

MHC Class II DRB1 Gene Polymorphism in Lori Sheep Breed

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Abstract : The present study aimed at analyzing of ovine major histocompatibility complex class II (Ovar II) DRB1 gene second exon in Lori Sheep breed. The MHC plays a central role in the control of disease resistance and immunological response. Genomic DNA from blood samples of 124 sheep was extracted and a 296 bp MHC exon 2 fragment was amplified using polymerase chain reaction. PCR products were characterized by the restriction fragment length polymorphism technique using Hin1I restriction enzyme. The PCR-RFLP patterns showed three genotypes, AA, AB and BB with frequency of 0.282, 0.573 and 0.145, respectively. There was no significant ($P > 0.05$) deviation from Hardy-Weinberg equilibrium for this locus in this population. The results of the present study indicate that exon 2 of the Ovar-DRB1 gene is highly polymorphic in Lori sheep and could be considered as an important marker assisted selection, for improvement of immunity in sheep.

Keywords : MHC-DRB1 gene, polymorphism, PCR-RFLP, lori sheep

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