GENOMIA
genetic laboratory

Result certificate #012345

Detection of d1-allele in D-locus affecting the coat colour 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.

SAMPLE

Result: Based on mutation examination genotype was determined D/d1

Explanation

It has been examined the presence of gene variants c.-22G>A of MLPH-gene (melanophilin gene) causing coat colour dilution in dogs. The dilution is caused by d1-allele at D-locus (Dilution). The MLPH-gene is responsible for the density of pigment granules (eumelanine) in a hair. The presence of the gene variant c.-22A, d1-allele, causes the loss of pigment granules in a hair; the original black colour is diluted to blue and brown colour to lilac.

The phenotypic expression of d1-allele is inherited autosomal recessively. The colour dilution occurs only in d1/d1-dogs that inherit d1-allele from each of its parents. The dilution is not expressed in heterozygous dogs D/d1, however these dogs are carriers of this trait. Dogs with D/D result do not carry color dilution caused by d1 allele.

There are also d2 and d3 alleles that are responsible for colour dilution in various dog breeds. The diluted dogs can also be compound heterozygotes d1/d2 or d1/d3.

There will be probably discovered other gene variants responsible for colour dilution. The final colour of a dog is affected by the presence of alleles at other loci (E, B, A, K and other).

Method: SOP188-MPS-canine, MPS, accredited method

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

verified and certified document
GENOMIA genetic laboratory

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Genomia s.r.o, Republikánská 6, 31200 Plzeň, Czech Republic
www.genomia.cz, laborator@genomia.cz, tel: +420 373 749 999

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