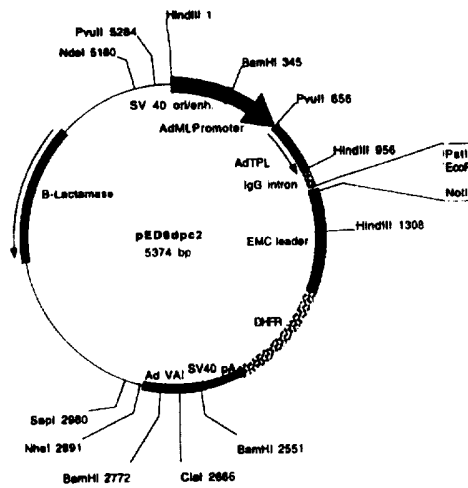




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

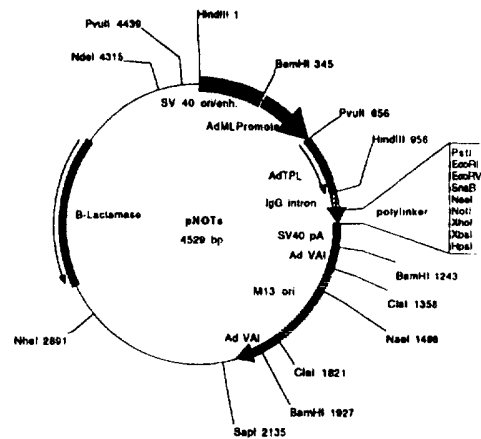
<p>(51) International Patent Classification <sup>6</sup> : <b>C12N 15/12, 15/19, C07K 14/47, 14/52, C12N 5/10, A61K 38/17, 38/19</b></p>	<p><b>A3</b></p>	<p>(11) International Publication Number: <b>WO 97/40151</b> (43) International Publication Date: 30 October 1997 (30.10.97)</p>
<p>(21) International Application Number: PCT/US97/06125 (22) International Filing Date: 14 April 1997 (14.04.97) (30) Priority Data: 08/635,311 19 April 1996 (19.04.96) US 08/781,226 10 January 1997 (10.01.97) US (71) Applicant: GENETICS INSTITUTE, INC. [US/US]; 87 CambridgePark Drive, Cambridge, MA 02140 (US). (72) Inventors: JACOBS, Kenneth; 151 Beaumont Avenue, Newton, MA 02160 (US). MCCOY, John, M.; 56 Howard Street, Reading, MA 01867 (US). RACIE, Lisa, A.; 124 School Street, Acton, MA 01720 (US). LAVALLIE, Edward, R.; 90 Green Meadow Drive, Tewksbury, MA 01876 (US). MERBERG, David; 2 Orchard Drive, Acton, MA 01720 (US). SPAULDING, Vikki; 11 Meadowbank Road, Billerica, MA 01821 (US). (74) Agent: BROWN, Scott, A.; Genetics Institute, Inc., 87 CambridgePark Drive, Cambridge, MA 02140 (US).</p>	<p>(81) Designated States: AU, CA, JP, MX, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). <b>Published</b> <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 5 February 1998 (05.02.98)</p>	

(54) Title: SECRETED PROTEINS AND POLYNUCLEOTIDES ENCODING THEM



Plasmid name: pED8dpc2  
Plasmid size: 5374 bp

Comments/References: pED8dpc2 is derived from pED8dpc1 by insertion of a new polylinker to facilitate cDNA cloning. SST cDNAs are cloned between EcoRI and NotI. pED vectors are described in Kaulman et al. (1991), NAR 19: 4486-4490.



Plasmid name: pNOT1  
Plasmid size: 4529 bp

Comments/References: pNOT1 is a derivative of pMT2 (Kaulman et al. 1988, Mol. Cell. Biol. 9:1741-1750). DHFR was deleted and a new polylinker was inserted between EcoRI and HpaI. M13 origin of replication was inserted in the ClaI site. SST cDNAs are cloned between EcoRI and NotI.

(57) Abstract

The invention provides 5 clones G 52-24, H 1075-1, J 59-41, H 83-22, J 143-1 isolated from a human PBMC cDNA library and one clone M 97-2 from a human glioblastoma cell line T 98 G cDNA library using a method of screening for cDNAs encoding secreted proteins. Determination of the nucleotide sequences and of the deduced amino acid sequences.

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/06125

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 6 C12N15/12 C12N15/19 C07K14/47 C07K14/52 C12N5/10  
 A61K38/17 A61K38/19

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 6 C07K 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)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>JOURNAL OF CELLULAR BIOCHEMISTRY,                      vol. 21A, no. suppl0, 10 March 1995 - 4                      April 1995,                      page 19 XP002027246                      K. JACOBS ET AL: "A novel method for                      isolating eukaryotic cDNA clones encoding                      secreted proteins"                      SEE ABSTRACT C1-207</p> <p style="text-align: center;">--- -/--</p>	

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.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

28 August 1997

Date of mailing of the international search report

15 -12- 1997

Name and mailing address of the ISA

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Authorized officer

LE CORNEC N.D.R.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/06125

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	R.E. CALLARD , A. J.H. GEARING: "the cytokine factsbook" 1994 , ACADEMIC PRESS HARCOURT BRACE & COMPANY, PUBLISHERS , LONDON XP002039160 209420 see page 2 - page 3 see page 31 see page 64 see page 75 see page 97 see page 148 see page 252	1-13
A	--- EMBL DATABASE ENTRY HS 30080, ACCESSION NUMBER R12300(VERSION 1), 21 April 1995, XP002039157 L.HILLIER ET AL: "The WashU-Merck EST project ."	13
P,A	--- EMBL DATABASE ENTRY HSA28937 . ACCESSION NUMBER : AA028937, 20 August 1996, XP002039158 L. HILLIER ET AL: "The WashU-Merck EST project"	1,13
A	--- JOURNAL OF BACTERIOLOGY, vol. 177, no. 1, 1 January 1995, pages 59-65, XP000560419 ENG MONG LIM ET AL: "IDENTIFICATION OF MYCOBACTERIUM TUBERCULOSIS DNA SEQUENCES ENCODING EXPORTED PROTEINS BY USING PHOA GENE FUSIONS"	
A	--- EMBL DATABASE ENTRY HS 007301 .ACCESSION NUMBER N67007( VERSION 2), 9 April 1996, XP002039159 HILLIER H . EET AL: "The WashU-Merck EST project : za49a11.s1 homo sapiens cDNA clone 295868 ."	1,13
P,A	--- EMBL DATABASE ENTRY . HSA29932 . ACESSION NUMBER : AA029932, 20 August 1996, XP002039170 L. HILLIER ET AL: "The WashU-Merck EST project"	1
T	--- US 5 536 637 A (JACOBS KENNETH) 16 July 1996 -----	

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 97/06125

## 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:  

See annex
  
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:
  
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:

See annex

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.:

1-13

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**

The application contains the following inventions:

1) claims 1-13 : polynucleotide sequences as in Seq. ID:2 and 26 from clone G52-24 encoding secreted protein as in Seq. ID:3 and 27 ,fragments , compositions , potential therapeutic use and gene corresponding to the cDNA sequences ID. 1,2,4,26.

2) claims 14-16 : polynucleotide sequences as in Seq. ID:5 and 28 from clone M97-2 encoding secreted protein as in Seq. ID:6 and 29 ,fragments , compositions and gene corresponding to the cDNA sequences ID. 5,7,28.

3) claims 17-19 : polynucleotide sequences as in Seq. ID:8 and 30 from clone H1075-1 encoding secreted protein as in Seq. ID:9 and 31 ,fragments , compositions and gene corresponding to the cDNA sequences ID. 8,10,30.

4) claims 20-22 : polynucleotide sequences as in Seq. ID:11 and 32 from clone J59-41 encoding secreted protein as in Seq. ID:12 and 33 ,fragments , compositions and gene corresponding to the cDNA sequences ID. 11,13,33.

5) claims 23-25 : polynucleotide sequences as in Seq. ID:14 and 34 from clone H83-22 encoding secreted protein as in Seq. ID:15 and 35 ,fragments , compositions and gene corresponding to the cDNA sequences ID.14,16,34.

6) claims 26-28 : polynucleotide sequences as in Seq. ID:17 and 36 from clone J143-1 encoding secreted protein as in Seq. ID:18 and 37 ,fragments , compositions and gene corresponding to the cDNA sequences ID. 17,19,36.

REMARK : Although claim 12 is directed to a method of treatment of the human/animal body (rule 39.1(IV) PCT), the search has been carried out and based on the alleged effects of the compound/composition.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 97/06125

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5536637 A	16-07-96	NONE	