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15/54, C07K 16/28, C12Q 1/68, G01N 33/53, 33/573(74) Agents: **SPRUILL, W., Murray et al.**; Alston & Bird
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Sidney Street, Cambridge, MA 02139 (US).(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
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IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,
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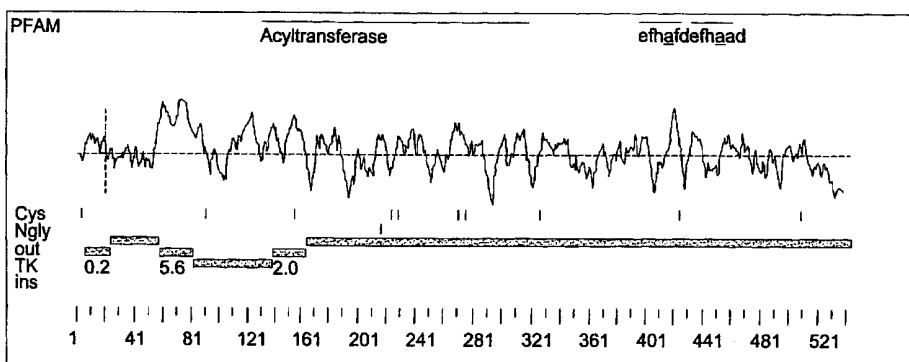
Published:

— with international search report

[Continued on next page]

(54) Title: 32447, A NOVEL HUMAN ACYLTRANSFERASE AND USES THEREOF

Analysis of 32447 (544 aa)



>32447
MSRCAQAAEVAATVPGAGVGNVGLRPPMVPRQASFFPPPVPNPFVQQTQIGSARRVQIVL
LGIILLPIRVLLVALILLAWPFAAISTVCCPEKLTHPIITGWRRIITQTALKFLGRAMFF
SMGFIIVAVKGKIASPLEAPVFAAPHSTFFDGIACVAVGLPSIVSRNENAVPLIGRLLR
AVQPVLSVRDPDSRKNTINETIKRTSGGEWPQILVFEGTCTNRSLITFKPGAFIPG
VPVQPVLLRYPNKLDTVTWQGYTFIQLCMLTFCQLFTKVEVEFMPVQVNPDEEKNDPV
LFANKVRNLMAEALGIPVTDHTYEDCRMLISAGQLTLPMEAGLVEFTKISRKLKLDWDGV
RKHLDEYASIASSSKGGRIIEEFKYLKLPVSDVLRQLFALFDRNHDGSDFREYVIGL
AVLCNPSNTEETIQVAFKLFVDDEGDYITEEFSTILGASLGVPDLVSGLFKEIAQGDS
ISYEFEKSFALKHPEYAKIFTTYLDLQTCVFSLPKEVQTTASTNKSPEKHEESTSD
KKDD

(57) Abstract: The invention provides isolated nucleic acids molecules, designated 32447 nucleic acid molecules, which encode novel acyltransferase family members. The invention also provides antisense nucleic acid molecules, recombinant expression vectors containing 32447 nucleic acid molecules, host cells into which the expression vectors have been introduced, and nonhuman transgenic animals in which a 32447 gene has been introduced or disrupted. The invention still further provides isolated 32447 proteins, fusion proteins, antigenic peptides and anti-32447 antibodies. Diagnostic methods utilizing compositions of the invention are also provided.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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.

(88) Date of publication of the international search report:
11 July 2002

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/US 01/20476

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N9/10 C12N15/54 C07K16/28 C12Q1/68 G01N33/53
G01N33/573

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 C12Q 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)

C. 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] Entry/Acc.no. AK000488, 22 February 2000 (2000-02-22) SUGANO, S. ET AL.: "Homo sapiens cDNA FLJ20481 fis, clone KAT07534." XP002197987 the whole document	1,3-5,7, 8,11-22
X	DATABASE EMBL [Online] Entry/Acc.no. AW241940, 16 December 1999 (1999-12-16) STRAUSBERG, R.: "xn77b08.xl Soares NFL T GBC S1 Homo sapiens cDNA clone IMAGE:2700471 3', mRNA sequence." XP002197988 the whole document	1,3,5,7, 16-18

☒ 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

7 May 2002

Date of mailing of the international search report

13. 05. 2002

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 01/20476

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 49728 A (KATO SEISHI ;KIMURA TOMOKO (JP); PROTEGENE INC (JP); SAGAMI CHEM R) 12 July 2001 (2001-07-12) see seq.ID's 94, 104, 114, and "HP10790" ---	1,3-8, 11,12, 16-18
E	WO 02 22660 A (HYSEQ INC ;WEHRMAN TOM (US); YANG YONGHONG (US); ZHANG JIE (US); Z) 21 March 2002 (2002-03-21) see seq.ID's 197 and 631 -----	1-22

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 01/20476

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:

Although claim 21, in as far as it pertains to in vivo use, is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.:
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 1,2,8 and 12 have not been searched in respect of the DNA insert of the plasmid deposited at the ATCC because no accession number has been provided within the time limit set by PCT Rule 13bis.4. As a result an objection for lack of clarity and disclosure according to PCT Articles 5 and 6 arises.

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.

PCT/US 01/20476

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 0149728	A	12-07-2001	AU	2404001 A	16-07-2001
			WO	0149728 A2	12-07-2001

WO 0222660	A	21-03-2002	WO	0222660 A2	21-03-2002
			WO	0222815 A1	21-03-2002
