



Demographic Information

Call Name	Joshua	DOB	June 30, 2021
Registered Name	Matthew's Joshua Castillo	Registration #	PR24312802
Breed	Miniature Poodle	Tattoo	-
Sex	Male	Microchip	900215006740867
Owner	Jesse Graber	Laboratory #	402528
		Report Date	May 29, 2023

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 cats 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

Degenerative Myelopathy

Degenerative Myelopathy (Bernese Mountain Dog Variant)

Degenerative Myelopathy (Common Variant)

GM2 Gangliosidosis (Poodle Type)

Hereditary Cataracts

Intervertebral Disc Disease Risk Factor and Chondrodystrophy (CDDY with IVDD)

Multidrug Resistance 1

Neonatal Encephalopathy with Seizures

Osteochondrodysplasia

Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration (prcd)

Progressive Retinal Atrophy, Rod-Cone Dysplasia 4

Von Willebrand Disease I

Genotype

WT/WT

0

0

WT/WT

WT/WT

M/M

WT/WT

WT/WT

WT/WT

WT/WT

WT/WT

WT/WT

Interpretation

Normal (Clear)

Normal (Clear)

Normal (Clear)

At-Risk

Normal (Clear)

Normal (Clear)

Normal (Clear)

Normal (Clear)

Normal (Clear)

Normal (Clear)

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

Coat Colors & Traits

Trait Name

A Locus (Agouti)

Genotype

A^w/A^t

Interpretation

Wolf sable/gray (carries tricolor/black and tan)

A^s Locus (Saddle Tan)	N/N	No saddle tan/creeping tan
B Locus (Brown)	B/b	Black coat, nose and foot pads (carries brown)
B Locus (Brown) - b ^a	0	
B Locus (Brown) - b ^c	1	
B Locus (Brown) - b ^d	0	
B Locus (Brown) - b ^s	0	
Brachycephaly	BR/BR	Likely medium to long muzzle
Chondrodysplasia (CDPA)	cd/cd	Likely typical leg length
Co Locus (Cocoa, French Bulldog Type)	CO/CO	Black coat, nose and foot pads (does not carry cocoa)
Cu Locus (Curly Hair)	Cu^c/Cu^c	Curly coat
D Locus (Dilute)	D/D	Non dilute
D Locus (Dilute) - d ¹	0	
D Locus (Dilute) - d ²	0	
E Locus (Yellow/Red)	e/e	Yellow/red
E^g Locus (Grizzle, Afghan Hound Type)	N/N	No grizzle
E^h Locus (Sable, Cocker Spaniel Type)	N/N	No sable
E^m Locus (Melanistic Mask)	N/N	No melanistic mask
H Locus (Harlequin, Great Dane Type)	h/h	No harlequin
Hr Locus (FOX13 Hairless Gene Test, Mexican Hairless, Peruvian Hairless and Chinese Crested Type)	hr/hr	Coated
I Locus (Intensity)	I/I	Normal intensity

IC Locus (Improper Coat/Furnishings)	F/F	Furnishings
K Locus (Dominant Black)	K ^B /K ^B	No agouti expression allowed
L Locus (Long Hair/Fluffy) - Lh ¹ , Lh ² , Lh ⁴	Lh/Lh	Longhaired
L Locus (Long Hair/Fluffy) - Lh ¹	2	
L Locus (Long Hair/Fluffy) - Lh ²	0	
L Locus (Long Hair/Fluffy) - Lh ⁴	0	
M Locus (Merle)	m/m	Non merle
Polydactyly	pd/pd	Normal (typical) toes (likely no hind dewclaws)
S Locus (White Spotting, Parti, or Piebald)	S/S	No white spotting, flash, parti, or piebald
SD Locus (Shedding)	sd/SD	Moderate shedding
Sex Determination - ZFX/Y	X/Y	Male
T Locus (Natural Bobtail)	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	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)
Ataxia (Norwegian Buhund Type)	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 Ataxia 1 (Belgian Shepherd Type)	WT/WT	Normal (Clear)
Cerebellar Cortical Degeneration	WT/WT	Normal (Clear)
<i>Cerebellar Degeneration</i>	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)	WT/WT	Normal (Clear)
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)	WT/WT	Normal (Clear)
Congenital Myasthenic Syndrome (Labrador Retriever Type)	WT/WT	Normal (Clear)
<i>Congenital Myasthenic Syndrome (Old Danish Pointer Type)</i>	WT/WT	<i>Normal (Clear)</i>
Congenital Stationary Night Blindness	WT/WT	Normal (Clear)
Craniomandibular 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	
Dandy-Walker-Like Malformation	WT/WT	Normal (Clear)
Degenerative Myelopathy	WT/WT	Normal (Clear)
Degenerative Myelopathy (Bernese Mountain Dog Variant)	0	
Degenerative Myelopathy (Common Variant)	0	
Degenerative Myelopathy Early-Onset Risk Modifier (Pembroke Welsh Corgi Type)	WT/WT	Normal (Clear)
Dental Hypomineralization	WT/WT	Normal (Clear)
Diffuse Cystic Renal Dysplasia and Hepatic Fibrosis	WT/WT	Normal (Clear)
Dilated Cardiomyopathy (Doberman Pinscher Type Risk Factor, Variant 1)	WT/WT	Normal (Clear)
Dilated Cardiomyopathy (Doberman Pinscher Type Risk Factor, Variant 2)	WT/WT	Normal (Clear)
Dilated Cardiomyopathy (Schnauzer Type)	WT/WT	Normal (Clear)
Dry Eye Curly Coat Syndrome	WT/WT	Normal (Clear)
Dystrophic Epidermolysis Bullosa	WT/WT	Normal (Clear)
Early Retinal Degeneration	WT/WT	Normal (Clear)
Ectodermal Dysplasia (Chesapeake Bay Retriever Type)	WT/WT	Normal (Clear)
Ectodermal Dysplasia, X-Linked (Dachshund Type)	WT/Y	X-Linked Male Normal
Ectodermal Dysplasia, X-Linked (Shepherd Type)	WT/Y	X-Linked Male Normal
Ehlers-Danlos Syndrome	WT/WT	Normal (Clear)

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

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 (Golden Retriever Type 2)	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)	M/M	At-Risk
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)
<i>Myotonia Congenita (Australian Cattle Dog Type)</i>	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)

Primary Open Angle Glaucoma (Norwegian Elkhound Type)	WT/WT	Normal (Clear)
Primary Open Angle Glaucoma and Primary Lens Luxation (Shar Pei Type)	WT/WT	Normal (Clear)
Progressive Retinal Atrophy (Basenji Type)	WT/WT	Normal (Clear)
<i>Progressive Retinal Atrophy (Bullmastiff/Mastiff Type)</i>	<i>WT/WT</i>	<i>Normal (Clear)</i>
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 4 (crd4/crd1)	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Early Onset (Spanish Water Dog Type)	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)
<i>Pyruvate Kinase Deficiency (Labrador Retriever Type)</i>	WT/WT	<i>Normal (Clear)</i>
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)	WT/Y	X-Linked Male Normal
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: M: Y:



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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 performed are DNA-based, rare genomic variations may interfere with the performance of some tests producing false results. If you think any results are in error, please contact the laboratory for further evaluation.

