

Distribution of *GABPB1* gene rs7181866 polymorphism in rugby players

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Nuclear respiration factor 2 is an important respiratory factor for cellular metabolism formed by polypeptides produced by the GA binding protein transcription factor subunit alpha (*GABPA*) and GA binding protein transcription factor subunit beta 1 (*GAPPB1*) genes. A functional polymorphism on the *GABPB1* gene (rs7181866, G/A) alters the cellular respiration metabolism by affecting the protein dynamics. In this context, here, we examined the distribution of *GABPB1* rs7181866 polymorphism in professional rugby players to see its relationship with their stamina. Twelve rugby players participated in the study. Genotyping was performed by Real-Time PCR after DNAs were isolated from blood cells using commercially available isolation kits. In our cohort, the AA genotype and the A allele were superior to the AG and GG genotypes and the G allele. There was no statistically significant difference in terms of Genotypes ($p=0.9027$) and allelic groups ($p=0.6948$) in the athlete and control groups. Studies have revealed the relationship between endurance characteristics of athletes and rs7181866 AA genotype and A allele. These studies will be an important data source for future studies in sports genetics and *GAPPB1* analysis.

Keywords: Athletic performance, Endurance, Nuclear respiration factor, Sport genetics