

## P1/Fas-CCL19双表达重组腺病毒载体的构建及表达鉴定

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### Construction and Identification of P1/Fas-CCL19 Double Expressed Reorganization Adenovirus Carrier

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#### 摘要

#### 目的

利用pAdEasy-1腺病毒包装系统构建血型B抗原模拟多肽P1/Fas-CCL19双表达重组腺病毒,并在体内外试验中验证其表达及可能的疗效。方法应用腺病毒穿梭质粒pShuttle-CMV、骨架质粒pAdEasy-1构建重组腺病毒质粒pAd-CMV-P1/Fas-CCL19并转染至

HEK293A细胞,获得重组腺病毒Ad-P1/Fas-CCL19颗粒后进一步感染乳腺癌4T1细胞并鉴定转染4T1细胞内P1/Fas-CCL19 mRNA和蛋

白质的表达。构建经人B型血红细胞免疫的4T1荷瘤小鼠模型,比较瘤内注射重组腺病毒Ad-P1/Fas-CCL19组、空腺病毒组、0.9%

氯化钠溶液组的荷瘤小鼠的肿瘤变化及生存期。结果感染后4T1细胞中P1/Fas-CCL19 mRNA和蛋白质均有表达。瘤内注射重组腺

病毒Ad-P1/Fas-CCL19较瘤内注射空腺病毒、0.9%氯化钠溶液明显抑制4T1肿瘤的生长,但三组小鼠的生存期无明显区别。结论P1/Fas-CCL19重组腺病毒载体成功构建,体内外实验均证明了其稳定表达及有效性,为进一步临床研究奠定了基础。

关键词: 腺病毒 血型抗原B Fas CCL19 4T1 肿瘤

#### Abstract:

#### Objective

To construct recombinant adenovirus expressing both simulated peptide of blood group B antigen P1/Fas and CCL19 by pAdEasy-1 packaging system, and test their expression. Methods We constructed pShuttle-CMV-P1/Fas-CCL19 adenovirus Shuttle plasmid pShuttle-CMV and pAdEasy-1. Then, we transfected pAd-CMV-P1/Fas-CCL19 to HEK293A cells and obtained recombinant Ad-P1/Fas-CCL19 particles which can infect 4T1 cells. At last we detected mRNA and protein expression of P1/Fas-CCL19 in 4T1 cells. 4T1 tumor-bearing mice model immunized by the B red blood cell was established successfully, and injected with recombinant adenovirus Ad-P1/Fas-CCL19, empty adenovirus, saline into the tumors, respectively. Then, tumor changes and survival period of the three groups were compared. Results P1/Fas-CCL19 can be effectively expressed in 4T1 cells on both mRNA and protein levels. Intratumor injection of

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recombinant adenovirus Ad-P1/Fas-CCL19 group inhibited 4T1 tumor growth significantly compared with intratumoral injection of adenovirus,empty saline,but survival time has no obvious difference among the three groups.ConclusionP1/Fas-CCL19 recombinant adenovirus vector was successfully constructed,experiments proved its stable expression and efficacy in vivo,in vitro, which make a foundation for further clinical research.

Key words: Adenovirus Blood group antigen B Fas CCL19 4T1 Tumor

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