

Customer: Dr. Josette Debrincat, 20, Animal Doctors, Guze Bajada, HMR 2131 Hamrun, Malta**Sample:**

Sample: 24-22121

Date received: 29.08.2024

Sample type: blood

Information provided by the customer

Name: Meg**Breed: Border Collie**

Tattoo number: N/A

Microchip: 380 260 102 381 321

Reg. number: MKC BOR/06/2024

Date of birth: 21/11/2022

Sex: female

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.899C>T mutation in FAM20C gene causing dental hypomineralization, called Raine-syndrome, in Border Collies was tested. Disease causes extensive wear of teeth, cracking of tooth enamel, brownish spots or brownish discolouration of teeth or dental pulp inflammation. Severe tooth wear leads to chronic inflammation of the pulp up to the loss of teeth.

Mutation that causes Raine-syndrome 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), they are healthy but they can transmit the mutation on their offspring. In offspring of two heterozygous animals following genotype distribution can be expected: 25 % N/N (healthy non-carriers), 50 % N/P (healthy carriers) and 25 % P/P (affected).

Method: SOPagriseq_canine, ngs, accredited method

Date of issue: 11.09.2024

Date of testing: 29.08.2024 - 11.09.2024

Approved by: Mgr. Martina Šafrová, Laboratory Manager



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