



## Demographic Information

Call Name	Sumsum	Owner	Erin Litton
Registered Name	Litton's Bet She's Something	Registration Number	
Breed	Miniature Australian Shepherd	Tattoo	
Sex	F	Microchip	
DOB	2017-09	Laboratory #	AN-L-CHC-22181
		Report Date	September 21, 2018

These tests were developed and performed by Paw Print Genetics®, Spokane WA.

# Explanation of Results

Normal	A 'Normal' result means that your dog does not have the mutation that causes the associated genetic disease.
Carrier	A 'Carrier' result indicates that your dog has inherited one copy of the mutation that has been reported to cause this genetic disease. Your dog may not be clinically affected by this mutation because two copies of the mutation are usually required to cause disease.
Carrier / At-Risk	A 'Carrier / At-Risk' result indicates that your dog inherited one copy of the mutation that has been reported to cause this genetic disease. Based on the mode of genetic inheritance for this particular disease, inheriting one mutant copy of the gene may result in the disease. Dogs with one copy of the mutation may have a milder phenotype as compared to dogs with two copies of this mutation.
At-Risk / Affected	An 'At-Risk / Affected' result indicates that your dog inherited one or two copies of the mutation that has been reported to cause this genetic disease. Based on the mode of genetic inheritance for this particular disease, inheriting one or two mutant copies of the gene may result in the disease.
No Result	'No Result' indicates that we were unable to obtain a genotype for your dog for this specific disease or trait and does not mean that your dog is a carrier or at-risk for this disease. There are a variety of reasons why a specific test may not provide a reportable result. Unique variations in the genetic code of some individuals may exist and cause certain regions of the genome to not perform properly with a specific test. In addition, suboptimal sampling of the dog's cheek cells could also result in poor sample performance due to inadequate cell counts, bacterial and fungal growth, or the presence of other test inhibitors. An acceptable level of tests with no results has been determined by Paw Print Genetics. Dogs with at least 90% of the test results are determined to be acceptable and reportable. If your dog has an unacceptable level of tests with no results, you will be contacted for a new sample to repeat the testing.

Please review our [testing terms and disclaimers](#) regarding your results.

WT: **wild type (normal)**    M: **mutant**    Y: **Y chromosome (male)**

# Breed Profile

Disease Name	Geno.	Interpretation
<a href="#">Collie Eye Anomaly</a>	WT/WT	Normal (Clear)
<a href="#">Cone Degeneration</a>	WT/WT	Normal (Clear)
<a href="#">Degenerative Myelopathy</a> Common Variant	WT/WT	Normal (Clear)
<a href="#">Exercise-Induced Collapse</a>	WT/WT	Normal (Clear)
<a href="#">Hereditary Cataracts</a> Australian Shepherd Type	WT/WT	Normal (Clear)
<a href="#">Hyperuricosuria</a>	WT/WT	Normal (Clear)
<a href="#">Intestinal Cobalamin Malabsorption</a> Border Collie Type	WT/WT	Normal (Clear)
<a href="#">Multidrug Resistance 1</a>	WT/WT	Normal (Clear)
<a href="#">Multifocal Retinopathy 1</a>	WT/WT	Normal (Clear)
<a href="#">Neuronal Ceroid Lipofuscinosis 6</a>	WT/WT	Normal (Clear)
<a href="#">Neuronal Ceroid Lipofuscinosis 8</a> Australian Shepherd Type	WT/WT	Normal (Clear)
<a href="#">Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration</a> prcd	WT/WT	Normal (Clear)
<a href="#">Von Willebrand Disease I</a>	WT/WT	Normal (Clear)

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# Coat Colors & Traits

Trait Name	Geno.	Interpretation									
<a href="#">A Locus</a> Agouti - $A^y, a^t, a$	$a^t/a^t$	Tricolor, black and tan									
<a href="#">B Locus – <math>b^c, b^d, b^s</math></a> Brown	B/b	Black coat, nose and foot pads (carries brown)									
<table border="1"> <tbody> <tr> <td>B Locus (Brown) - <math>b^c</math></td> <td>0</td> <td></td> </tr> <tr> <td>B Locus (Brown) - <math>b^d</math></td> <td>0</td> <td></td> </tr> <tr> <td>B Locus (Brown) - <math>b^s</math></td> <td>1</td> <td></td> </tr> </tbody> </table>			B Locus (Brown) - $b^c$	0		B Locus (Brown) - $b^d$	0		B Locus (Brown) - $b^s$	1	
B Locus (Brown) - $b^c$	0										
B Locus (Brown) - $b^d$	0										
B Locus (Brown) - $b^s$	1										
<a href="#">Cu Locus</a> Curly Hair	Cu/Cu	Straight coat									
<a href="#">D Locus – <math>d^1</math></a> Dilute	D/D	Non dilute									
<a href="#">E Locus</a> Yellow/Red	E/E	Black									
<a href="#"><math>E^m</math> Locus</a> Melanistic Mask	N/N	No melanistic mask									
<a href="#">K Locus</a> Dominant Black	$k^y/k^y$	Agouti expression allowed									
<a href="#">L Locus – <math>Lh^1</math></a> Long Hair/Fluffy	Lh/Lh	Longhaired									
<a href="#">Sex Determination</a>	X/X	Female									
<a href="#">T Locus</a> Natural Bobtail	t/t	Normal tail									

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Determinants of coat colors and traits are complex. Many of these variants are known and many of the genes screened in the Canine HealthCheck interact. In addition, not all the genetic factors that contribute to a dog's coat color and traits are known. Because of the complexities in gene-gene interactions, the coat colors and traits reported in your Canine HealthCheck results may vary from your dog's actual appearance. Individual differences in genes throughout the canine genome, not tested in this genetic screen, may also affect the final coat color or traits seen in your dog.

# Diseases

Disease Name	Geno.	Interpretation
<a href="#">Alaskan Husky Encephalopathy</a>	WT/WT	Normal (Clear)
<a href="#">Alaskan Malamute Polyneuropathy</a>	WT/WT	Normal (Clear)
<a href="#">Amelogenesis Imperfecta</a>	WT/WT	Normal (Clear)
<a href="#">Benign Familial Juvenile Epilepsy</a>	WT/WT	Normal (Clear)
<a href="#">Canine Multiple System Degeneration Chinese Crested Type</a>	WT/WT	Normal (Clear)
<a href="#">Canine Multiple System Degeneration Kerry Blue Terrier Type</a>	WT/WT	Normal (Clear)
<a href="#">Cerebellar Ataxia Finnish Hound Type</a>	WT/WT	Normal (Clear)
<a href="#">Chondrodysplasia Karelian Bear Dog and Norwegian Elkhound Type</a>	WT/WT	Normal (Clear)
<a href="#">Coagulation Factor VII Deficiency</a>	WT/WT	Normal (Clear)
<a href="#">Collie Eye Anomaly</a>	WT/WT	Normal (Clear)
<a href="#">Complement 3 Deficiency</a>	WT/WT	Normal (Clear)
<a href="#">Cone Degeneration</a>	WT/WT	Normal (Clear)
<a href="#">Cone Degeneration German Shorthaired Pointer Type</a>	WT/WT	Normal (Clear)
<a href="#">Congenital Hypothyroidism with Goiter Terrier Type</a>	No Result	No Result
<a href="#">Congenital Myasthenic Syndrome Labrador Retriever Type</a>	WT/WT	Normal (Clear)
<a href="#">Congenital Myasthenic Syndrome Old Danish Pointer Type</a>	WT/WT	Normal (Clear)
<a href="#">Congenital Stationary Night Blindness</a>	WT/WT	Normal (Clear)
<a href="#">Cyclic Neutropenia</a>	No Result	No Result
<a href="#">Cystinuria Australian Cattle Dog Type</a>	WT/WT	Normal (Clear)
<a href="#">Cystinuria Miniature Pinscher Type</a>	WT/WT	Normal (Clear)

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Canine HealthCheck is a product of Paw Print Genetics. This test was developed and its performance determined by Paw Print Genetics®. This laboratory has established and verified the test's accuracy and precision. Because all tests are performed are DNA-base, 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 for further evaluation.