



## Study of Nucleotide Diversity and its Frequency in NPY Gene in Indigenous Turkeys of Iran

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**Abstract:** Neuropeptide (NPY) is a neurotransmitter with the main purpose of stimulating appetite Secreted from the hypothalamus in the brain and the peripheral nervous system during starvation and has a broadly effective function in growth and reproduction. materials and method: For this research, 70 samples of blood-borne turkeys were collected and DNA extracted and after it Replication from exon 1 and intron 1. Reproduced sequencing products and their results were analyzed using BioEtite, Popgene32, Mega and DNAsp software. The purpose of this study was to identify mutations in exon 1 and introne 1 regions of NPY gene and their frequency in indigenous turkeys in northwestern Iran. The results of this study showed that found five nucleotide mutations in populations of turkeys in the northwest of the country that indicate significant genetic variation in the population. Considering the effect of neuropeptide y on growth and reproductive traits, it can be expected that these mutations will affect the expression of this gene and subsequently affect these traits.

**Keywords:** neuropeptide Y; gene polymorphism; sequencing; turkey