

عنوان مقاله:

تنوع ژنتیکی MHC کلاس دو بوقلمون تجاری و ارتباط آن با پاسخ ایمنی هومورال

محل انتشار:

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خلاصه مقاله:

Background: Major histocompatibility complex (MHC) is one of the best characterized genetic regions controlling immune responses against vaccines. Identifying the association between MHC haplotypes and improved immune responses would be useful in genetic breeding strategies in animals. OBJECTIVES: MHC class II B genetic diversity and its association with humoral immune responses against Newcastle vaccine (NDV) were evaluated in commercial turkey poult (meleagris gallopavo). METHODS: A total of 92 turkey poult were vaccinated with live VG/GA strain of Newcastle disease vaccine at age of 10 and 20 days. Serum NDV specific IgY was assessed by indirect enzyme linked immunosorbent assay (ELISA) and MHC II B polymorphism was determined using high resolution melting curve (HRM) technique and DNA sequencing method. Effects of alleles on humoral immune responses were evaluated by multivariate regression analysis and GLM procedures. RESULTS: A total of 8 HRM profiles and 10 alleles were identified in this population. B1-1*3, B1-1*4 and B1-1*5 alleles were significantly associated with lower antibody responses against vaccine in commercial turkey poult. CONCLUSIONS: Three alleles reported in this study were associated with reduced immune responses against NDV vaccine in turkey population. Due to such negative associations, molecular breeding programs based on specific genetic markers should be implemented with great caution.

کلمات کلیدی:

Antibody, Immunity, MHC, Turkey, Vaccine

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