

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 PCRRFLP 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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