



## Demographic Information

Call Name	Wiz	DOB	November 1, 2015
Registered Name	Versailles No Place Like Home	Registration Number	DN44641904
Breed	Border Collie	Tattoo	
Sex	M	Microchip	95600000513670
Owner	Karen marquardt & Marquardt	Laboratory #	AN-L-CHC-20843
		Report Date	December 10, 2018

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

## Explanation of Results

<b>Normal</b>	A 'Normal' result means that your dog does not have the mutation that causes the associated genetic disease.
<b>Carrier</b>	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.
<b>Carrier / At-Risk</b>	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.
<b>At-Risk / Affected</b>	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.
<b>No Result</b>	'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	<b>Normal (Clear)</b>
<a href="#">Degenerative Myelopathy</a> <a href="#">Common Variant</a>	WT/WT	<b>Normal (Clear)</b>
<a href="#">Exercise-Induced Collapse</a>	WT/WT	<b>Normal (Clear)</b>
<a href="#">Hyperuricosuria</a>	WT/WT	<b>Normal (Clear)</b>
<a href="#">Intestinal Cobalamin Malabsorption</a> <a href="#">Border Collie Type</a>	WT/WT	<b>Normal (Clear)</b>
<a href="#">Multidrug Resistance 1</a>	WT/WT	<b>Normal (Clear)</b>
<a href="#">Myotonia Congenita</a> <a href="#">Australian Cattle Dog Type</a>	WT/WT	<b>Normal (Clear)</b>
<a href="#">Neuronal Ceroid Lipofuscinosis 5</a> <a href="#">Australian Cattle Dog/Border Collie Type</a>	WT/WT	<b>Normal (Clear)</b>
<a href="#">Trapped Neutrophil Syndrome</a>	WT/WT	<b>Normal (Clear)</b>
<a href="#">Von Willebrand Disease I</a>	WT/WT	<b>Normal (Clear)</b>

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M: **mutant**

Y: **Y chromosome (male)**

## Coat Colors & Traits

Trait Name	Geno.	Interpretation
<a href="#">A Locus</a> <a href="#">Agouti</a> <a href="#">- A<sup>y</sup>, a<sup>t</sup>, a</a>	a <sup>t</sup> /a <sup>t</sup>	Tricolor, black and tan
<a href="#">B Locus – b<sup>c</sup>, b<sup>d</sup>, b<sup>s</sup></a> <a href="#">Brown</a>	B/B	Black coat, nose and foot pads
B Locus (Brown) - b <sup>c</sup>	0	
B Locus (Brown) - b <sup>d</sup>	0	
B Locus (Brown) - b <sup>s</sup>	0	
<a href="#">Cu Locus</a> <a href="#">Curly Hair</a>	Cu/Cu	Straight coat
<a href="#">D Locus – d<sup>1</sup></a>	D/D	Non dilute

<a href="#">Dilute</a>		
<a href="#">E Locus</a> <a href="#">Yellow/Red</a>	E/E	Black
<a href="#">E<sup>m</sup> Locus</a> <a href="#">Melanistic Mask</a>	N/N	No melanistic mask
<a href="#">K Locus</a> <a href="#">Dominant Black</a>	K <sup>B</sup> /K <sup>B</sup>	No agouti expression allowed
<a href="#">L Locus – Lh<sup>1</sup></a> <a href="#">Long Hair/Fluffy</a>	Lh/Lh	Longhaired
<a href="#">Sex Determination</a>	X/Y	Male
<a href="#">T Locus</a> <a href="#">Natural Bobtail</a>	t/t	Normal tail

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

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</a>	WT/WT	Normal (Clear)

<a href="#">German Shorthaired Pointer Type</a>		
<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="#">Cystinuria Australian Cattle Dog Type</a>	WT/WT	Normal (Clear)
<a href="#">Cystinuria Miniature Pinscher Type</a>	WT/WT	Normal (Clear)
<a href="#">Cystinuria Newfoundland Type</a>	No Result	No Result
<a href="#">Degenerative Myelopathy. Common Variant</a>	WT/WT	Normal (Clear)
<a href="#">Dilated Cardiomyopathy. Doberman Pinscher Type Risk Factor, Variant 1</a>	No Result	No Result
<a href="#">Dry Eye Curly Coat Syndrome</a>	WT/WT	Normal (Clear)
<a href="#">Dystrophic Epidermolysis Bullosa</a>	WT/WT	Normal (Clear)
<a href="#">Early Retinal Degeneration</a>	WT/WT	Normal (Clear)
<a href="#">Ectodermal Dysplasia Chesapeake Bay Retriever Type</a>	WT/WT	Normal (Clear)
<a href="#">Ectodermal Dysplasia, X-Linked Shepherd Type</a>	WT/Y	X-Linked Male Normal
<a href="#">Elliptocytosis</a>	WT/WT	Normal (Clear)
<a href="#">Epidermolytic Hyperkeratosis</a>	WT/WT	Normal (Clear)
<a href="#">Exercise-Induced Collapse</a>	WT/WT	Normal (Clear)
<a href="#">Familial Nephropathy. Cocker Spaniel Type</a>	WT/WT	Normal (Clear)
<a href="#">Familial Nephropathy. English Springer Spaniel Type</a>	WT/WT	Normal (Clear)
<a href="#">Gallbladder Mucoceles</a>	WT/WT	Normal (Clear)
<a href="#">Glanzmann's Thrombasthenia Great Pyrenees Type</a>	WT/WT	Normal (Clear)
<a href="#">Glanzmann's Thrombasthenia Otterhound Type</a>	WT/WT	Normal (Clear)
<a href="#">Globoid Cell Leukodystrophy. Irish Setter Type</a>	WT/WT	Normal (Clear)
<a href="#">Globoid Cell Leukodystrophy. Terrier Type</a>	WT/WT	Normal (Clear)

<a href="#">Glycogen Storage Disease Ia</a>	WT/WT	Normal (Clear)
<a href="#">Glycogen Storage Disease IIIa</a>	WT/WT	Normal (Clear)
<a href="#">Glycogen Storage Disease VII Wachtelhund Type</a>	WT/WT	Normal (Clear)
<a href="#">GM1 Gangliosidosis Alaskan Husky Type</a>	WT/WT	Normal (Clear)
<a href="#">GM1 Gangliosidosis Portuguese Water Dog Type</a>	WT/WT	Normal (Clear)
<a href="#">GM1 Gangliosidosis Shiba Inu Type</a>	WT/WT	Normal (Clear)
<a href="#">GM2 Gangliosidosis Japanese Chin Type</a>	WT/WT	Normal (Clear)
<a href="#">GM2 Gangliosidosis Poodle Type</a>	WT/WT	Normal (Clear)
<a href="#">Greyhound Polyneuropathy</a>	WT/WT	Normal (Clear)
<a href="#">Hemophilia A Boxer Type</a>	WT/Y	X-Linked Male Normal
<a href="#">Hemophilia A German Shepherd Dog, Type 1</a>	WT/Y	X-Linked Male Normal
<a href="#">Hemophilia A German Shepherd Dog, Type 2</a>	WT/Y	X-Linked Male Normal
<a href="#">Hemophilia B Cairn Terrier Type</a>	WT/Y	X-Linked Male Normal
<a href="#">Hemophilia B Lhasa Apso Type</a>	No Result	No Result
<a href="#">Hemophilia B Rhodesian Ridgeback Type</a>	WT/Y	X-Linked Male Normal
<a href="#">Hereditary Cataracts</a>	WT/WT	Normal (Clear)
<a href="#">Hereditary Cataracts Australian Shepherd Type</a>	WT/WT	Normal (Clear)
<a href="#">Hereditary Footpad Hyperkeratosis Irish Terrier and Kromfohländer Type</a>	WT/WT	Normal (Clear)
<a href="#">Hereditary Nasal Parakeratosis</a>	WT/WT	Normal (Clear)
<a href="#">Hereditary Nephritis Samoyed Type</a>	WT/Y	X-Linked Male Normal
<a href="#">Hyperuricosuria</a>	WT/WT	Normal (Clear)
<a href="#">Ichthyosis Golden Retriever Type</a>	WT/WT	Normal (Clear)
<a href="#">Inherited Myopathy of Great Danes</a>	WT/WT	Normal (Clear)

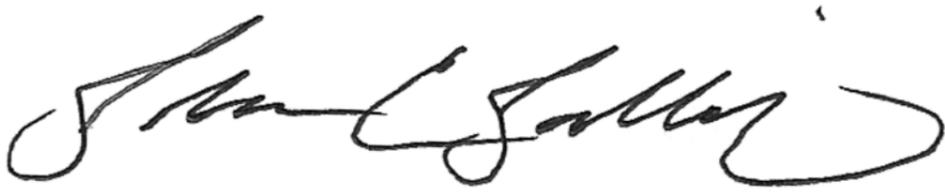
<a href="#">Intestinal Cobalamin Malabsorption Beagle Type</a>	WT/WT	Normal (Clear)
<a href="#">Intestinal Cobalamin Malabsorption Border Collie Type</a>	WT/WT	Normal (Clear)
<a href="#">Juvenile Laryngeal Paralysis and Polyneuropathy</a>	WT/WT	Normal (Clear)
<a href="#">L-2-Hydroxyglutaric Aciduria Staffordshire Bull Terrier Type</a>	WT/WT	Normal (Clear)
<a href="#">Late Onset Ataxia</a>	WT/WT	Normal (Clear)
<a href="#">Leukocyte Adhesion Deficiency, Type I</a>	WT/WT	Normal (Clear)
<a href="#">Leukocyte Adhesion Deficiency, Type III</a>	WT/WT	Normal (Clear)
<a href="#">May-Hegglin Anomaly</a>	WT/WT	Normal (Clear)
<a href="#">Mucopolysaccharidosis I</a>	WT/WT	Normal (Clear)
<a href="#">Mucopolysaccharidosis IIIA Dachshund Type</a>	WT/WT	Normal (Clear)
<a href="#">Mucopolysaccharidosis IIIA New Zealand Huntaway Type</a>	WT/WT	Normal (Clear)
<a href="#">Mucopolysaccharidosis VII Shepherd Type</a>	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="#">Multifocal Retinopathy 2</a>	WT/WT	Normal (Clear)
<a href="#">Multifocal Retinopathy 3</a>	WT/WT	Normal (Clear)
<a href="#">Muscular Dystrophy Golden Retriever Type</a>	WT/Y	X-Linked Male Normal
<a href="#">Myostatin Deficiency Whippet and Longhaired Whippet Type</a>	WT/WT	Normal (Clear)
<a href="#">Myotonia Congenita Australian Cattle Dog Type</a>	WT/WT	Normal (Clear)
<a href="#">Myotonia Congenita Schnauzer Type</a>	WT/WT	Normal (Clear)
<a href="#">Myotubular Myopathy 1</a>	WT/Y	X-Linked Male Normal
<a href="#">Narcolepsy Dachshund Type</a>	WT/WT	Normal (Clear)
<a href="#">Narcolepsy Doberman Pinscher Type</a>	No Result	No Result
<a href="#">Narcolepsy Labrador Retriever Type</a>	WT/WT	Normal (Clear)

<a href="#">Neonatal Cerebellar Cortical Degeneration</a>	WT/WT	Normal (Clear)
<a href="#">Neonatal Encephalopathy with Seizures</a>	WT/WT	Normal (Clear)
<a href="#">Neuronal Ceroid Lipofuscinosis Tibetan Terrier Type</a>	WT/WT	Normal (Clear)
<a href="#">Neuronal Ceroid Lipofuscinosis 1</a>	WT/WT	Normal (Clear)
<a href="#">Neuronal Ceroid Lipofuscinosis 10</a>	WT/WT	Normal (Clear)
<a href="#">Neuronal Ceroid Lipofuscinosis 2</a>	WT/WT	Normal (Clear)
<a href="#">Neuronal Ceroid Lipofuscinosis 4A</a>	WT/WT	Normal (Clear)
<a href="#">Neuronal Ceroid Lipofuscinosis 5 Australian Cattle Dog/Border Collie Type</a>	WT/WT	Normal (Clear)
<a href="#">Neuronal Ceroid Lipofuscinosis 6</a>	WT/WT	Normal (Clear)
<a href="#">Neuronal Ceroid Lipofuscinosis 8 Australian Shepherd Type</a>	WT/WT	Normal (Clear)
<a href="#">Neuronal Ceroid Lipofuscinosis 8 Setter Type</a>	WT/WT	Normal (Clear)
<a href="#">Osteogenesis Imperfecta Beagle Type</a>	WT/WT	Normal (Clear)
<a href="#">Osteogenesis Imperfecta Golden Retriever Type</a>	WT/WT	Normal (Clear)
<a href="#">P2RY12 Receptor Platelet Disorder</a>	WT/WT	Normal (Clear)
<a href="#">Persistent Müllerian Duct Syndrome</a>	WT/WT	Normal (Clear)
<a href="#">Polyneuropathy Leonberger and Saint Bernard Type</a>	WT/WT	Normal (Clear)
<a href="#">Pompe Disease</a>	WT/WT	Normal (Clear)
<a href="#">Prekallikrein Deficiency</a>	WT/WT	Normal (Clear)
<a href="#">Primary Ciliary Dyskinesia</a>	WT/WT	Normal (Clear)
<a href="#">Primary Hyperoxaluria</a>	WT/WT	Normal (Clear)
<a href="#">Primary Lens Luxation</a>	WT/WT	Normal (Clear)
<a href="#">Primary Open Angle Glaucoma</a>	WT/WT	Normal (Clear)
<a href="#">Progressive Retinal Atrophy Basenji Type</a>	WT/WT	Normal (Clear)
<a href="#">Progressive Retinal Atrophy Bullmastiff/Mastiff Type</a>	WT/WT	Normal (Clear)
<a href="#">Progressive Retinal Atrophy Irish Setter Type</a>	WT/WT	Normal (Clear)
<a href="#">Progressive Retinal Atrophy</a>	WT/WT	Normal (Clear)

<a href="#">Sloughi Type</a>		
<a href="#">Progressive Retinal Atrophy, Cone-Rod Dystrophy 1</a>	WT/WT	Normal (Clear)
<a href="#">Progressive Retinal Atrophy, Generalized</a>	WT/WT	Normal (Clear)
<a href="#">Progressive Retinal Atrophy, Golden Retriever 1</a>	WT/WT	Normal (Clear)
<a href="#">Progressive Retinal Atrophy, Golden Retriever 2</a>	WT/WT	Normal (Clear)
<a href="#">Progressive Retinal Atrophy, PRA1 Papillon Type</a>	WT/WT	Normal (Clear)
<a href="#">Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration prcd</a>	WT/WT	Normal (Clear)
<a href="#">Progressive Retinal Atrophy, Rod-Cone Dysplasia 3</a>	WT/WT	Normal (Clear)
<a href="#">Pyruvate Dehydrogenase Deficiency</a>	No Result	No Result
<a href="#">Pyruvate Kinase Deficiency Basenji Type</a>	WT/WT	Normal (Clear)
<a href="#">Pyruvate Kinase Deficiency Beagle Type</a>	WT/WT	Normal (Clear)
<a href="#">Pyruvate Kinase Deficiency Labrador Retriever Type</a>	WT/WT	Normal (Clear)
<a href="#">Pyruvate Kinase Deficiency Pug Type</a>	WT/WT	Normal (Clear)
<a href="#">Pyruvate Kinase Deficiency Terrier Type</a>	WT/WT	Normal (Clear)
<a href="#">Renal Cystadenocarcinoma and Nodular Dermatofibrosis</a>	WT/WT	Normal (Clear)
<a href="#">Sensory Ataxic Neuropathy</a>	WT	Normal (Clear)
<a href="#">Severe Combined Immunodeficiency Disease Terrier Type</a>	WT/WT	Normal (Clear)
<a href="#">Severe Combined Immunodeficiency Disease Wetterhoun Type</a>	WT/WT	Normal (Clear)
<a href="#">Severe Combined Immunodeficiency Disease, X-Linked Basset Hound Type</a>	WT/Y	X-Linked Male Normal
<a href="#">Severe Combined Immunodeficiency Disease, X-Linked Corgi Type</a>	WT/Y	X-Linked Male Normal
<a href="#">Skeletal Dysplasia 2</a>	WT/WT	Normal (Clear)
<a href="#">Spinal Dysraphism</a>	WT/WT	Normal (Clear)
<a href="#">Spinocerebellar Ataxia</a>	WT/WT	Normal (Clear)
<a href="#">Startle Disease</a>	WT/WT	Normal (Clear)

<a href="#">Thrombopathia</a> <a href="#">American Eskimo Dog Type</a>	WT/WT	Normal (Clear)
<a href="#">Thrombopathia</a> <a href="#">Basset Hound Type</a>	WT/WT	Normal (Clear)
<a href="#">Thrombopathia</a> <a href="#">Newfoundland Type</a>	WT/WT	Normal (Clear)
<a href="#">Trapped Neutrophil Syndrome</a>	WT/WT	Normal (Clear)
<a href="#">Vitamin D Dependent Rickets, Type II</a> <a href="#">Pomeranian Type</a>	WT/WT	Normal (Clear)
<a href="#">Von Willebrand Disease I</a>	WT/WT	Normal (Clear)
<a href="#">Von Willebrand Disease II</a>	No Result	No Result
<a href="#">Von Willebrand Disease III</a> <a href="#">Kooikerhondje Type</a>	WT/WT	Normal (Clear)
<a href="#">Von Willebrand Disease III</a> <a href="#">Scottish Terrier Type</a>	WT/WT	Normal (Clear)

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



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Medical Director

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 on 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.