GENOMIA
genetic laboratory

Result certificate #011728:

Detection of mutation causing myostatin deficiency in whippet dogs by fragmentation analysis of PCR product

Sample
Sample: 11-18603
Name: Alioth Speedy Star
Breed: whippet
Reg. number: 458
Microchip: 939000010190311
Date of birth: 12.03.2011
Sex: male
Date received: 14.07.2011
Sample type: buccal swab

Customer
Sona Struharikova
Osztalova 686
925 84 Vlčany
Slovak Republic

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

Explanation

Mutation c.939_940delTG in MSTN gene 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 the absence of functional protein, a greater quantity of muscle fibres (microfibriles) than needed is produced. Dogs carrying one mutation (MH/N heterozygotes) are more muscular than normal whippets and have higher athletic potential.

Dogs with two copies of mutation (MH/MH mutant homozygotes) are so-called *bully* whippets, extremely unhealthy muscular dogs.

If two dogs carrying one mutation (MH/N heterozygotes) are mated, 25 % of the offspring in the litter are expected to be *bully* puppies.

Method: SOP83

Report date: 20.07.2011
Responsible person: Mgr. Markéta Dajbychová, Deputy Laboratory Manager

Genomia s.r.o, Teslova 3, 30100 Plzeň, Czech Republic, IČZ: 44929000
www.genomia.cz, laborator@genomia.cz, tel: +420 378 051 410

