GENOMIA
genetic laboratory

Result certificate #012345

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 MCR5-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: 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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