

(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织
国际局



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C12N 15/54, A61K 38/17

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(26) 公布语言: 中文

(30) 优先权:
00116424.4 2000年6月12日(12.06.00) CN

(71) 申请人(对除美国以外的所有指定国): 上海博德基因
开发有限公司(BIOWINDOW GENE
DEVELOPMENT INC. SHANGHAI) [CN/CN]; 中国
上海市中山北二路 1111 号 3 号楼 12 层, Shanghai
200092 (CN)。

(72) 发明人;及

(75) 发明人/申请人(仅对美国): 毛裕民(MAO, Yumin)
[CN/CN]; 谢毅(XIE, Yi) [CN/CN]; 中国上海市中山
北二路1111号 3号楼12层, Shanghai 200092 (CN)。

(74) 代理人: 上海市华诚律师事务所(WATSON & BAND
LAW OFFICES); 中国上海市南京东路61号11楼,
Shanghai 200002 (CN)。

(81) 指定国(国家): AE, AG, AL, AM, AT, AU, AZ, BA,
BB, BG, BR, BY, BZ, CA, CH, CO, CR, CU, CZ, DE,
DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,
MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG,
SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
VN, YU, ZA, ZW

(84) 指定国(地区): ARIPO专利(GH, GM, KE, LS, MW,
MZ, SD, SL, SZ, TZ, UG, ZW), 欧亚专利(AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM), 欧洲专利(AT, BE,
CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,
MC, NL, PT, SE, TR), OAPI专利(BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG)

根据细则4.17的声明:

— 关于申请人在国际申请日有权申请并被授予专利(细则
4.17(ii))对除美国以外的所有指定国
— 发明人资格(细则4.17(iv))仅对美国

本国际公布:

— 包括国际检索报告。

(88) 国际检索报告的公布日期: 2002年4月4日(04.04.02)

所引用双字母代码和其它缩写符号, 请参考刊登在每期
PCT公报期刊起始的“代码及缩写符号简要说明”。

(54) Title: A NOVEL POLYPEPTIDE, A HUMAN DNA METHYLATION PROTEIN AND THE POLYNUCLEOTIDE
ENCODING THE POLYPEPTIDE

(54) 发明名称: 一种新的多肽—人甲基化-DNA-蛋白-半胱氨酸甲基转移酶 13 和编码这种多肽的多核苷酸

(57) Abstract: The present invention discloses a novel polypeptide, a human DNA methylation protein, the polynucleotide encoding the polypeptide and the method for producing the polypeptide by DNA recombinant technology. The invention also discloses the uses of the polypeptide in methods for treating various diseases, such as embryonic development disorders and tumors. The invention also discloses the agonists against the polypeptide and the therapeutic action thereof. The invention also discloses the uses of the polynucleotide encoding the novel human DNA methylation protein.

(57) 摘要

本发明公开了一种新的多肽——人甲基化-DNA-蛋白-半胱氨酸甲基转移酶 13, 编码此多肽的多核苷酸和经 DNA 重组技术产生这种多肽的方法。本发明还公开了此多肽用于治疗多种疾病的方法, 如肿瘤疾病、胚胎发育畸形等。本发明还公开了抗此多肽的拮抗剂及其治疗作用。本发明还公开了编码这种新的人甲基化-DNA-蛋白-半胱氨酸甲基转移酶 13 的多核苷酸的用途。

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN01/00942

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷ C07K14/47 C12N9/10 C07H21/04 C12N15/54 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)

IPC⁷ C07K14/47 C12N9/10 C07H21/04 C12N15/54 A61K38/17

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 practicable, search terms used)

CNPAT WPI EPODOC NCBI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	NCBI Register No. AF205588.1 GI: 6531675(Rump, A., et al) 07 Dec 1999, Refer to the SEQ ID	1-12, 14-18
A	NCBI Register No. CAB87950.1 GI: 7576272(Brown, A., et al) 14 Apr 2000, Refer to the SEQ ID	1-12, 14-18
A	DE4319875C1 04 Aug 1994, Refer to the Abstract	1-12, 14-18

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier application or patent but published on or after the international filing date	"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
"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)	"&" document member of the same patent family
"C" 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	

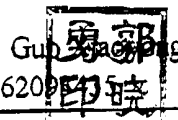
Date of the actual completion of the international search
06 Jan 2002(06.01.02)

Date of mailing of the international search report
17 JAN. 2002 (17.01.02)

Name and mailing address of the ISA/CN
6 Xitucheng Rd., Jimen Bridge, Haidian District,
100088 Beijing, China
Facsimile No. 86-10-62019451

Authorized officer

Telephone No. 8610-6209



INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN01/00942

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: 13
because they relate to subject matter not required to be searched by this Authority, namely:
Claim 13 is directed to a method of treatment of the human/animal body.
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:

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.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT / CN01/00942

DE4319875C1 Publishing Date: 04 Aug 1994

Patent family members:

WO9429454A1 Publishing Date: 22 Dec 1994

国际检索报告

国际申请号

PCT/CN01/00942

A. 主题的分类

IPC⁷ C07K14/47 C12N9/10 C07H21/04 C12N15/54 A61K38/17

按照国际专利分类表(IPC)或者同时按照国家分类和 IPC 两种分类

B. 检索领域

检索的最低限度文献(标明分类体系和分类号)

IPC⁷ C07K14/47 C12N9/10 C07H21/04 C12N15/54 A61K38/17

包含在检索领域中的除最低限度文献以外的检索文献

在国际检索时查阅的电子数据库(数据库的名称和, 如果实际可行的, 使用的检索词)

CNPAT WPI EPODOC NCBI

C. 相关文件

类 型*	引用文件, 必要时, 指明相关段落	相关的权利要求编号
A	NCBI 登记号 AF205588.1 GI: 6531675(Rump,A., 等人) 07.12 月 1999, 参见序列	1-12,14-18
A	NCBI 登记号 CAB87950.1 GI: 7576272(Brown,A., 等人) 14.4 月 2000, 参见序列	1-12,14-18
A	DE4319875C1 04.8 月 1994, 参见摘要	1-12,14-18

☐ 其余文件在 C 栏的续页中列出。

☒ 见同族专利附件。

* 引用文件的专用类型:

"A" 明确叙述了被认为不是特别相关的一般现有技术的文件

"L" 在国际申请日的当天或之后公布的在先的申请或专利

"I" 可能引起对优先权要求的怀疑的文件, 为确定另一篇引用文件的公布日而引用的或者因其他特殊理由而引用的文件

"O" 涉及口头公开、使用、展览或其他方式公开的文件

"P" 公布日先于国际申请日但迟于所要求的优先权日的文件

"1" 在申请日或优先权日之后公布的在后文件, 它与申请不相抵触, 但是引用它是为了理解构成发明基础的理论或原理

"X" 特别相关的文件, 仅仅考虑该文件, 权利要求所记载的发明就不能认为是新颖的或不能认为是有创造性

"Y" 特别相关的文件, 当该文件与另一篇或者多篇该类文件结合并且这种结合对于本领域技术人员为显而易见时, 权利要求记载的发明不具有创造性

"&" 同族专利成员的文件

国际检索实际完成的日期

06.1 月 2002(06.01.02)

国际检索报告邮寄日期

17. 1月 2002 (17.01.02)

国际检索单位名称和邮寄地址

ISA/CN

中国北京市海淀区西土城路 6 号(100088)

传真号: 86-10-62019451

受权官员

电话号码: 86-10-62019451



国际检索报告

国际申请号
PCT/CN01/00942

第I栏 关于某些权利要求不能作为检索主题的意见(接第1页第1项)

按条约17(2)(a)对某些权利要求未作国际检索报告的理由如下:

1. ☒ 权利要求(编号): 13

因为它们涉及到不要求本国际检索单位检索的主题, 即:
其涉及疾病的治疗和诊断方法。

2. ☐ 权利要求(编号):

因为它们涉及到国际申请中不符合规定的要求的部分, 以至于不能进行任何有意义的国际检索,
具体地说:

3. ☐ 权利要求(编号):

因为它们是从属权利要求, 并且没有按照细则6.4(a)第2句和第3句的要求撰写。

第II栏 关于缺乏发明单一性时的意见(接第1页第2项)

本国际检索单位在该国际申请中发现多项发明, 即:

1. ☐ 由于申请人按时缴纳了所要求缴纳的全部附加检索费, 本国际检索报告针对全部可作检索的权利要求。

2. ☐ 由于无需付出有理由要求附加费的劳动即能对全部可检索的权利要求都进行检索, 本国际检索单位未通知缴纳任何附加费。

3. ☐ 由于申请人仅按时缴纳了部分所要求缴纳的附加检索费, 本国际检索报告仅涉及已缴费的那些权利要求。具体地说, 是权利要求(编号):

4. ☐ 申请人未按时缴纳所要求的附加检索费。因此, 本国际检索报告仅涉及权利要求中首先提到的发明:
包含该发明的权利要求是(编号):

关于异议的说明: ☐ 申请人的异议书随附加检索费同时提交。

☐ 支付附加检索费时未提交异议书。

国际申请号
PCT/CN01/00942

PCT/ISA/210 表(同族专利附件)(1998 年 7 月)