

Detection of variant c.709A>G in MC5R
gene causing different degrees of shedding
in dogs

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: Based on gene variants examination genotype was determined A/G

Explanation

Presence or absence of variant c.709A>G in MC5R gene causing different degrees of shedding in dogs was tested.

The MC5R-gene has been identified as a gene that can impact the degree of shedding in certain dog breeds. The MC5R-gene is expressed in the hair follicle glands that produce the oily, waxy substance called sebum. This secretion of sebaceous glands keeps the hair flexible and assists in lubrication, thermo-regulation and water repellence. The variants of MC5R-gene disrupt the structure of sebum and result in increased shedding. There exist two variants of this gene: A and G. The G-variant is the original gene generated during evolution and is responsible for high degree of shedding. Dogs carrying one copy of this variant have increased shedding and dogs inheriting two copies of this variant have even higher degree of shedding.

Result codes:

- A/A – low degree of shedding
- A/G – moderate degree of shedding
- G/G – high degree of shedding

The RSPO2-gene is another gene impacting the hair quality. The overall degree of dog shedding can be determined by genetic testing. It is necessary to test the combination of MC5R and RSPO2 genes.

Method: SOP188-MPS-canine, MPS

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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