

Cytotoxic T-Lymphocyte Associated Antigen-4 (CTLA-4) is a key factor in immune regulation. Polymorphisms in CTLA-4 gene may influence the status of this factor and eventually the immune response of host against the infectious agents. This response becomes of particular importance in cases when the pathogen is an opportunistic such as *Toxoplasma gondii*. This study aimed to explore the effect of CTLA-4+49A/G single nucleotide polymorphism (SNP) on the susceptibility to toxoplasmosis in women. Genomic DNA was isolated from 59 women with toxoplasmosis and aged matched 60 *Toxoplasma*-free women as controls. Tetra-Primer Amplification Refractory System-Polymerase Chain Reaction (ARMS-PCR) was used for amplification and genotyping of CTLA-4 gene using specific primers. The heterozygous genotype (AG) and G allele of the polymorphism CTLA-4+49A/G were less frequent among cases (17.12% and 16.95% respectively) than controls (40% and 35% respectively) with significant differences (OR=0.379, 95%CI=0.206-0.697, P=0.002). These data strongly suggested the protective role of CTLA-4+49G against toxoplasmosis among Iraqi women.