



Association of growth factor receptor-bound protein 10 gene polymorphism with superovulation traits in Changbaishan black cattle

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ABSTRACT. The application of assisted reproductive technology in animal production benefits the economy and conservation of biological resources. Single nucleotide polymorphism (SNPs) was used as predictive markers for breeding and reproduction. In the present study, we examined the association between a SNP of the *grb10* gene and superovulation traits in cattle. Sequencing results indicated a point mutation and statistical analysis showed a significant association of the mutation with superovulation traits. The high number of embryos collected from the heterozygotes suggested that the mutation in the

grb10 gene exerted a significant effect on the number of embryos recovered although the quality was not affected. The *grb10* gene may serve as a useful biomarker for donor selection.

Key words: *grb10*; Polymorphism; Superovulation traits; Cattle