

Determination of diagnostic value of *Toxoplasma gondii* recombinant surface antigen (SAG1, P30) in mouse experimental model

ABSTRACT

The aim of this study was to test the potential diagnostic usefulness of recombinant *Toxoplasma gondii* SAG1 antigen and excretory-secretory antigen (ESA), with respect to toxoplasmosis detection and infection phase distinction in laboratory mouse by determining specific serum IgM and IgG antibodies with the use of indirect ELISA technique. The highest titre at the beginning of infection was demonstrated by immunoglobulin M while the highest titre at the end of the infection was displayed by immunoglobulin G. In contrast, sera of chronically infected mice, positive IgG titre was detected on day 14 p.i. for ESA or day seven p.i. with rSAG1 and increased thereafter until day 70 p.i. after which the titre stabilized. IgA antibody also showed similar kinetics as IgG. Potentially rSAG1 may be a suitable diagnostic antigen than ESA in the diagnosis of acute and chronic toxoplasmosis.

Keyword: Toxoplasmosis; Diagnosis; Recombinant; Surface antigen