



# GENETIC CERTIFICATE

Name : **Bakkeborg`s Berner`s Aico**

**Ms Ingelise NIELSEN**  
Karbymark 7  
7960 Karby  
DENMARK

Specie : **Dog**  
Breed : **Bernese Mountain Dog**  
  
ID Number : **208 250 000 096 123**  
Pedigree Number :

Gender : **Unknown**  
Birth date : **31/05/2017**

Owner :  
**NIELSEN Ingelise**  
7960 Karby (DK)  
Customer Nb : C97846

Sample Number : **597 288** (Authenticated)  
Sample type : Blood sample  
Sample date : 27/09/2018  
Request date : 03/10/2018

Sampler veterinarian :  
**HOVGAARD SORENSEN René**  
7900 Nykobing Mors (DK)  
Official number :

File Nu. : 152 575  
Animal Number : 174 571  
Result code : 330233

## Histiocytic Sarcoma (Test SH)

Result : **Index B**

Interpretation : Neutral index - not predictive of higher or lower risk of developing Histiocytic Sarcoma.

This genetic test should be just one of the many selection criteria. It is important within a breeding population to give priority to individuals with the best index but is also of the utmost importance when selecting breeding pairs that sufficient genetic diversity is maintained in the breed.

Méline Corniquel  
Genetic Analyst

Caroline Dufaure De Citres  
Genetic Analyst

Result established on 12/10/2018

Certificate issued on 12/10/2018

### Explanation

This genetic test for Histiocytic Sarcoma is based on 9 genetic markers (Panel SH0912) identified from scientific research on Histiocytic Sarcoma on Bernese Mountain Dogs carried out by the Canine Genetics Team of the CNRS of Rennes, France. The methods used to calculate the genetic index were based on a population of 1081 European dogs, mainly from France. The test for Histiocytic Sarcoma has three possible results expressed as an index: index A, the individual tested has a four times lower risk of developing Histiocytic Sarcoma ; index B means neutral index ; index C, the individual tested has a four times higher risk of developing Histiocytic Sarcoma. This genetic test is simply a probability test, and this must be clearly accepted by the user. This genetic test is designed solely to be a tool to help breeders in their breeding decisions. As a probability test, the test SH is subject to error and should not therefore be used, under no circumstances, as a commercial or advertising point by breeders. The ANTAGENE laboratory will provide the necessary state-of-the-art technology to guarantee the reliability of its genetic test.



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Result code : 330232

### Degenerative Myelopathy (DM-sod1a)

Result : **Heterozygous**

Interpretation : The animal has 1 normal copy and 1 defective copy of the SOD1A allele. The animal will not develop the form of Degenerative Myelopathy associated to this single mutation. Statistically the animal will transmit the genetic anomaly to 50% of its progeny. An another DNA test (DM-sod1b) is available to detect an other form of Degenerative Myelopathy in this breed. Dogs heterozygous for both SOD1A and SOD1B may also develop a Degenerative Myelopathy associated to this double heterozygosity.

Manon Silvestre  
Genetic Analyst

Méline Corniquel  
Genetic Analyst

Result established on 09/10/2018  
Certificate issued on 09/10/2018

#### Explanation

This test is specific to Degenerative Myelopathy in Bernese Mountain dog. This disorder is inherited as an autosomal recessive trait. This test relies on the detection of the c.118G>A mutation in the SOD1 gene (Awano et al. 2009). This test can not be used to detect other forms of degenerative myelopathy, nor other hereditary forms of neurological diseases, nor other neurological disorders acquired during the life span of the animal. An another DNA test (DM-sod1B) is available to detect an other form of Degenerative Myelopathy in this breed

The laboratory ANTAGENE puts at its disposal all resources and means necessary with regards to reliability, quality assurance, and traceability in order to guarantee a result of 99% accuracy.