

Article

A Candidate Gene Association Study for Economically Important Traits in Czech Dairy Goat Breeds

Michaela Brzáklová ^{1,*}, Jana Rychtářová ², Jindřich Čítek ^{3,4} and Zuzana Sztankóová ¹

¹ Department of Genetics and Breeding of Farm Animals, Institute of Animal Science, 104 00 Prague, Czech Republic; sztankoova.zuzana@vuzv.cz

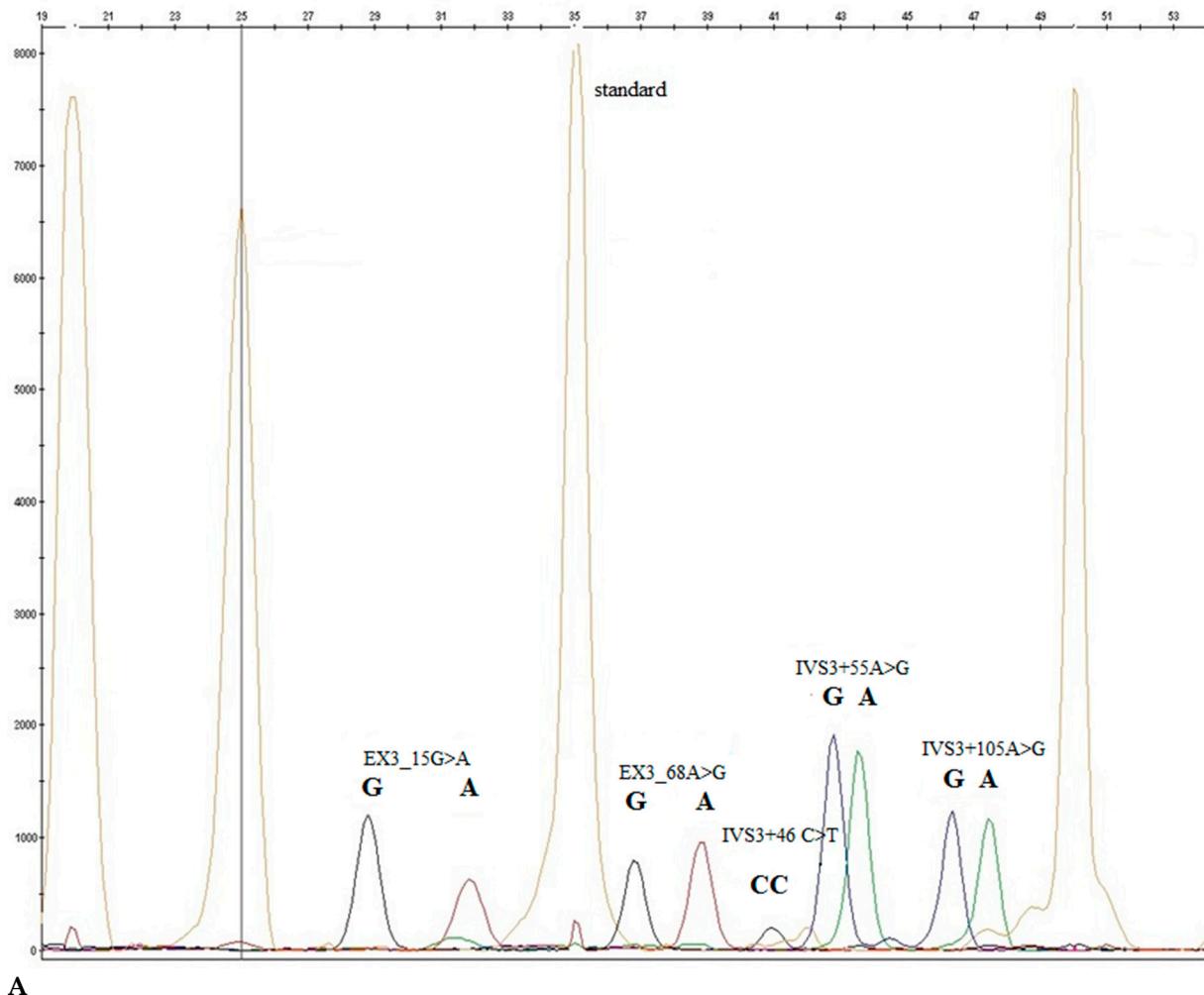
² Department of Biology of Reproduction, Institute of Animal Science, 104 00 Prague, Czech Republic; rychtarova.jana@vuzv.cz

³ Department of Genetics and Agricultural Biotechnologies, Faculty of Agriculture, University of South Bohemia, 370 05 Ceske Budejovice, Czech Republic; citek@zf.jcu.cz

⁴ Department of Infectious Diseases and Preventive Medicine, Veterinary Research Institute, 621 00 Brno, Czech Republic

* Correspondence: brzakova.michaela@vuzv.cz; Tel.: +420-606-794059

Supplementary Material



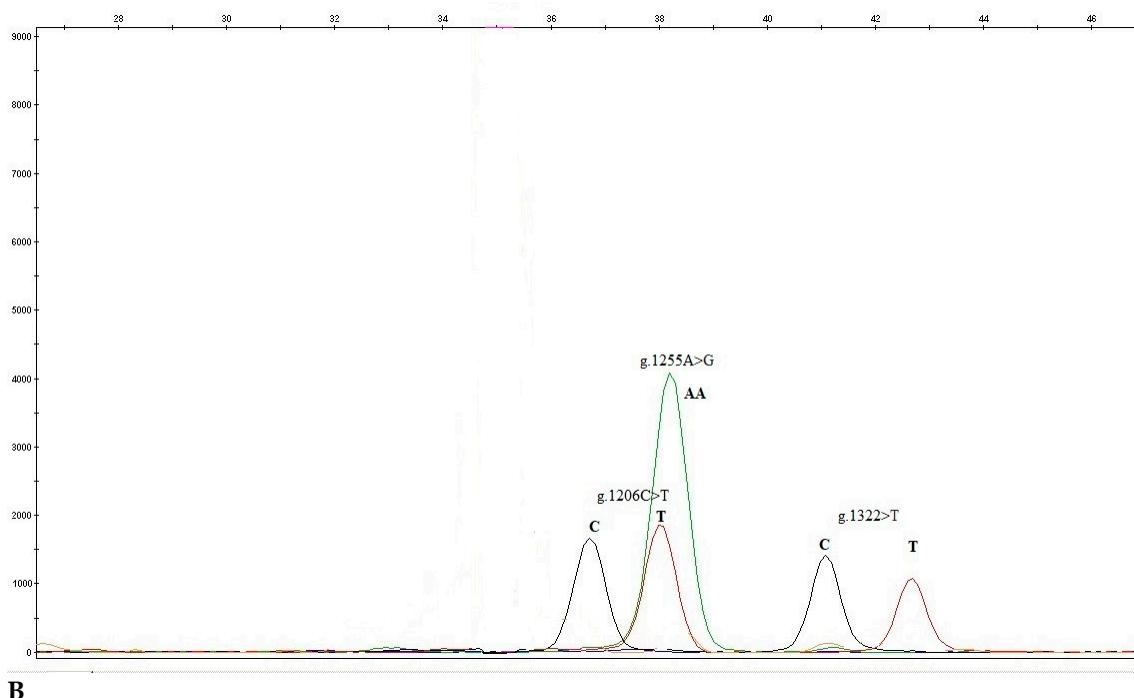


Figure S1. Electropherograms. (A) Electropherogram of SNPs (AH011188.2; AF422168.1) in the Stearoyl-coenzyme A desaturase (SCD) gene analysed with Gene Mapper software. (B) Electropherogram of SNPs (AJ292286) in the Acetyl-coenzyme A carboxylase α (ACACA) gene analysed with Gene Mapper software.

Table S1. Primers used for the amplification PCR product and extension primers (PEA analysis) of the goat Stearoyl-CoA desaturase (GenBank AH011188.2; AF422168.1), Acetyl-CoA carboxylase (AJ292286) cDNA, and annealing temperature (T_m)¹.

Locus	Primer name and sequence (5'--3')	T_m °C
ACACA	F: gggCCCCTTACgTTTCTgT R: AgCTTCTgCCTTAgtCTgCA	59
PEA	PIII ^a K-ACACA (1206): (AT) ₄ ATTTCCTCTTgACCTgCTCT K-ACACA (1255): gTCTTgTTgTgATTgggTCTCAg K-ACACA (1320): (AT) ₇ ATTTCCTgggCATAgCTgTCC	
SCD	F: TCCTAAgCITTATTCCAgCCCC R: gCCAgTCACTCAgAAgTACCC	59.5
PEA	Exon3 K - EX3_15G>A: TgCCCAgggCACTCATCA Exon3 K - EX3_68A>G: (AT) ₃ gCAGCCgAgCTTgTAggT Intron3 K - IVS3+46C>T: (AT) ₄ AgCTCTTTgCTCCTCACTCTTATC T Intron3 K - IVS3+55A>G: (AT) ₆ ATCTCCTCACTCTTATCgATgAgCC Intron3 K - IVS3+105A>G: (AT) ₁₁ AGAgggACAgCACCTggATA	

ACACA - Acetyl-CoA carboxylase, SCD - Stearoyl-CoA desaturase, PIII^a = promotor III – 5'UTR.

Table S2. Thermal cycling conditions of Stearoyl-CoA desaturase (SCD) and Acetyl-CoA carboxylase α (ACACA) loci.

SCD	ACACA
95 °C for 4 min	95 °C for 2 min
94 °C for 30 sec	95 °C for 30 sec
59,5 °C for 30 sec	59 °C for 45 sec
72 °C for 40 sec	72 °C for 1 min
72 °C for 10 min.	72 °C for 5 min
29 cycles	