



Association of T1740C polymorphism of *L-FABP* with meat quality traits in Junmu No. 1 white swine

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ABSTRACT. This study was designed to investigate a single nucleotide polymorphism in intron 1 of the liver fatty acid-binding protein (*L-FABP*) gene in 156 Junmu No. 1 white swine using PCR-single-strand conformational polymorphism. The association between the polymorphism and meat quality traits was also studied. The cloning and sequencing results indicated that the polymorphism in intron 1 was due to a T→C mutation at position 1740 of *L-FABP*, yielding three genotypes (TT, TC, and CC). Association analysis revealed that the polymorphism had a significant effect on marbling ($P < 0.05$): genotype CC had more marbling than TC, and TC had more marbling than TT. The polymorphism also had a highly significant effect on intramuscular fat content ($P < 0.01$). Genotypes CC and TC had higher intramuscular

fat content than TT; there was no significant difference between CC and TC ($P > 0.05$). However, no significant conclusions concerning other traits could be drawn. We tentatively conclude that *L-FABP* is a candidate gene or a quantitative trait locus-linked gene associated with meat quality traits.

Key words: Swine; *L-FABP*; Intron 1; Single nucleotide polymorphism; Marbling; Intramuscular fat