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Abstract

Evolutionary forces during domestication process and breed formation have led to remarkable differences between wild and domestic sheep genomes. In this study, we compared genetic diversity of 13 Iranian Mouflons (*Ovis orientalis*) and 20 Iranian domestic sheep (*Ovis aries*) based on 86 candidate genes putatively involved in the domestication of sheep. Mean nucleotide diversity and mean expected heterozygosity of candidate genes calculated by means of VCF tools and statistical analysis were performed via IBM SPSS software. Our results showed that Mouflon was superior for both calculated diversity parameters in the majority of candidate genes under study. In fact, wild group showed higher mean nucleotide