



Characterization of porcine *GAS6* cDNA gene and its expression analysis in weaned piglets

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ABSTRACT. The growth arrest-specific 6 gene (*GAS6*) is a member of the family of plasma vitamin K-dependent proteins, which are able to bind to phospholipids using an N-terminal gamma-carboxyglutamic acid domain. A recent report has demonstrated that the *GAS6* gene can promote fat deposition and is associated with an increased number of fat cells in mice. In order to investigate whether *GAS6* expression is associated with meat quality in pigs, a 2382-bp cDNA sequence of the porcine *GAS6* gene (GenBank accession No. KC526197) was first obtained using rapid amplification of cDNA ends from porcine longissimus dorsi tissue. One A/G single nucleotide polymorphism anchored in exon 12 was genotyped using the marker PCR-RFLP-*Bgl*I, and the G allele was dominant in the pig breeds tested. Quantitative real-time polymerase chain reaction showed that the porcine *GAS6* gene was expressed in all tissues examined in weaned male Shaziling (SZL) and Yorkshire (YS) weanling piglets, and mRNA expression of *GAS6* in the longissimus dorsi tissue of SZL piglets was significantly higher than that in YS piglets ($P < 0.05$). The *GAS6* protein was likely to be a membrane protein and was detected in longissimus dorsi tissue from SZL and YS piglets using immunohistochemistry, with an

abundant protein expression index ($P > 0.05$). The results imply that the *GAS6* gene can be considered a potential candidate for meat quality trait selection and fat deposition in pigs.

Key words: Pig; *GAS6*; SNP; Expression profile; Immunohistochemistry