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论著

利用补丁甲基化技术构建特殊报告载体检测DNA甲基化对FCER1G基因启动子的调控活性

梁云生, 赵明, 梁功平, 尹恒, 陆前进

中南大学湘雅二医院皮肤科,医学表观基因组学湖南省重点实验室,长沙 410011

摘要： 目的:构建一种特殊的荧光素报告载体检测DNA甲基化对FCER1G基因启动子调控序列的调控活性。方法:用补丁甲基化技术构建特殊的含完全甲基化和模拟甲基化的FCER1G启动子调控序列的PGL-3荧光素报告载体;通过比较完全甲基化与模拟甲基化荧光素报告载体活性来检测DNA 甲基化对FCERG基因启动子调控序列的调控活性。结果:成功构建特殊的完全甲基化与模拟甲基化FCER1G启动子调控序列荧光素报告载体;并检测出完全甲基化与模拟甲基化荧光素报告载体活性比为(0.36±0.07):1(*P*<0.001)。结论:FCER1G启动子调控序列是甲基化敏感位点,FCER1G启动子受DNA甲基化调控。

关键词： 补丁甲基化 FCER1G基因 启动子调控序列 DNA甲基化

Construction of special reporter to detect DNA methylation regulatory activity in FCER1G gene promoter through patch-methylation

LIANG Yunsheng, ZHAO Ming, LIANG Gongping, YIN Heng, LU Qianjin

Department of Dermatology, Second Xiangya Hospital, Central South University; Hunan Key Laboratory of Medical Epigenomics, Changsha 410011, China

Abstract: Objective: To construct a special luciferase reporter to detect DNA methylation regulatory activity in FCER1G gene promoter regulatory element.
Methods: We constructed special full and mock methylated FCER1G gene promoter regulatory luciferase reporters by patch-methylation, and detected DNA methylation regulatory activity by comparing the luciferase activity of full-methylated luciferase reporters with mock-methylated reporters.
Results: We successfully constructed the full and mock methylated FCER1G gene promoter regulatory luciferase reporters. The ratio of luciferase activity between the full methylated and the mock methylated was (0.36?0.07):1 (*P*<0.001).
Conclusion: FCER1G promoter activity is methylation-sensitive and is regulated by DNA methylation.

Keywords: patch methylation FCER1G promoter regulatory element DNA methylation

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通讯作者: 陆前进,Email:dermatology2007@yahoo.com.cn

作者简介: 梁云生,博士研究生,主治医师,主要从事特应性皮炎表观遗传学发病机制研究。

作者Email: dermatology2007@yahoo.com.cn

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