

论文

let-7/miR-98家族对IL-6的调节作用

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摘要:

目的 探索微小RNA对IL-6的调节作用。方法 通过生物信息学预测发现let-7/miR-98 家族可以调控IL-6基因, 采用聚合酶链反应(RT-PCR)和酶联免疫法检测其对IL-6基因表达的影响, 采用定点突变和双荧光报告基因系统来验证let-7/miR-98家族对IL-6基因的直接调节作用。结果 miR-98可以抑制IL-6蛋白的表达, miR-98对IL-6 mRNA 也有抑制作用, let-7/miR-98可直接调节IL-6基因3'UTR。结论 let-7/miR-98家族可以直接调节IL-6基因的表达, 提示let-7/miR-98家族可能成为干预IL-6参与的相关疾病的一种新药物。

关键词: 微小RNA; let-7/miR-98家族; 基因, interleukin-6

Regulatory role of the let-7/miR-98 family in the IL-6 expression

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Abstract:

Objective To investigate the regulatory role of microRNA in expression of interleukin-6(IL-6). Methods The let-7/miR-98 family was predicted to regulate IL-6 by bioinformatics. Real-time PCR and ELISA were used to determine IL-6 mRNA and protein expression levels, respectively. Site-directed gene mutagenesis and reporter gene assay were performed to identify the direct regulatory effect of let-7/miR-98 on IL-6 3'UTR. Results miR-98 can inhibit the IL-6 expression at both protein and mRNA levels. Furthermore, let-7/miR-98 can directly target IL-6 3'UTR. Conclusion Let-7/miR-98 down-regulates the IL-6 expression. The findings indicate that let-7/miR-98 may provide a novel strategy for therapeutic intervention of IL-6--realated diseases.

Keywords: microRNA; let-7/miR-98 family; Genes, interleukin-6

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