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Acta Medica Iranica
2009;47(4) : 1-8

Gene Cloning of 30 kDa Toxoplasma gondii Tachyzoites Surface An¬tigen (SAG1)

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Abstract:

Background: Toxoplasma gondii is an obligate intracellular parasite and its sexual and asexual cycles, respectively take place in the intestinal epithelial cell of definitive host and tissue of intermediate hosts. Congenital toxoplasmosis is more impor¬tant when the mother acquired the infection during pregnancy period for the first time. Serological tests are the only meth¬ods for diagnosis of toxoplasmosis. Among serological tests, ELISA has specific value and availability of parasite spe¬cific anti¬gen increases the specificity of test. This study has designed and performed in the aim of availability to specific anti¬gen of Toxoplasma. Methods: A pair of forward and reverse primers was designed based on published sequence of T. gondii SAG1 gene. PCR reac¬tion was performed and PCR product was cloned in the pQE-30 expression vector. Results: The gene of 30 kDa protein of Toxoplasma tachyzoites was cloned in expression vector successfully. Recombinant plas¬mid was confirmed and is ready to express recombinant protein for further studies. Conclusion: In this research we cloned P30 gene of T. gondii tachyzoites surface protein successfully and is ready to ex¬press the recom¬binant protein.

Keywords:

Toxoplasma tachyzoite ، SAG1 ، pQE-30 expression vector ، pTZ57R cloning vector

TUMS ID: 3629

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