

Genetic tests in Leonberger dogs

(October 2020)

Genetic disorders of Leonbergers:

Four disorders were genetically characterized by the Universities of Bern (CH) and Minnesota (USA), and genetic tests were developed. These include three forms of *polyneuropathy* (**LPN1**, **LPN2**, **LPPN3**), disease of the peripheral nervous system, and *leukoencephalomyelopathy* (**LEMP**), disorder of the central nervous system.

The genotypes are reported for **each disorder individually** as follows:

N/N (clear of the mutation), **D/N** (heterozygous carrier), and **D/D** (homozygous affected dog).

Further information and breeding recommendations can be found at www.genetics.unibe.ch.

Sand coat color:

Gene test for a coat color dilution at the **I (intensity)** locus characterized by the Universities of Bern (CH) and Rennes (F) identifies the sand-colored Leonbergers and heterozygous carriers. This trait follows autosomal recessive inheritance with estimated variant allele frequency of 11.5% in Leonbergers and is **not related to any disease**. The genotypes are reported as follows: **I/I** (sable coat color), **I/i** (heterozygous carrier, sable coat color), and **i/i** (sand coat color).

For the genetic testing a **single blood sample per dog (1-5 ml EDTA blood)** is required and sufficient to perform the detection of all causative variants. Blood samples must be labeled properly. Please, use an **individual order form for each single dog** and send them together with the samples in a padded envelope without cooling to:

In case of questions please contact:

Prof. Dr. Cord Drögemüller

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phone: **0041 (0)31 631 25 29**

Price: 1 test **100** CHF/EUR, 2 tests **150** CHF/EUR, 3 tests **175** CHF/EUR,
4 tests **200** CHF/EUR, 5 tests **225** CHF/EUR.

Once the sample arrives, we will send an invoice with payment instructions (including details as IBAN, BIC) by e-mail. After the receipt of your payment our lab will perform the tests and send the results **by e-mail as PDF file**. Please note, usually it takes 2-6 weeks until a result is obtained.

Test (please check): **LPN1** **LPN2** **LPPN3** **LEMP** **sand coat color**

Name & Kennel

Registry ID

Chip No.

Date of birth

male

female

coat color

Owner name

Address

ZIP/City/Country

E-mail

Owner's declaration of consent

I agree to genetic testing of the animal indicated above. I also agree that the test results and sample material may be used for further scientific research. The leftover sample material will belong to the University of Bern.

Date

Owner's signature

Confirmation of correct sampling and animal identity

Date

Veterinarian (stamp & signature)