



## Demographic Information

Call Name	Hank	DOB	Dec. 27, 2018
Registered Name	Double M Diesel	Registration #	DN56405505
Breed	Australian Shepherd	Tattoo	-
Sex	Male	Microchip	-
Owner	Jordan Starbuck	Laboratory #	370232 (AN-19-000568)
		Report Date	Dec. 26, 2019

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 cats 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.

## 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	Genotype	Interpretation						
Coagulation Factor VII Deficiency	WT/WT	<input type="radio"/> Normal (clear)						
Collie Eye Anomaly	WT/WT	<input type="radio"/> Normal (clear)						
Cone Degeneration	WT/WT	<input type="radio"/> Normal (clear)						
Cranio-mandibular Osteopathy	WT/WT	<input type="radio"/> Normal (clear)						
Degenerative Myelopathy	WT/M	<input checked="" type="radio"/> Carrier						
<table><tbody><tr><td>Degenerative Myelopathy (Bernese Mountain Dog Variant)</td><td>0</td><td></td></tr><tr><td>Degenerative Myelopathy (Common Variant)</td><td>1</td><td></td></tr></tbody></table>			Degenerative Myelopathy (Bernese Mountain Dog Variant)	0		Degenerative Myelopathy (Common Variant)	1	
Degenerative Myelopathy (Bernese Mountain Dog Variant)	0							
Degenerative Myelopathy (Common Variant)	1							
Exercise-Induced Collapse	WT/WT	<input type="radio"/> Normal (clear)						
Hereditary Cataracts (Australian Shepherd Type)	WT/WT	<input type="radio"/> Normal (clear)						
Hyperuricosuria	WT/WT	<input type="radio"/> Normal (clear)						
Intervertebral Disc Disease Risk Factor and Chondrodystrophy (CDDY with IVDD)	WT/WT	<input type="radio"/> Normal (clear)						
Intestinal Cobalamin Malabsorption (Border Collie Type)	WT/WT	<input type="radio"/> Normal (clear)						
Multidrug Resistance 1	WT/WT	<input type="radio"/> Normal (clear)						
Multifocal Retinopathy 1	WT/WT	<input type="radio"/> Normal (clear)						
Neuronal Ceroid Lipofuscinosis 6	WT/WT	<input type="radio"/> Normal (clear)						
Neuronal Ceroid Lipofuscinosis 8 (Australian Shepherd Type)	WT/WT	<input type="radio"/> Normal (clear)						
Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration (prcd)	WT/WT	<input type="radio"/> Normal (clear)						

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

# Coat Colors & Traits

Trait Name	Genotype	Interpretation
A Locus (Agouti)	$a^t/a^t$	Tricolor, black and tan
A <sup>s</sup> Locus (Saddle Tan)	N/N	No saddle tan/creeping tan
B Locus (Brown)	B/b or b/b	Carries brown and may have brown or black coat, nose and foot pads
B Locus (Brown) - b <sup>a</sup>	0	
B Locus (Brown) - b <sup>c</sup>	1	
B Locus (Brown) - b <sup>d</sup>	1	
B Locus (Brown) - b <sup>s</sup>	0	
Brachycephaly	BR/BR	Likely medium to long muzzle
Chondrodysplasia (CDPA)	cd/cd	Likely typical leg length
Cu Locus (Curly Hair)	Cu/Cu	Straight coat
D Locus (Dilute)	D/D	Non dilute
D Locus (Dilute) - d <sup>1</sup>	0	
D Locus (Dilute) - d <sup>2</sup>	0	
E Locus (Yellow/Red)	E/E	Black
E <sup>g</sup> Locus (Grizzle, Afghan Hound Type)	N/N	No grizzle
E <sup>h</sup> Locus (Sable, Cocker Spaniel Type)	N/N	No sable
E <sup>m</sup> Locus (Melanistic Mask)	N/N	No melanistic mask
H Locus (Harlequin, Great Dane Type)	h/h	No harlequin

<b>Hr Locus (FOXI3 Hairless Gene Test, Mexican Hairless, Peruvian Hairless and Chinese Crested Type)</b>	<b>hr/hr</b>	<b>Coated</b>
<b>I Locus (Intensity)</b>	<b>I/I</b>	<b>Normal intensity</b>
<b>IC Locus (Improper Coat/Furnishings)</b>	<b>IC/IC</b>	<b>No furnishings, improper coat</b>
<b>K Locus (Dominant Black)</b>	<b>k<sup>Y</sup>/k<sup>Y</sup></b>	<b>Agouti expression allowed</b>
<b>L Locus (Long Hair/Fluffy) - Lh<sup>1</sup>, Lh<sup>2</sup></b>	<b>Lh/Lh</b>	<b>Longhaired</b>
L Locus (Long Hair/Fluffy) - Lh <sup>1</sup>	2	
L Locus (Long Hair/Fluffy) - Lh <sup>2</sup>	0	
<b>M Locus (Merle)</b>	<b>M216/M223</b>	<b>Two copy merle carrier</b>
<b>Polydactyly</b>	<b>PD/pd</b>	<b>Likely polydactylous with hind dewclaws (typical toes carrier)</b>
<b>S Locus (White Spotting, Parti, or Piebald)</b>	<b>S/S</b>	<b>No white spotting, flash, parti, or piebald</b>
<b>SD Locus (Shedding)</b>	<b>sd/SD</b>	<b>Moderate shedding</b>
<b>Sex Determination</b>	<b>X/Y</b>	<b>Male</b>
<b>T Locus (Natural Bobtail)</b>	<b>t/t</b>	<b>Normal tail</b>

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**

**Genotype**

**Interpretation**

Acral Mutilation Syndrome	WT/WT	Normal (clear)
Acute Respiratory Distress Syndrome	WT/WT	Normal (clear)
Adult Paroxysmal Dyskinesia	WT/WT	Normal (clear)
Alaskan Husky Encephalopathy	WT/WT	Normal (clear)
Alaskan Malamute Polyneuropathy	WT/WT	Normal (clear)
Amelogenesis Imperfecta	WT/WT	Normal (clear)
Benign Familial Juvenile Epilepsy	WT/WT	Normal (clear)
Canine Multiple System Degeneration (Chinese Crested Type)	WT/WT	Normal (clear)
Canine Multiple System Degeneration (Kerry Blue Terrier Type)	WT/WT	Normal (clear)
Canine Scott Syndrome	WT/WT	Normal (clear)
Catalase Deficiency	WT/WT	Normal (clear)
Centronuclear Myopathy	WT/WT	Normal (clear)
Cerebellar Ataxia (Finnish Hound Type)	WT/WT	Normal (clear)
Cerebellar Cortical Degeneration	WT/WT	Normal (clear)
Cerebellar Degeneration	WT/WT	Normal (clear)
Chondrodysplasia (Karelian Bear Dog and Norwegian Elkhound Type)	WT/WT	Normal (clear)
Cleft Palate and Syndactyly (Nova Scotia Duck Tolling Retriever Type)	WT/WT	Normal (clear)
Coagulation Factor VII Deficiency	WT/WT	Normal (clear)
Collie Eye Anomaly	WT/WT	Normal (clear)

Complement 3 Deficiency	WT/WT	Normal (clear)
Cone Degeneration	WT/WT	Normal (clear)
Cone Degeneration (German Shepherd Dog Type)	No Result	No Result
Cone Degeneration (German Shorthaired Pointer Type)	WT/WT	Normal (clear)
Cone Degeneration (Labrador Retriever Type)	WT/WT	Normal (clear)
Congenital Hypothyroidism with Goiter (Terrier Type)	WT/WT	Normal (clear)
Congenital Methemoglobinemia	WT/WT	Normal (clear)
Congenital Myasthenic Syndrome (Jack Russell Terrier Type)	No Result	No Result
Congenital Myasthenic Syndrome (Labrador Retriever Type)	WT/WT	Normal (clear)
Congenital Myasthenic Syndrome (Old Danish Pointer Type)	WT/WT	Normal (clear)
Congenital Stationary Night Blindness	WT/WT	Normal (clear)
Cranio-mandibular Osteopathy	WT/WT	Normal (clear)
Cyclic Neutropenia	WT/WT	Normal (clear)
Cystinuria (Australian Cattle Dog Type)	WT/WT	Normal (clear)
Cystinuria (Labrador Retriever Type)	WT/WT	Normal (clear)
Cystinuria (Miniature Pinscher Type)	WT/WT	Normal (clear)
Cystinuria (Newfoundland Type)	WT/WT	Normal (clear)
Cystinuria Type 3 (Bulldog Type Risk Factor, Variant 3)	WT/WT	Normal (clear)
Cystinuria Type 3 (Bulldog Type Risk Factor, Variants 1 and 2)	WT/WT	Normal (Clear)

Cystinuria Type 3 (Bulldog Type Risk Factor, Variant 1)	0	
Cystinuria Type 3 (Bulldog Type Risk Factor, Variant 2)	0	
<b>Dandy-Walker-Like Malformation</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Degenerative Myelopathy</b>	<b>WT/M</b>	<b>Carrier</b>
Degenerative Myelopathy (Bernese Mountain Dog Variant)	0	
Degenerative Myelopathy (Common Variant)	1	
<b>Degenerative Myelopathy Early-Onset Risk Modifier (Pembroke Welsh Corgi Type)</b>	<b>WT/M</b>	<b>One Copy Carrier - Not associated with disease</b>
<b>Dental Hypomineralization</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Diffuse Cystic Renal Dysplasia and Hepatic Fibrosis</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Dilated Cardiomyopathy (Doberman Pinscher Type Risk Factor, Variant 1)</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Dilated Cardiomyopathy (Doberman Pinscher Type Risk Factor, Variant 2)</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Dilated Cardiomyopathy (Schnauzer Type)</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Dry Eye Curly Coat Syndrome</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Dystrophic Epidermolysis Bullosa</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Early Retinal Degeneration</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Ectodermal Dysplasia (Chesapeake Bay Retriever Type)</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Ectodermal Dysplasia, X-Linked (Dachshund Type)</b>	<b>WT/Y</b>	<b>X-Linked Male Normal</b>
<b>Ectodermal Dysplasia, X-Linked (Shepherd Type)</b>	<b>WT/Y</b>	<b>X-Linked Male Normal</b>
<b>Ehlers-Danlos Syndrome</b>	<b>WT/WT</b>	<b>Normal (Clear)</b>

Ehlers-Danlos Syndrome (Variant 1)	0	
Ehlers-Danlos Syndrome (Variant 2)	0	
<b>Elliptocytosis</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Epidermolytic Hyperkeratosis</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Episodic Falling Syndrome</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Exercise-Induced Collapse</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Factor XI Deficiency</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Familial Nephropathy (Cocker Spaniel Type)</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Familial Nephropathy (English Springer Spaniel Type)</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Fucosidosis</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Gallbladder Mucoceles</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Glanzmann's Thrombasthenia (Great Pyrenees Type)</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Glanzmann's Thrombasthenia (Otterhound Type)</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Glaucoma (Border Collie Type)</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Globoid Cell Leukodystrophy (Irish Setter Type)</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Globoid Cell Leukodystrophy (Terrier Type)</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Glycogen Storage Disease Ia</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Glycogen Storage Disease IIIa</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Glycogen Storage Disease VII (Wachtelhund Type)</b>	<b>WT/WT</b>	<b>Normal (clear)</b>
<b>Glycogen Storage Disease VII, PFK Deficiency</b>	<b>WT/WT</b>	<b>Normal (clear)</b>

GM1 Gangliosidosis (Alaskan Husky Type)	WT/WT	Normal (clear)
GM1 Gangliosidosis (Portuguese Water Dog Type)	WT/WT	Normal (clear)
GM1 Gangliosidosis (Shiba Inu Type)	WT/WT	Normal (clear)
GM2 Gangliosidosis (Japanese Chin Type)	WT/WT	Normal (clear)
GM2 Gangliosidosis (Poodle Type)	WT/WT	Normal (clear)
Greyhound Polyneuropathy	WT/WT	Normal (clear)
Hemophilia A (Boxer Type)	WT/Y	X-Linked Male Normal
Hemophilia A (German Shepherd Dog, Type 1)	WT/Y	X-Linked Male Normal
Hemophilia A (German Shepherd Dog, Type 2)	WT/Y	X-Linked Male Normal
Hemophilia B (Cairn Terrier Type)	WT/Y	X-Linked Male Normal
Hemophilia B (Lhasa Apso Type)	WT/Y	X-Linked Male Normal
Hemophilia B (Rhodesian Ridgeback Type)	WT/Y	X-Linked Male Normal
Hereditary Cataracts (Australian Shepherd Type)	WT/WT	Normal (clear)
Hereditary Cataracts	WT/WT	Normal (clear)
Hereditary Footpad Hyperkeratosis (Irish Terrier and Kromfohrländer Type)	WT/WT	Normal (clear)
Hereditary Nasal Parakeratosis	WT/WT	Normal (clear)
Hereditary Nasal Parakeratosis (Greyhound Type)	WT/WT	Normal (clear)
Hereditary Nephritis (Samoyed Type)	WT/Y	X-Linked Male Normal
Hyperuricosuria	WT/WT	Normal (clear)

Hypomyelination (Weimaraner Type)	WT/WT	Normal (clear)
Ichthyosis (American Bulldog Type)	WT/WT	Normal (clear)
Ichthyosis (Golden Retriever Type 1)	WT/WT	Normal (clear)
Ichthyosis (Great Dane Type)	WT/WT	Normal (clear)
Inherited Myopathy of Great Danes	WT/WT	Normal (clear)
Intervertebral Disc Disease Risk Factor and Chondrodystrophy (CDDY with IVDD)	WT/WT	Normal (clear)
Intestinal Cobalamin Malabsorption (Beagle Type)	WT/WT	Normal (clear)
Intestinal Cobalamin Malabsorption (Border Collie Type)	WT/WT	Normal (clear)
Juvenile Laryngeal Paralysis and Polyneuropathy	WT/WT	Normal (clear)
Juvenile Myoclonic Epilepsy (Rhodesian Ridgeback Type)	WT/WT	Normal (clear)
L-2-Hydroxyglutaric Aciduria (Staffordshire Bull Terrier Type)	WT/WT	Normal (clear)
Lagotto Storage Disorder	WT/WT	Normal (clear)
Late Onset Ataxia	WT/WT	Normal (clear)
Lethal Acrodermatitis	WT/WT	Normal (clear)
Leukocyte Adhesion Deficiency, Type I	WT/WT	Normal (clear)
Leukocyte Adhesion Deficiency, Type III	WT/WT	Normal (clear)
Ligneous Membranitis	WT/WT	Normal (clear)
Lundehund Syndrome	WT/WT	Normal (clear)
Macular Corneal Dystrophy (Labrador Retriever Type)	WT/WT	Normal (clear)

May-Hegglin Anomaly	WT/WT	Normal (clear)
Mucopolysaccharidosis I	WT/WT	Normal (clear)
Mucopolysaccharidosis IIIA (Dachshund Type)	WT/WT	Normal (clear)
Mucopolysaccharidosis IIIA (New Zealand Huntaway Type)	WT/WT	Normal (clear)
Mucopolysaccharidosis VII (Shepherd Type)	WT/WT	Normal (clear)
Multidrug Resistance 1	WT/WT	Normal (clear)
Multifocal Retinopathy 1	WT/WT	Normal (clear)
Multifocal Retinopathy 2	WT/WT	Normal (clear)
Multifocal Retinopathy 3	WT/WT	Normal (clear)
Muscular Dystrophy (Golden Retriever Type)	WT/Y	X-Linked Male Normal
Musladin-Lueke Syndrome	WT/WT	Normal (clear)
Myostatin Deficiency (Whippet and Longhaired Whippet Type)	WT/WT	Normal (clear)
Myotonia Congenita (Australian Cattle Dog Type)	WT/WT	Normal (clear)
Myotonia Congenita (Schnauzer Type)	WT/WT	Normal (clear)
Myotubular Myopathy 1	WT/Y	X-Linked Male Normal
Myotubular Myopathy 1 (Rottweiler Type)	WT/Y	X-Linked Male Normal
Narcolepsy (Dachshund Type)	WT/WT	Normal (clear)
Narcolepsy (Doberman Pinscher Type)	WT/WT	Normal (clear)
Narcolepsy (Labrador Retriever Type)	WT/WT	Normal (clear)

Neonatal Cerebellar Cortical Degeneration	WT/WT	Normal (clear)
Neonatal Encephalopathy with Seizures	WT/WT	Normal (clear)
Neuroaxonal Dystrophy (Rottweiler Type)	WT/WT	Normal (clear)
Neuroaxonal Dystrophy (Spanish Water Dog Type)	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis (Tibetan Terrier Type)	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 1 (Cane Corso Type)	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 1	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 10	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 12	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 2	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 4A	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 5 (Australian Cattle Dog/Border Collie Type)	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 5 (Golden Retriever Type)	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 6	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 7	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 8 (Australian Shepherd Type)	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 8 (Setter Type)	WT/WT	Normal (clear)
Oculocutaneous Albinism	WT/WT	Normal (clear)
Oculocutaneous Albinism (Small Breed Type)	WT/WT	Normal (clear)

Osteochondrodysplasia	WT/WT	Normal (clear)
Osteogenesis Imperfecta (Beagle Type)	WT/WT	Normal (clear)
Osteogenesis Imperfecta (Dachshund Type)	WT/WT	Normal (clear)
Osteogenesis Imperfecta (Golden Retriever Type)	WT/WT	Normal (clear)
P2RY12 Receptor Platelet Disorder	WT/WT	Normal (clear)
Pembroke Welsh Corgi Duchenne Muscular Dystrophy	WT/Y	X-Linked Male Normal
Persistent Müllerian Duct Syndrome	WT/WT	Normal (clear)
Polyneuropathy (Leonberger and Saint Bernard Type)	WT/WT	Normal (clear)
Polyneuropathy (Leonberger Type 2)	WT/WT	Normal (clear)
Polyneuropathy with Ocular Abnormalities and Neuronal Vacuolation	WT/WT	Normal (clear)
Pompe Disease	WT/WT	Normal (clear)
Prekallikrein Deficiency	WT/WT	Normal (clear)
Primary Ciliary Dyskinesia	WT/WT	Normal (clear)
Primary Hyperoxaluria	WT/WT	Normal (clear)
Primary Lens Luxation	WT/WT	Normal (clear)
Primary Open Angle Glaucoma (Basset Fauve de Bretagne Type)	WT/WT	Normal (clear)
Primary Open Angle Glaucoma (Basset Hound Type)	WT/WT	Normal (clear)
Primary Open Angle Glaucoma	WT/WT	Normal (clear)
Primary Open Angle Glaucoma (Norwegian Elkhound Type)	No Result	No Result

Primary Open Angle Glaucoma and Primary Lens Luxation (Shar Pei Type)	WT/WT	Normal (clear)
Progressive Retinal Atrophy (Basenji Type)	WT/WT	Normal (clear)
Progressive Retinal Atrophy (Bullmastiff/Mastiff Type)	WT/WT	Normal (clear)
Progressive Retinal Atrophy (Giant Schnauzer Type)	WT/WT	Normal (clear)
Progressive Retinal Atrophy (Irish Setter Type)	WT/WT	Normal (clear)
Progressive Retinal Atrophy (Shetland Sheepdog Type)	WT/WT	Normal (clear)
Progressive Retinal Atrophy (Sloughi Type)	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Cone-Rod Dystrophy	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Cone-Rod Dystrophy 1	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Cone-Rod Dystrophy 2	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Cone-Rod Dystrophy 3	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Cone-Rod Dystrophy 4 (crd4/cord1)	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Generalized	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Golden Retriever 1	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Golden Retriever 2	WT/WT	Normal (clear)
Progressive Retinal Atrophy, PRA1 (Papillon Type)	WT/WT	Normal (clear)
Progressive Retinal Atrophy, PRA3 (Tibetan Terrier and Spaniel Type)	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration (prcd)	WT/WT	Normal (clear)

Progressive Retinal Atrophy, Rod-Cone Dysplasia 3	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Rod-Cone Dysplasia 4	WT/WT	Normal (clear)
Progressive Retinal Atrophy, X-Linked 1	WT/Y	X-Linked Male Normal
Protein Losing Nephropathy	WT/WT, WT/WT	Normal (Clear) - No Increased Risk
Protein Losing Nephropathy (Variant 1)	0	
Protein Losing Nephropathy (Variant 2)	0	
Pyruvate Dehydrogenase Deficiency	WT/WT	Normal (clear)
Pyruvate Kinase Deficiency (Basenji Type)	WT/WT	Normal (clear)
Pyruvate Kinase Deficiency (Beagle Type)	WT/WT	Normal (clear)
Pyruvate Kinase Deficiency (Labrador Retriever Type)	WT/WT	Normal (clear)
Pyruvate Kinase Deficiency (Pug Type)	WT/WT	Normal (clear)
Pyruvate Kinase Deficiency (Terrier Type)	WT/WT	Normal (clear)
Recurrent Inflammatory Pulmonary Disease	WT/WT	Normal (clear)
Renal Cystadenocarcinoma and Nodular Dermatofibrosis	WT/WT	Normal (clear)
Retinal Dysplasia/Oculoskeletal Dysplasia 1	WT/WT	Normal (clear)
Retinal Dysplasia/Oculoskeletal Dysplasia 2	WT/WT	Normal (clear)
Sensory Neuropathy (Border Collie Type)	WT/WT	Normal (Clear)
Severe Combined Immunodeficiency Disease (Terrier Type)	WT/WT	Normal (clear)
Severe Combined Immunodeficiency Disease (Wetterhoun Type)	WT/WT	Normal (clear)

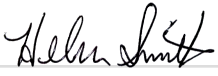
Severe Combined Immunodeficiency Disease, X-Linked (Basset Hound Type)	No Result	No Result
Severe Combined Immunodeficiency Disease, X-Linked (Corgi Type)	WT/Y	X-Linked Male Normal
Shar-Pei Autoinflammatory Disease	WT/WT	Normal (clear)
Skeletal Dysplasia 2	WT/WT	Normal (clear)
Spinal Dysraphism	WT/WT	Normal (clear)
Spinocerebellar Ataxia	WT/WT	Normal (clear)
Spondylocostal Dysostosis	WT/WT	Normal (clear)
Stargardt Disease	WT/WT	Normal (clear)
Startle Disease	WT/WT	Normal (clear)
Thrombopathia (American Eskimo Dog Type)	WT/WT	Normal (clear)
Thrombopathia (Basset Hound Type)	WT/WT	Normal (clear)
Thrombopathia (Newfoundland Type)	WT/WT	Normal (clear)
Trapped Neutrophil Syndrome	WT/WT	Normal (clear)
Urolithiasis (Native American Indian Dog Type)	WT/WT	Normal (clear)
Van Den Ende-Gupta Syndrome	WT/WT	Normal (clear)
Von Willebrand Disease I	WT/WT	Normal (clear)
Von Willebrand Disease II	WT/WT	Normal (clear)
Von Willebrand Disease III (Kooikerhondje Type)	WT/WT	Normal (clear)
Von Willebrand Disease III (Scottish Terrier Type)	WT/WT	Normal (clear)

Von Willebrand Disease III (Shetland Sheepdog Type)

WT/WT

Normal (clear)

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



**Helen F Smith, PhD**  
Associate Laboratory Director



**Christina J Ramirez, PhD, DVM, DACVP**  
Medical Director

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