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WO 02/012328 A3

(54) Title: COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF COLON CANCER

(57) Abstract: Compositions and methods for the therapy and diagnosis of cancer, particularly colon cancer, are disclosed. Illustrative compositions comprise one or more colon tumor polypeptides, immunogenic portions thereof, polynucleotides that encode such polypeptides, antigen presenting cell that expresses such polypeptides, and T cells that are specific for cells expressing such polypeptides. The disclosed compositions are useful, for example, in the diagnosis, prevention and/or treatment of diseases, particularly colon cancer.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 01/24218

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C07K14/47 G01N33/574 C12Q1/68 A61K38/17

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 C12Q A61K

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, EMBL, BIOSIS, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL20 May 1999 (1999-05-20) "Homo sapiens mRNA; cDNA DKFZp586A1123 (from clone DKFZp586A1123); partial cds." Database accession no. AL050181 XP002195313 the whole document</p> <p style="text-align: center;">---</p>	1-17
X	<p>WO 00 37643 A (MEAGHER MADELEINE JOY; CORIXA CORP (US); WANG TONGTONG (US); YUQIU) 29 June 2000 (2000-06-29) the whole document</p> <p style="text-align: center;">---</p> <p style="text-align: center;">-/--</p>	1-17

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

8 April 2002

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19. 07. 2002

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INTERNATIONAL SEARCH REPORT

International Application No.
PCT/US 01/24218

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	J-M FRIGERIO ET AL: "Analysis of 2166 clones from a human colorectal cancer cDNA library by partial sequencing" HUMAN MOLECULAR GENETICS, OXFORD UNIVERSITY PRESS, SURREY, GB, vol. 4, no. 1, 1995, pages 37-43, XP002111970 ISSN: 0964-6906 the whole document ---	1-17
A	WO 98 53319 A (KINZLER KENNETH W ;VOGELSTEIN BERT (US); UNIV JOHNS HOPKINS (US)) 26 November 1998 (1998-11-26) the whole document -----	1-17

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 01/24218

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 claims 12, 13 and 17 are 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:

see additional sheet

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.:

1-17 (all partially)

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

Present claim 6 relates to a method using an agent that is defined by reference to a desirable characteristic or property, namely its ability to bind a polypeptide.

The claim covers all compounds having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and disclosure within the meaning of Article 5 PCT for only a very limited number of such products. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the compound by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to antibodies as mentioned in claim 5.

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 1-17 (all partially)

an isolated nucleic acid having the SEQ ID NO: 1, the protein encoded by said DNA, fusion proteins comprising this protein, expression vectors comprising the DNA sequence SEQ ID NO: 1, host cells transformed with this vector, antibodies directed against the protein encoded by SEQ ID NO: 1, oligonucleotides hybridizing to SEQ ID NO: 1, stimulated or expanded T cells, compositions and kits comprising said nucleic acids, proteins, antibodies and T cells, as well as the use of any of these compounds in methods for diagnosis and therapy of cancer, for the stimulation of an immune response and for stimulating and/or expanding T-cells

Inventions 2-1788: claims 1-17 (all partially)

idem as subject 1,
wherein invention NO: 2 is represented by SEQ ID NO: 2;
wherein each of the subsequent inventions 3 to 1787 is represented independently by the respective, subsequent SEQ ID;
and wherein invention No: 1788 is represented by the nucleotide sequence SEQ ID NO: 1788 and the deduced amino acid sequence SEQ ID NO: 1789

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/24218

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0037643 A	29-06-2000	US 6284241 B1	04-09-2001
		AU 2387900 A	12-07-2000
		EP 1144632 A2	17-10-2001
		WO 0037643 A2	29-06-2000
		US 2002076414 A1	20-06-2002

WO 9853319 A	26-11-1998	AU 7499198 A	11-12-1998
		WO 9853319 A2	26-11-1998
