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(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

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根据细则4.17的声明:

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- 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25日(25.04.02)

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 GAMMA CARBOXYL GLUTAMIC ACID PROTEIN 113.31 WITH ABUNDANT PROLINE AND THE POLYNUCLEOTIDE CODING THIS NOVEL PEPTIDE

(54) 发明名称: 一种新的多肽——脯氨酸富含的 gamma 羧基谷氨酸蛋白 113.31 和编码这种多肽的多核苷酸

(57) Abstract: The invention disclosed a novel polypeptide gamma carboxyl glutamic acid protein 113.31 with abundant proline, polynucleotide coding this peptide and the method for producing this peptide by DNA recombinant techniques. This invention also disclosed therapeutical methods with this peptide for several diseases, such as malignant tumor, haemal illness, Heteroplasia, HIV infection, immunological illness and all kinds of inflammations, et al. This invention also disclosed an antagonist against this peptide and it's therapeutical effect. The invention also disclosed the use of this polynucleotide coding the novel gamma carboxyl glutamic acid protein 113.31 with abundant proline.

(57) 摘要

本发明公开了一种新的多肽——脯氨酸富含的 gamma 羧基谷氨酸蛋白 113.31, 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, 如恶性肿瘤, 血液病, 发育紊乱症, HIV 感染, 免疫性疾病和各类炎症等。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脯氨酸富含的 gamma 羧基谷氨酸蛋白 113.31 的多核苷酸的用途。



# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CN01/00996

## A. CLASSIFICATION OF SUBJECT MATTER

C07K14/47, 14/435, C12N15/12, 15/63, 15/85, A61K38/17, A61P35/00, 37/00

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 C07K C12N A61K A61P

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)

GenBank WPI CNPAT

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                                                                                                 | Relevant to claim No. |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| A         | J. Cell. Sci. 113 (Pt 1), 103-112 (2000), Fujita,A.etal.,<br>Ropporin, a sperm-specific binding protein of rhophilin,<br>that is localized in the fibrous sheath of sperm flagella | I-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                                                                     |
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| "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                                                                                                                                                                                                    |
| "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                                                                   |                                                                                                                                                                                                                                                  |

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国际检索报告

国际申请号  
PCT/CN01/00996

A. 主题的分类

C07K14/47, 14/435, C12N15/12, 15/63, 15/85, A61K38/17, A61P35/00, 37/00

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 C07K C12N A61K A61P

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)

GenBank WPI CNPAT

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    | J. Cell. Sci. 113 (Pt 1), 103-112 (2000), Fujita,A.等,<br>Ropporin, a sperm-specific binding protein of rhophilin,<br>that is localized in the fibrous sheath of sperm flagella | 1-18      |

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:                 | “T” 在申请日或优先权日之后公布的在后文件, 它与申请 |
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国际检索实际完成的日期  
26.12 月 2001(26.12.01)

国际检索报告邮寄日期  
10. 1月 2002(10.01.02)

国际检索单位名称和邮寄地址  
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