

论文

海洋硫酸多糖类药物聚甘古酯单克隆抗体的制备及其特性研究

陈騫;辛现良;耿美玉;朱建春;杨明;李勇

1. 青岛海洋大学 药物与食品研究所, 山东 青岛 266003; 2. 长春生物制品研究所 血液制品研究室, 吉林 长春 130012

摘要:

目的制备和纯化聚甘古酯(911)单克隆抗体,为911药代动力学的免疫学方法的建立提供依据。方法 用还原胺化法,制备911-BSA和911-HSA复合物,间接ELISA法检测抗体生成。以IsostripTM试剂盒测定抗体亚型,流式细胞仪测定DNA含量。结果获得了一株阳性杂交瘤细胞DD3,腹水效价可达1×10⁵,其抗体亚型为IgG2a(κ),细胞株的DNA含量约为脾细胞和NS-1细胞之和,亲和力常数为2.0×10⁸ L·mol⁻¹。结论本实验制备了特异性针对911的单克隆抗体DD3,且与内源性多糖和褐藻酸无交叉反应,为911药代动力学的免疫学检测提供了依据。

关键词: 海洋硫酸多糖 聚甘古酯 单克隆抗体 抗艾滋病药物

Preparation and characterization of monoclonal antibody against marine sulfated polysaccharide drug poly-mannaguronic acid

CHEN Kun; XIN Xian-liangGENG Mei-yu; ZHU Jian-chun; YANG Ming; LI Yong

Abstract:

Aim To prepare and characterize the monoclonal antibody against poly-mannaguronic acid (911). Methods A hybridoma cell line was obtained by cloning for 3 times those cells that secret antibody against 911 after the fusion of NS-1 myelome cells with spleen cells from Balb/c mice immunized with a 911-bovine serum albumin conjugate, prepared by reductive amination. Hybridoma was inoculated to Balb/c mouse to induce ascites. The antibody was purified by ammonium sulfate and Protein A - Sepharose CL-4B. DD3 was confirmed to be fusion cells after determination of DNA content with flow cytometry. Competitive inhibitory test and Biacore confirmed the cross-reactivity of the antibody with other endogenous polysaccharides or with alginic acid sodium. Igs' classes and subclasses were identified by IsostripTM method. The affinity of DD3 was verified by ELISA. Results A hybridoma cell line secreting monoclonal antibody against 911 (marine sulfate polysaccharide) named DD3 was obtained. The DD3 ascites contained specific antibody with titer over 1.0×10⁵. There was no cross-reactivity of these antibodies with other endogenous polysaccharides or with alginic acid sodium. The immunoglobulin subclass of DD3 was IgG2a, κ type. The affinity of DD3 was 2.0×10⁸ L·mol⁻¹. Conclusion One hybridoma line (DD3) secreting monoclonal antibody against 911 was established to provide a potential method for the pharmacokinetic study of 911.

Keywords: poly-mannaguronic acid monoclonal antibody anti-AIDs agent marine sulfated polysaccharide

收稿日期 2002-03-08 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者: 耿美玉

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(125KB)
- ▶ [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

- ▶ 海洋硫酸多糖
- ▶ 聚甘古酯
- ▶ 单克隆抗体
- ▶ 抗艾滋病药物

本文作者相关文章

- ▶ 陈騫
- ▶ 辛现良
- ▶ 耿美玉
- ▶ 朱建春
- ▶ 杨明
- ▶ 李勇

PubMed

- ▶ Article by
- ▶ Article by
- ▶ Article by
- ▶ Article by
- ▶ 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="9810"/>