document --- -/--	1,3-10

[X] 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	Date of mailing of the international search report
10 January 2002	25/01/2002

Name and mailing address of the ISA	Authorized officer
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	Niebuhr-Ebel, K

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Form PCT/ISA/210 (second sheet) (July 1992)

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
X	LEE I.-S. ET AL: "Molecular cloning and sequencing of a cDNA encoding alanine-glyoxylate aminotransferase 2 from rat kidney." JOURNAL OF BIOCHEMISTRY (TOKYO), vol. 117, no. 4, 1995, pages 856-862, XP001038687 ISSN: 0021-924X the whole document	1,3-10
X	-& DATABASE EMBL/GENBANK 'Online! Accession No.: D38100, RNAGT2P, 28 September 1995 (1995-09-28) LEE I.-S.: "Rat mRNA for kidney AGT2 precursor" XP002186745 the whole document	1,3,4,6, 7
X	-& DATABASE EMBL/SWISSPROT 'Online! Accession No.: Q64565, 1 November 1997 (1997-11-01) LEE I.-S.: "Alanine-glyoxylate aminotransferase 2" XP002186746 the whole document	4-6
X	DATABASE EMBL/GENBANK 'Online! EST:HS190185, Accession No.: R83190, 6 August 1995 (1995-08-06) HILLIER L. ET AL.: "The WashU-Merck EST project" XP002186747 the whole document	1,3,7
X	DATABASE EMBL/GENBANK 'Online! EST:HSZZ38983, Accession No.: AA333931, 18 April 1997 (1997-04-18) ADAMS ET AL.: "Homo sapiens cDNA 5' end similar to ornithine aminotransferase" XP002186748 the whole document	1,3,7
X	DATABASE EMBL/GENBANK 'Online! EST:HSA10205, Accession No.: AA010205, 2 August 1996 (1996-08-02) HILLIER ET AL.: "Generation and analysis of 280000 human expressed sequence tags" XP002186749 the whole document	1,3,7

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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	TARN A C ET AL: "Primary hyperoxaluria type 1: Diagnostic relevance of mutations and polymorphisms in the alanine:glyoxylate aminotransferase gene (AGXT)." JOURNAL OF INHERITED METABOLIC DISEASE, vol. 20, no. 5, 1997, pages 689-696, XP001026633 ISSN: 0141-8955 the whole document	11-16,22

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-6 partially, 18-20

Claims 1-6 have only been searched partially, because no deposit sheet has been submitted for the "plasmid deposited with ATCC as Accession Number _____". Since no Accession Number has yet been assigned to said plasmid, no search concerning said plasmid could be carried out.

Claims 18-20 concern methods of treatment which make use of "23686 modulators". In these claims the term "modulator" lacks clarity as it is unclear which kind of substances are meant. In the specification it is stated that modulators may include "a small molecule", a "peptide" or a "gene therapy vector", and no example is given which would be helpful in defining these terms more precisely. The administration of substances well known in the art could fall under the scope of said claims, and therefore the scope of the claims is ambiguous and undefined.

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.