

## عنوان مقاله:

Single strand conformation polymorphisms (SSCPs) in the 5'- flanking region of Lactoferrin gene and its association with milk production traits and somatic cell score in Holstein cattle

## محل انتشار:

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## خلاصه مقاله:

Lactoferrin (Lf) is a bioactive protein present in all external secretions such as milk that plays important role in the innate host defense. Therefore, the Lf has a major role in bovine mammary gland defense during mastitis. In this study, 5'-flanking region of bovine Lf gene containing three single nucleotide polymorphisms (SNPs) at positions -602 (T/G), -600 (A/G) and -586 (T/C) were screened using PCRSSCP method. Three distinct SSCP patterns, representing 3 different haplotypes (A, B and C), were identified. The frequencies of A, B, and C haplotypes for amplified fragment were 0.43, 0.39 and 0.18, respectively. An association study was applied with data from milk production traits and somatic cell score (SCS). Statistically significant differences were found between various haplotypes at the amplified fragment and fat percentage ( $P < 0.05$ ). However, the haplotypes also tend to associate with protein percentage ( $P = 0.06$ ) and milk yield ( $P = 0.08$ ). No significant difference was observed between combined genotypes and SCS. Therefore, the haplotypes identified in the 5'- flanking region of bovine Lf gene can serve as potential candidate genetic markers for marker assisted selection in cattle.

## کلمات کلیدی:

flanking region, Lf gene, haplotype, milk production traits, SCS-5

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