

Detection of mutations in LHX3 gene
causing pituitary dwarfism in German
shepherds, Saarloos and Czechoslovakian
Wolfdogs

Customer: Radek Kunc, Brňany 31, 41201 Litoměřice, Czech Republic

Sample:

Sample: 20-19004

Date received: 09.07.2020

Sample type: blood

Information provided by the customer

Name: Legenda Moai Šedý poklad

Breed: Czechoslovakian Wolfdog

Microchip: 203 094 100 007 556

Reg. number: ČMKU/CSV/5718/19

Date of birth: 09.03.2019

Sex: female

Date of sampling: 07.07.2020

The identity of the animal has been checked by MVDr. Petr
Petráš, KVL 0191

Result: Mutation was detected in heterozygous status (N/P) (c.622-37-31del)

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 mutations c.622-37-31del a c.545_547dupACA in gene LHX3 causing pituitary dwarfism in German shepherds, Saarloos Wolfdogs and Czechoslovakian Wolfdogs were tested. The disease is characterised by degeneration of hypophysis (pituitary) resulting in deficiency of pituitary hormones. Common clinical manifestations are growth retardation, retention of secondary hairs (puppy coat) with signs of alopecia. The affected dogs can have normal size during the first weeks of their lives. Between the 3rd and the 4th month of age the differences are already evident.

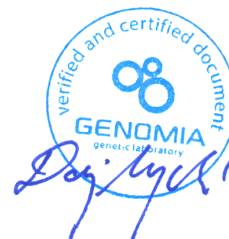
Mutations that cause pituitary dwarfism are inherited as an autosomal recessive trait. That means the disease affects dogs with P/P (positive/positive) genotype only. The dogs with N/P (negative/positive) genotype are considered carriers of the disease (heterozygotes), they are healthy but they can transmit 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: SOP171-dwarfism, fragment analysis

Date of issue: 10.07.2020

Date of testing: 09.07.2020 - 10.07.2020

Approved by: Mgr. Markéta Dajbychová, Deputy Laboratory Manager



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