

论著

## 兰尼碱受体mRNA在哮喘豚鼠气道平滑肌细胞中表达的改变

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**摘要** 目的 明确兰尼碱受体 (RyR) 与哮喘发病的关系, 为哮喘的防治提供一条新的途径。方法 以酶消化法分离培养正常与哮喘豚鼠气道平滑肌细胞 (ASMCs), 应用RT-PCR方法测定每组细胞RyR 各亚型RyR1, RyR2和RyR3的mRNA表达。结果 正常与哮喘豚鼠ASMCs中, RyR1和RyR2的mRNA均见表达, 未见RyR3 mRNA的表达, 并以表达RyR2 mRNA为主。哮喘时, RyR1和RyR2的mRNA相对吸光度值分别为 $0.43 \pm 0.05$ 和 $1.5 \pm 0.6$ , 明显高于正常组RyR1 mRNA的吸光度值 $0.34 \pm 0.03$  ( $n=6$ ,  $P<0.01$ )。结论 RyR1 mRNA表达上调可能与哮喘发病相关。

**关键词** [哮喘](#) [受体](#) [兰尼碱](#) [肌](#) [平滑](#) [气道](#)

**分类号** [r963](#), [r996](#)

## Changes of ryanodine receptors mRNA expressions in airway smooth muscle cells of asthmatic guinea pigs

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### Abstract

**AIM** To investigate the roles of ryanodine receptors (RyR) in asthma, and try to provide a new target for asthma treatment. **METHODS** Airway smooth muscle cells (ASMCs) were obtained by enzyme separation method from normal and asthmatic guinea pigs. The expressions of RyR1, RyR2 and RyR3 mRNA were determined by RT-PCR. **RESULTS** Both in normal and asthmatic guinea pigs, there were mRNA expressions of RyR1 and RyR2 in ASMCs, but no RyR3 mRNA. In asthma group, the expressions of RyR1 mRNA and RyR2 mRNA were  $0.43 \pm 0.05$  and  $1.5 \pm 0.6$ , respectively. RyR1 mRNA of asthmatic group expressed significantly higher than that of normal group ( $0.43 \pm 0.05$  vs  $0.34 \pm 0.03$ ). **CONCLUSION** The up-regulation of RyR1 mRNA might be closely related to asthma.

**Key words** [asthma](#) [receptor](#) [ryanodine](#) [muscle](#) [smooth](#) [airway](#)

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