

**Result certificate #049268:**

**Sample**

Sample: 14-19513  
Name: Ori od Trojské skály  
Breed: Newfoundland  
Tattoo number: 5775  
Reg. number: CMKU/NF/5775/11/14  
Date of birth: 20.12.2011  
Sex: male  
Date received: 16.07.2014  
Sample type: buccal swab  
Sample certified by Vet/Tech or witness.

**Detection of c.-22G>A MLPH gene variants  
(locus D) influencing dog coat color by DNA  
Sequencing**

**Customer**

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**Result: D/D**

**Explanation**

Presence of c.-22G>A MLPH gene variants was examined. It is a set of locus D (Dilution) alleles. MLPH gene controls density of pigment (eumelanin and pheomelanin) distribution in hair. Presence of c.-22A gene variant causes decline of pigments in hair; origin black coat color is diluted in to blue coat color.

Color dilution in different breeds of dogs can be also caused by other genes whose variations have not been described yet.

Phenotype of d allele is inherited in autosomal recessive trait. Color dilution is evident in d/d individuals, who inherited d-allele from both parents. Heterozygous D/d individuals has no color dilution, they are just carriers of d-allele. Final coat color is influenced by other loci (E, B, A, K).

Method: SOP47

Report date: 22.07.2014

Responsible person: Mgr. Barbora Bláhová, Analyst

