

论文

猪基源的肝素粗品及混淆品的AS-PCR及ARMS分子检测

于智勇;丁鸽;丁小余;褚必海;钱亮;顾笋

1. 南京师范大学 生命科学学院, 江苏 南京 210046; 2. 扬州教育学院, 江苏 扬州 225009

摘要:

本文建立了一种简便、准确的鉴别猪基源的肝素粗品及其混淆品的DNA分子鉴定方法。在对家猪、野猪及其他7种动物(均用于加工猪肝素粗品的混淆品)的mtDNA D-loop区进行序列分析的基础上, 设计了专门用于鉴别猪基源肝素钠的AS-PCR(allele-specific PCR)引物及ARMS(amplification refractory mutation system)引物, 对家猪、野猪及其他7种动物来源的肝素、肌肉或血液共49个样品的基源进行了分子检测。结果表明: AS-PCR及ARMS方法均可用于猪基源肝素粗品的快速鉴别。AS-PCR鉴别时的复性温度为54~56℃, ARMS引物鉴别时的复性温度更宽, 为52~58℃。在用两种引物对肝素样品进行鉴别时, 仅猪来源的肝素DNA模板能扩增得到约170 bp的扩增条带, 而其他动物来源的肝素DNA模板在同样条件下无扩增产物。

关键词: 猪基源肝素钠 mtDNA D-loop区 AS-PCR ARMS 分子鉴别

Molecular identification of heparin from pigs by allele- specific PCR (AS-PCR) and amplification refractory mutation system (ARMS)

YU Zhi-yong DING Ge; DING Xiao-yu; CHU Bi-hai; QIAN Liang; GU Sun

Abstract:

The aim of this study is to develop a convenient and effective method for the identification of heparin from pigs (include *Sus scrofa domestica* Brisson and *Sus scrofa riukiuanus*). Based on sequences of D-loop region of pigs and the other animals, two pairs of highly specific primers were designed for distinguishing heparin of pigs from other animals. The primers were employed to amplify D-loop region of DNA templates extracted from pig and seven other animal species that amounted to 49 samples. AS-PCR (allele-specific PCR) and ARMS (amplification refractory mutation system) were all suitable for fast identification of heparin from pig with anneal temperature at 54-56℃ in AS-PCR and with wider anneal temperature in ARMS, at 52-58℃. An about 170 bp DNA fragments were amplified from separately pigs and whereas no DNA fragment was amplified from other samples under the same reaction condition.

Keywords: mtDNA D-loop region AS-PCR ARMS molecular identification heparin of *Sus scrofa*

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作者简介:

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