中国寄生虫学与寄生虫病杂志 2000 18 (6): 333-335 ISSN: 1000-7423 CN: 31-1248/R

论著

恶性疟原虫乳酸脱氢酶单克隆抗体的制备及其鉴定

吴英松,董文其,李明,高洋,毕惠祥,李英杰

第一军医大学热带医学研究所,广州 510515

收稿日期 修回日期 网络版发布日期 接受日期

摘要

[目的]制备抗恶性疟原虫乳酸脱氢酶 (LDHp)单克隆抗体 (McAb) ,并对其特异性进行鉴定。[方法]用纯化的LDHp重组抗原免疫BALB/c小鼠 ,采用杂交瘤技术制备McAb ,筛选分泌高滴度McAb的杂交瘤细胞株 ,测定其免疫球蛋白亚类及其效价 ,ELISA、Westernblot试验分析其特异性。 [结果]筛选出2A5和1H10两株能稳定分泌抗LDHpMcAb的杂交瘤细胞株 ,两株单抗均为IgG2b,2A5和 1H10培养上清的ELISA效价分别为 1:5 12和 1:2 5 6 ,腹水效价分别为 1:2 5 6 0 0和 1:12 80 0 ,两株单抗与间日疟原虫、红细胞、弓形虫、日本血吸虫等抗原均不发生交叉反应 ,能识别恶性疟原虫 33kDa的虫源蛋白。 [结论]制备的抗LDHp杂交瘤细胞株能分泌高滴度和高特异性的单抗

关键词 恶性疟原虫 乳酸脱氢酶 单克隆抗体

分类号

PREPARATION AND CHARACTERIZATION OF McAbs AGAINST LACTATE DEHYDROGENASE OF PLASMODIUM FALCIPARUM~+

WU Ying-song,DONG Wen-qi,LI Ming,GAO Yang,BI Hui-xiang,LI Ying-jie

Institute of Tropical Medicine;The First Military Medical University;Guangzhou 510515

Abstract

Objective] To prepare and characterize the monoclonal antibodies(McAbs) against lactate dehydrogenase of the Plasmodium falciparum(LDHp). [Methods] BALB/c mice were immunized with purified recombinant LDHp and McAbs against LDHp were prepared according to the protocol of hybridoma technique. The McAbs were characterized by ELISA and Western blot analysis. [Results] Two McAbs against LDHp antigen were obtained. Both McAbs were IgG 2b . The titer of two McAbs(2A5,1H10) in the ascites was \{1:25 600\} and \{1:12 800\}, and in supernatant were \{1:512 \},\{1:256\} respectively. The result of ELISA indicated that two McAbs reacted only with P.falciparum, and did not react with normal human red blood cells, P.vivax, Toxoplasma gondii, Schistosoma japonicum. It is recognized 33 kDa protein which was defined as LDHp by Western blot analysis. [Conclusion] Two hybridoma cell lines secreting high titer of McAbs against LDHp with high specificity were established.

Key words Plasmodium falciparum lactate dehydrogenase monoclonal antibodies

DOI:

通讯作者

作者个人主页 吴英松;董文其;李明;高洋;毕惠祥;李英杰