

**Sample**

Sample: 19-13232  
Name: Finally the Best Velmond  
Breed: Briard (Berger de Brie)  
Microchip: 967 000 009 853 165  
Reg. number: CMKU/BRI/6662/16  
Date of birth: 27.11.2016  
Sex: male  
Date received: 17.05.2019  
Sample type: blood  
The identity of the animal has been checked by  
MVDr. Zbyněk Kratochvíl

**Customer**

Táňa Holešová  
U Studánky 5  
170 00 Praha 7  
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Result: D/D

**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 and pheomelanine) 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 dilution.

There is other MLPH-gene variant c.705C (d2-allele) that is responsible for colour dilution in various dog breeds. The diluted dogs are also compound heterozygous d1/d2, where the d1-allele is inherited from one parent and d2-allele from the other parent.

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: SOP175-MLPH, real-time PCR-ASA

Report date: 21.05.2019

Responsible person: Ing. Irena Rusková, Analyst



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