质谱学报 2010 31 (4): 252-256 ISSN: 1004-2997 CN: 11-2979/TH

技术交流

HPLC-MS/MS联用技术定量测定人血浆中恩替卡韦

郝光涛[1];李媛媛[1];何世学[2];陈刚[1];高洪志[1];刘泽源[1]

1.军事医学科学院附属医院药理室，北京100071 2.哈励逊国际和平医院，河北 衡水053000

收稿日期 修回日期 网络版发布日期:

摘要 建立HPLC-MS/MS联用方法定量测定人血浆中恩替卡韦浓度。以地西泮为内标，甲醇为有机相，甲醇-水为（5 mmol•L^{-1}碳酸氢铵）梯度洗脱流动相，Waters-Eterra MS-C$_{18}$(2.1×50 mm×5 μm)色谱柱为分析柱，通过电喷雾离子源(ESI)，以正离子多反应监测（MRM）方式检测。用于定量分析的离子对分别为 *m/z* 278.2→152.1(恩替卡韦) 和 *m/z* 285.0→193.0 (地西泮，内标)。恩替卡韦的线性范围为0.05~20 μg•L^{-1}，定量下限为0.05 μg•L^{-1}（*n*=6）。日内、日间精密度的RSD<15%，平均回收率>75%。

关键词

恩替卡韦 高效液相色谱-串联质谱 血浆药物浓度

分类号

Quantitative Determination of Entecavir in Human Plasma by HPLC-MS/MS

HAO Guang-tao[1]; LI Yuan-yuan[1]; HE Shi-xue[2]; CHEN Gang[1]; GAO Hong-zhi[1];LIU Ze-yuan[1]

1. Affiliated Hospital, Academy of Military Medical Sciences, Beijing 100071, China; 2.Harrison International Peace Hospital, Hengshui 053000, China

Abstract

Entecavir in human plasma was determined by high performance liquid coupled with-tandem mass spectrometry (HPLC-MS/MS). Diazepam was used as internal standard. Entecavir was separated on a Waters-Eterra MS-C$_{18}$ column(2.1×50 mm×5 μm). Electrospray ionization(ESI) source was applied， and multiple reaction monitoring(MRM) mode was operated in the positive mode with the monitor ions at *m/z* 278.2→152.1 for entecavir and *m/z* 285.0→193.0 for the internal standard， respectively. The linear calibration curve is obtained over the concentration range of 0.05—20 μg•L^{-1}. The limit of quantitation is 0.05 μg•L^{-1}(*n*=6). The inter and intra-day precision(RSD) is less than 15%. The average recoveries are above 75%.

Key words

entecavir _ high performance liquid chromatography coupled with-tandem mass spectrometry （HPLC-MS/MS） _ plasma concentration

DOI

通讯作者