

**Detection of c.2083C>T mutation in ITGA10  
gene causing Canine Chondrodysplasia  
in Norwegian Elkhound and Karelian  
Bear Dog****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: 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.2083C>T mutation in ITGA10 gene causing Canine Chondrodysplasia in Norwegian Elkhound and Karelian Bear Dog was tested. Chondrodysplasia is a genetic disorder of cartilage and bone development. The affected dogs show shortened limbs compared to healthy dogs. Further, it may occur skeletal abnormalities such as shorter protruding toes on the outer side of the front paws, bowed forelimbs, shortened vertebral bodies and substantially delayed ossification of carpal bones.

Mutation that causes chondrodysplasia 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

Date of issue: 06.02.2021

Date of testing: 01.02.2021 - 06.02.2021

Approved by: Mgr. Martina Šafrová, Laboratory Manager



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