GENOMIA
genetic laboratory

Result certificate #012345

Detection of c.939_940delTG mutation in MSTN gene causing myostatin deficiency in whippet 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.

Result: Based on mutation examination genotype was determined MH/N

Explanation

Presence or absence of c.939_940delTG mutation in MSTN gene causing myostatin deficiency in whippet dogs was tested. Two base-pair deletion in the third exon of MSTN-gene is leading to a premature stop codon at amino acid 313. MSTN gene encodes synthesis of myostatin. Myostatin is a regulator of skeletal muscle growth. It controls the number of muscle fibres by regulation of the total number of myoblaststst. In case the functional protein is absent, a greater quantity of muscle fibres (microfibriles) than needed is produced.

Dogs with MH/N result (heterozygotes) are more muscular than normal whippets and have higher athletic potential. Dogs with MH/MH result (mutant homozygotes), so-called bully whippets, are extremely unhealthy muscular dogs. Dogs with N/N result have standard muscularity. If two dogs carrying one mutation (MH/N) are mated, 25 % of the offspring in the litter are expected to be bully puppies.

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



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