

عنوان مقاله:

Association of the insulin-like growth factor-I (IGF-I) gene polymorphism with milk production traits in Iranian Holstein

محل انتشار:

دوازدهمین کنگره ژنتیک ایران (سال: 1391)

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خلاصه مقاله:

PCR-SSCP analysis of the 5' flanking region of the bovine insulin-like growth factor-I (IGF-I) gene was used to screen polymorphisms in a total of 287 cattle belonging to three populations: Holstein (H), Kurdish (K) and crossbred (1/2 H × 1/2 K) reared in the west of Iran. IGF-I amplified fragments from homozygous individuals were sequenced and aligned. Sequencing showed a C/T transition at position -472 according to the GenBank sequence AF210383. The observed heterozygosity, as well as Ne and polymorphism information content (PIC) values in the IGF-I gene, indicate high genetic variability in the Holstein breed. General linear mixed effect models (GLMMs) revealed that the presence of allele A in IGF-I was associated with increased MY and the presence of allele B was associated with decreased 305-day protein yield (PY) and 305-day fat yield (FY) ($P < 0.1$). Animals that possessed the AA genotype were favorable for MY ($P < 0.05$), PY and FY ($P < 0.1$). These results suggest that variation in the bovine IGF-I gene is associated with milk production traits in Iranian Holstein cattle

کلمات کلیدی:

cattle, gene polymorphism, IGF-I, milk traits

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