Detection of c.735delT VWF mutation in VWF gene causing vWD type III in Shetland Sheepdogs

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 mutation c.735delT in VWF gene causing vWD type III (von Willebrand disease type III) in Shetland sheepdogs was tested. VWD type III is the most severe form of vWDs, which leads to very strong life-threatening bleeding. VWD type III is characterized by total absence of von Willebrand factor (vWF). VWD III occurs in breeds Shetland Sheepdogs, Scottish Terrier and Kooikerhondje.

Mutation c.735delT in VWF gene is inherited as an autosomal recessive trait. That means the vWD typ III affects dogs with P/P genotype only. The dogs with N/P genotype are considered carriers of the disease (heterozygotes). Carriers have lower level of vWF; their homeostasis is normal. In offspring of two heterozygous animals following genotype distribution can be expected: 25 % N/N, 50 % N/P and 25 % P/P.

Method: SOP173-vWDIII-sheltie, PCR-RFLP

Date of issue: 30.11.2008
Date of testing: 25.11.2008 - 30.11.2008
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