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# GPR41稳定细胞株的建立及受体激动剂筛选

吴 璀， 董素珍

华东师范大学 脑功能基因组学教育部重点实验室、上海市脑功能基因组学重点实验室，上海 200062

# Establishment of GPR41 stable cell line and agonist screening of GPR41 receptor

WU Jin， DONG Su-zhen

Key Laboratory of Brain Functional Genomics, Ministry of Education, Shanghai Key Laboratory of Brain Functional Genomics, East China Normal University, Shanghai 200062， China

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摘要 构建GPR41稳定细胞株，从RNA、蛋白水平验证了GPR41的表达并利用cAMP和钙流检测验证了GPR41的生物活性.实验结果表明，该细胞株可以用于筛选受体激动剂.从海藻来源的黄曲霉中提取到的次级代谢产物用于筛选GPR41的激动剂.实验结果还表明，2-吡喃酮类化合物（37 号）在1μmol/L浓度条件下即可具有GPR41 受体激动活性.这是首次报道2-吡喃酮类化合物具有GPR41受体激动活性.

关键词： GPR41 稳定细胞株 海洋真菌次级代谢产物 配体

Abstract： In this study, a stable GPR41 receptor cell model was established. The GPR41 expression was detected by RT-PCR and western blot，while the function of GPR41 was confirmed by cAMP and Ca assays. These results have shown that we have successfully established GPR41 cell line which can be used for screening the agonists of the receptor in vitro. GPR41 receptor binding activity was tested by cAMP assay using secondary metabolites extracted from gulf seaweed aflatoxin c-f-3 in Putian Fujian. The results have also shown that the No.37 compound, a new compound belonging to 2-Pyrones, has GPR41 receptor agonist activity with high affinity. This is the first report on 2-Pyrones with GPR41 receptor agonist activity.

Key words： GPR41 stable cell line secondary metabolites of marine fungi agonist

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