**Result certificate #012345**

Detection of c.790A>G gene variants in
MC1R gene responsible for melanistic mask
in dogs

# GENOMIA
## genetic laboratory

**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: $E^M$/N

## Explanation

Presence or absence of c.790A>G MC1R gene variants (melanocortin 1 receptor) was tested. Dominant gene variant c.790G is called $E^M$. Genotypes $E^M$/N a $E^M$/$E^M$ cause melanistic mask in dogs. Melanistic mask phenotype depends on coat color. However, not all dogs with the $E^M$-allele have melanistic mask. In brown, black or blue coated dogs, it is often difficult to distinguish the melanistic mask from their coat color. The color of the melanistic mask corresponds with the other genes affecting the production of the eumelanin type. Therefore, the melanistic mask may not be always black. Phenotype of $E^M$ allele is inherited as an autosomal dominant trait. Dogs with N/N result do not have melanistic mask.

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

Genomia is accredited in compliance with ISO/IEC 17025:2018 under #1549
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