



Canine Genetic Health CertificateTM

Call Name: Thorin
Registered Name: Trails Ends Thorin Oakensheid
Breed: Miniature American Shepherd
Sex: Male
DOB: June 2015

Laboratory #: 15863
Registration #: DN43294204
Certificate Date: Oct. 6, 2015

This canine's DNA showed the following genotype(s):

Disease	Gene	Genotype	Interpretation
Collie eye anomaly	<i>NHEJ1</i>	WT/WT	Normal
Cone degeneration	<i>CNGB3</i>	WT/WT	Normal
Degenerative myelopathy	<i>SOD1</i>	WT/M	Carrier
Hereditary cataracts (Australian Shepherd type)	<i>HSF4</i>	WT/WT	Normal
Hyperuricosuria	<i>SLC2A9</i>	WT/WT	Normal
Multidrug resistance 1	<i>ABCB1</i>	WT/WT	Normal
Multifocal retinopathy 1	<i>BEST1</i>	WT/WT	Normal
Neuronal ceroid lipofuscinosis 6	<i>CLN6</i>	WT/WT	Normal
Progressive retinal atrophy, Progressive rod-cone degeneration	<i>PRCD</i>	WT/WT	Normal

WT, wild type (normal); M, mutant

Paw Print GeneticsTM performed the tests listed on this dog. See the Laboratory Report for interpretation and recommendations based on these findings. The genes/diseases reported here were selected by the client. Normal results do not exclude inherited mutations not tested in these or other genes that may cause medical problems or may be passed on to offspring. These tests were developed and their performance determined by Paw Print Genetics. This laboratory has established and verified the tests' accuracy and precision. Because all tests performed are DNA-based, rare genomic variations may interfere with the performance of some tests producing false results. If you think these results are in error, please contact the laboratory immediately for further evaluation. Genetic counseling is available at Paw Print Genetics.

Blake C Ballif, PhD
Laboratory & Scientific Director

Casey R Carl, DVM
Associate Medical Director