

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 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: SOPAgriSeq_canine, ngs, accredited method

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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