

Demographic Information

Call Name	Hakuna
Registered Name	Sayre's Hakuna Matata
Breed	Australian Shepherd
Sex	F
Owner	Kimberly Sayre
DOB	April 1, 2019
Registration Number	DN57504201
Tattoo	
Microchip	956000011870333
Laboratory #	AN-L-CHC-11766
Report Date	August 9, 2019

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
Coagulation Factor VII Deficiency	WT/WT	Normal (Clear)
Collie Eye Anomaly	WT/WT	Normal (Clear)
Cone Degeneration	WT/WT	Normal (Clear)
Degenerative Myelopathy Common Variant	WT/WT	Normal (Clear)
Exercise-Induced Collapse	WT/WT	Normal (Clear)
Hereditary Cataracts Australian Shepherd Type	WT/M	Carrier (At-Risk)
Hyperuricosuria	WT/WT	Normal (Clear)
Intestinal Cobalamin Malabsorption Border Collie Type	WT/WT	Normal (Clear)
Multidrug Resistance 1	WT/WT	Normal (Clear)
Multifocal Retinopathy 1	WT/WT	Normal (Clear)
Neuronal Ceroid Lipofuscinosis 6	WT/WT	Normal (Clear)
Neuronal Ceroid Lipofuscinosis 8 Australian Shepherd Type	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration prcd	WT/WT	Normal (Clear)

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Coat Colors & Traits

Trait Name	Geno.	Interpretation
A Locus	a ^t /a ^t	Tricolor, black and tan

<u>Agouti</u> <u>- A^y, a^t, a</u>											
<u>B Locus – b^c, b^d, b^s</u> <u>Brown</u>	B/b	Black coat, nose and foot pads (carries brown)									
<table border="1"> <tr> <td>B Locus (Brown) - b^c</td> <td>0</td> <td></td> </tr> <tr> <td>B Locus (Brown) - b^d</td> <td>0</td> <td></td> </tr> <tr> <td>B Locus (Brown) - b^s</td> <td>1</td> <td></td> </tr> </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										
<u>Cu Locus</u> <u>Curly Hair</u>	Cu/Cu	Straight coat									
<u>D Locus – d¹</u> <u>Dilute</u>	D/D	Non dilute									
<u>E Locus</u> <u>Yellow/Red</u>	E/E	Black									
<u>E^m Locus</u> <u>Melanistic Mask</u>	E ^m /N	Melanistic mask (carrier)									
<u>K Locus</u> <u>Dominant Black</u>	k ^y /k ^y	Agouti expression allowed									
<u>L Locus – Lh¹</u> <u>Long Hair/Fluffy</u>	Lh/Lh	Longhaired									
<u>Sex Determination</u>	X/X	Female									
<u>T Locus</u> <u>Natural Bobtail</u>	t/T	Bobtail									

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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.