Development of a multi-epitope antigen as a serodiagnosis marker of Toxoplasma gondii infection

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Due to the high prevalence of Toxoplasma gondii infection has been attracting a lot of attention to its diagnosis and treatment. The use of pure antigens although in some show high sensitivity and specificity, however, the challenges such as cross-reactivity still remain as diagnostic difficulties. In this study, three surface antigens (SAG) of T. gondii were employed for designing a multi-epitope antigen. The antigen was then expressed using E. coli BL21 (DE3) cells and purified by affinity chromatography. ELISA analysis was used for evaluation of acute toxoplasmosis. The results showed a sensitivity of 72.6% and a specificity of 90.3% for recombinant ELISA.

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