GENOMIA
genetic laboratory

Result certificate #127064

Detection of c.118G>A mutation
in SOD1 gene causing
degenerative myelopathy in dogs

Sample
Sample: 19-08430
Name: Hyrra Iluze
Breed: German Shepherd Dog
Tattoo number: 67868
Microchip: 953 010 001 974 065
Reg. number: CMKU/DS/97525/15/17
Date of birth: 30.01.2015
Sex: female
Date received: 02.04.2019
Sample type: blood

Customer
Radek Kurtin
Krnalovice 3
73946 Hukvaldy
Czech Republic

Result: Mutation was not detected (N/N)

Legend: N/N = wild-type genotype. N/P = carrier of the mutation. P/P = mutated genotype (individual will be most probably affected with the disease). (N = negative, P = positive)

Explanation

Presence or absence of c.118G>A mutation in SOD1 gene causing degenerative myelopathy in many canine breeds was tested. This mutation is sometimes referred to as SOD1A. Affected dogs have progressive loss of movement and gradual worsening of the condition up to complete paralysis. The age of disease onset and symptoms severity vary among the breeds.

Mutation SOD1A is inherited as an autosomal recessive trait. That means the disease affects dogs with P/P genotype only. The dogs with N/P genotype are considered carriers of the disease (heterozygotes). In offspring of two heterozygous animals following genotype distribution can be expected: 25 % N/N (healthy non-carriers), 25 % P/P (affected), and 50 % N/P (healthy carriers).

The test does not exclude existence of another, nowadays unknown, mutation which can cause DM. In Bernese Mountain Dogs, there has been identified also SOD1B mutation responsible for DM - this test does not refer about SOD1B.

Analysis was performed by the partner laboratory. Genomia guarantees the quality of its partner's services.

Method: SOP175-DM, real-time PCR-ASA

Report date: 08.04.2019
Responsible person: Mgr. Markéta Dajbychová, Deputy Laboratory Manager

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