

论文

藁本内酯和丁烯酞内酯对bFGF诱导的大鼠平滑肌细胞异常增殖的抑制作用

梁明金;贺浪冲

西安交通大学 医学院 药理学系, 陕西 西安 710061

摘要:

目的研究藁本内酯和丁烯酞内酯与大鼠主动脉平滑肌细胞的亲合活性, 及其对主动脉平滑肌细胞增殖的抑制作用。方法采用大鼠主动脉细胞膜色谱模型观察藁本内酯和丁烯酞内酯的保留特性; 培养并分离纯化大鼠主动脉平滑肌细胞, 采用bFGF诱导平滑肌细胞增殖, 以MTT比色法检测藁本内酯和丁烯酞内酯对平滑肌细胞增殖的抑制作用。结果藁本内酯和丁烯酞内酯与大鼠主动脉平滑肌细胞膜有亲和性, 其保留行为与钙离子受体拮抗剂维拉帕米相似; 藁本内酯和丁烯酞内酯不会引起正常大鼠主动脉平滑肌细胞增殖, 但能明显抑制bFGF诱导的大鼠主动脉平滑肌细胞的增殖。其有效浓度分别为5.5和11.1 μmol·L⁻¹ (P<0.05)。结论藁本内酯和丁烯酞内酯与大鼠主动脉平滑肌细胞具有亲和力, 能抑制血管平滑肌细胞的异常增殖。

关键词: 藁本内酯 丁烯酞内酯 细胞膜色谱法 细胞增殖 平滑肌细胞 碱性成纤维细胞生长因子

Inhibitory effects of ligustilide and butylidenephthalide on bFGF-stimulated proliferation of rat smooth muscle cells

LIANG Ming-jin; HE Lang-chong

Abstract:

AimTo investigate the bio-affinities of ligustilide and butylidenephthalide to rat aortic smooth muscle cells and the inhibitory effects of them on bFGF-stimulated proliferation of rat vascular smooth muscle cell (VSMC). MethodsVSMCs were cultured from rat aorta pectoralis and identified by an immunohistochemical method. The bio-affinities between solute (ligustilide or butylidenephthalide) and cell membrane were measured by rat aortic cell membrane chromatography (CMC). The inhibitory effects of ligustilide and butylidenephthalide on bFGF-stimulated VSMC proliferation were evaluated by MTT colorimetric method. ResultsBoth ligustilide and butylidenephthalide had selective affinities to rat aortic smooth muscle cell as the same as verapamil, one of the calcium ion antagonists. They could potently inhibit the bFGF-stimulated VSMC proliferation at the concentrations of 5.5 and 11.1 μmol·L⁻¹, separately (P<0.05), but had no effects on the normal VSMC growth. ConclusionBoth ligustilide and butylidenephthalide can inhibit the abnormal proliferation of VSMC induced by bFGF.

Keywords: butylidenephthalide cell membrane chromatography cell proliferation smooth muscle cell basic fibroblast growth factor ligustilide

收稿日期 2005-04-01 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者: HE Lang-chong

作者简介:

参考文献:

本刊中的类似文章

文章评论 (请注意: 本站实行文责自负, 请不要发表与学术无关的内容! 评论内容不代表本站观点.)

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF(311KB)
- ▶ [HTML全文]
- ▶ 参考文献

服务与反馈

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ 引用本文
- ▶ Email Alert
- ▶ 文章反馈
- ▶ 浏览反馈信息

本文关键词相关文章

- ▶ 藁本内酯
- ▶ 丁烯酞内酯
- ▶ 细胞膜色谱法
- ▶ 细胞增殖
- ▶ 平滑肌细胞
- ▶ 碱性成纤维细胞生长因子

本文作者相关文章

- ▶ 梁明金
- ▶ 贺浪冲

PubMed

- ▶ Article by
- ▶ Article by

反馈人	<input type="text"/>	邮箱地址	<input type="text"/>
反馈标题	<input type="text"/>	验证码	<input type="text" value="3281"/>