

论文

LC-MS/MS法研究1- [1-(6-甲氧基-2-萘基)乙基]-2-(4-硝基苄基)-6,7-二甲氧基-1,2,3,4-四氢异喹啉氢溴酸盐在大鼠体内的代谢产物

王雷娜;宋敏;杭太俊;张正行

中国药科大学 药物分析教研室, 江苏 南京 210009

摘要:

采用液相色谱-串联质谱法对大鼠灌胃1- [1-(6-甲氧基-2-萘基)乙基]-2-(4-硝基苄基)-6,7-二甲氧基-1,2,3,4-四氢异喹啉氢溴酸盐(编号P91024)后粪便、尿液、胆汁和血浆中的主要代谢产物进行研究。通过比较给药样品和空白样品的全扫描总离子流色谱和选择离子扫描色谱图差别寻找I相代谢产物;根据其一级和二级质谱图,确定I相代谢产物的分子结构。完全提取I相代谢产物后的样品溶液,再用葡糖醛酸酶酶解,得II相结合物的苷元部分,采用与I相代谢产物鉴定同样方法寻找和鉴定II相代谢产物苷元的结构,进而确证II相代谢产物的分子结构。从大鼠粪便中鉴定出P91024的2个I相代谢物,从胆汁中鉴定出1个I相和5个II相代谢产物,从尿液中鉴定出1个I相和3个II相代谢产物,从血浆中鉴定出4个I相和1个II相代谢产物;并分别分析推测出它们的结构。P91024在大鼠体内被代谢转化为多种产物,利用LC-MS/MS可以快速寻找和鉴定。

关键词: 1- [1-(6-甲氧基-2-萘基)乙基]-2-(4-硝基苄基)-6,7-二甲氧基-1,2,3,4-四氢异喹啉氢溴酸盐 代谢物 液相色谱-串联质谱

Metabolites of 1-(1-(6-methoxyl-2-naphthyl)ethyl)-2-(4-nitrobenzyl)-6,7-dimethoxyl-1,2,3,4-tetrahydroisoquinoline hydrobromide in rat by LC-MS/MS method

WANG Lei-na; SONG Min; HANG Tai-jun; ZHANG Zheng-xing

Abstract:

To investigate the principal metabolites of 1-(1-(6-methoxyl-2-naphthyl)ethyl)-2-(4-nitrobenzyl)-6,7-dimethoxyl-1,2,3,4-tetrahydroisoquinoline hydrobromide (code designation: P91024) in rats after ig administration by LC-MS/MS, the phase I metabolites were discovered by comparing the fullscan and SIM chromatograms of the test samples with the corresponding blanks. The structures of phase I metabolites were identified by ESI-MS spectra and the product spectra of the corresponding adduct ions. The phase II metabolites were identified in the test samples after the phase I metabolites were completely removed with solvent extraction and then treated with glucuronidase for enzymolysis of phase II glucuronide conjugates and the hydrolysates. Two phase I metabolites of P91024 were identified in rat feces, one phase I and five phase II in bile, one phase I and three phase II in urine, and four phase I and one phase II in plasma. Their structures were elucidated, separately. P91024 was extensively metabolized in rat. The metabolites can be easily screened and identified by LC-MS/MS method.

Keywords: metabolite LC-MS/MS 1-(1-(6-methoxyl-2-naphthyl)ethyl)-2-(4-nitrobenzyl)-6,7-dimethoxyl-1,2,3,4-tetrahydroisoquinoline hydrobromide

收稿日期 2007-05-12 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者: 宋敏

作者简介:

参考文献:

本刊中的类似文章

1. 姜红;宋敏;杭太俊;张正行.1- [1-(6-甲氧基-2-萘基)乙基]-2-(4-硝基苄基)-6,7-二甲氧基-1,2,3,4-四氢异喹啉

扩展功能

本文信息

- Supporting info
- PDF(212KB)
- [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

- 1- [1-(6-甲氧基-2-萘基)乙基]-2-(4-硝基苄基)-6,7-二甲氧基-1,2,3,4-四氢异喹啉氢溴酸盐
- 代谢物
- 液相色谱-串联质谱

本文作者相关文章

- 王雷娜
- 宋敏
- 杭太俊
- 张正行

PubMed

- Article by
- Article by
- Article by
- Article by

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.)

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="2500"/>