

实验研究

## 应用磁分离酶联免疫技术检测抗日本血吸虫虫卵抗体

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摘要

目的 建立检测日本血吸虫病患者血清中特异性虫卵抗体的磁微粒分离酶联免疫法 (MPAIA)。方法 采用异硫氰酸荧光素 (FITC) 标记日本血吸虫可溶性虫卵抗原 (Sj-SEA) 为检测抗原, 标记羊抗FITC抗体的磁微粒为固相载体, 碱性磷酸酶 (ALP) 标记羊抗人免疫球蛋白G (IgG) 作为酶标二抗, 以单磷酸酚酞溶液为底物, 检测日本血吸虫病患者血清中虫卵特异性抗体。结果 用磁微粒分离酶联免疫法检测日本血吸虫虫卵抗体, 阳性检出率为96.7% (116/120), 与旋毛虫、并殖吸虫、囊尾蚴等其他寄生蠕虫抗体无交叉反应现象, 检测试剂4℃可保存12个月。灵敏度参考品的灵敏度为1 : 1 600, 精密度参考品的精密度 (CV) <10%。结论 磁微粒分离酶联免疫法具有灵敏度高、特异性强、技术先进, 试剂保存时间长等特点。

关键词 [日本血吸虫](#); [磁微粒分离酶联免疫法](#); [抗体检测](#)

分类号

## Application of Magnetic Particle Antibody Immunoassay in Detection of Anti-Schistosoma japonicum Egg Antibody

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Abstract

Objective To establish a magnetic particle antibody immunoassay (MPAIA) for the detection of sp-ecific antibody in sera of schistosomiasis patients. Methods Fluorescein isothiocyanate (FITC) was used to label *Sch-istosoma japonicum* soluble egg antigen (Sj-SEA). Anti-human IgG coated with alkaline phosphatase (ALP) as enzyme-labeled second antibody, and magnetic beads were coupled with sheep anti-FITC antibody as solid phase. Phenolphthale in monophosphate was used as substrate to set up MPAIA for the detection. Serum samples from cases with schistosomiasis or other helminth infections were tested. Results The positive rate of MPAIA was 96.7% (116/120) with the sera of *S. japonicum*-infected cases. No cross reaction was observed with sera of trichinellosis, paragonimiasis or cysticercosis cases. The positive titer with reference sample was 1 : 1 600. The precision was lower than 10%. The MPAIA tips can be stored at 4℃ for 12 months. Conclusion MPAIA shows a high sensitivity, proper specificity and long-term validity for schistosomiasis detection.

Key words [Schistosoma japonicum](#); [Magnetic particle antibody immunoassay](#); [Antibody detection](#)

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