

Result certificate #012345

Detection of ASIP (locus A) canine gene variants influencing coat color

Customer: Jan Novák, Dlouhá 1, 30000 Plzeň, Czech Republic Sample: Sample: 21-12345 Date received: 01.02.2021 Sample type: blood

Information provided by the customer Name: Lassie DEMO

Breed: Plemeno Tattoo number: 1392013 Microchip: 123 456 789 012 345 Reg. number: REGQ12345 Date of birth: 1.1.2020 Sex: female Date of sampling: 01.02.2021 The identity of the animal has been checked.

Result: a^y/a^t

Explanation

Presence of ASIP (locus A – Agouti signal peptide) c.244G>T (p.A82S), c.248G>A (p.R83H) and c.286C>T (p.R96C) gene variants was examined. It is a set of locus A (Agouti) alleles. There have been described 4 alleles with the dominance hierarchy as follows $a^{y} > a^{w} > a^{t} > a$. Alleles a^{y} , a^{w} , a^{t} are designated jointly A-alleles (Agouti) and a-allele is called non-agouti. To distinguish a^{t} and a^{w} alleles, 231 bp SINE insertion was tested.

The wild type allele a^w causes the change from production of eumelaning to phaeomelanin in an individual hair so-called agouti colour. The allele a^y is responsible for fawn or sable colour. The a^t allele produces a black to light brown, so-called black and tan (tricolour) phenotype. The a-allele causes recessive black colour (nonagouti).

Final coat color is influenced by other loci (B, E, D, K).

Method: SOPAgriseq_canine, ngs

Date of issue: 06.02.2021 Date of testing: 01.02.2021 - 06.02.2021 Approved by: Mgr. Martina Šafrová, Laboratory Manager



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