**DELILAH**

# Veterinary Report by Embark

embarkvet.com

Test Date: March 19th, 2024

# Customer-supplied information

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| Owner Name: Lori Warner  Dog Name: Delilah  Sex: Female  Date of birth: 02/17/23 | Breed type: purebred  Breed: Bernese Mountain Dog  Breed registration: American Kennel Club (AKC) WS79788107  Microchip: N/A |

# Genetic summary

Genetic breed identification: **Bernese Mountain Dog** Breed mix:

**Bernese Mountain Dog: 100.0%** Predicted adult weight: **99 lbs** Calculated from 17 size genes.

Life stage: **Young adult**

Based on date of birth provided.

**How to interpret Delilah’s genetic health results:**

If Delilah inherited any of the variants that we tested, they will be listed at the top of the Health Report section, along with a description of how to interpret this result. We also include all of the variants that we tested Delilah for that we did not detect the risk variant for.

**A genetic test is not a diagnosis**

This genetic test does not diagnose a disease. Please talk to your vet about your dog’s genetic results, or if you think that your pet may have a health condition or disease.

**Summary**

Delilah is not at increased risk for the genetic health conditions that Embark tests.

**Clear results**

**Breed-relevant** (2)

**Other** (259)

## BREED-RELEVANT RESULTS

Research studies indicate that these results are more relevant to dogs like Delilah, and may influence her chances of developing certain health conditions.

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| Degenerative Myelopathy, DM (SOD1A) | Clear |

Von Willebrand Disease Type I, Type I vWD (VWF) Clear

Research has not yet linked these conditions to dogs with similar breeds to Delilah. Review any increased risk or notable results to understand her potential risk and recommendations.

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| 2-DHA Kidney & Bladder Stones (APRT) | Clear |

Acral Mutilation Syndrome (GDNF-AS, Spaniel and Pointer Variant) Clear

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| Alaskan Husky Encephalopathy (SLC19A3) | Clear |

Alaskan Malamute Polyneuropathy, AMPN (NDRG1 SNP) Clear

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| Alexander Disease (GFAP) | Clear |

ALT Activity (GPT) Clear

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| Anhidrotic Ectodermal Dysplasia (EDA Intron 8) | Clear |

Autosomal Dominant Progressive Retinal Atrophy (RHO) Clear

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| Bald Thigh Syndrome (IGFBP5) | Clear |

Bernard-Soulier Syndrome, BSS (GP9, Cocker Spaniel Variant) Clear

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| Bully Whippet Syndrome (MSTN) | Clear |

Canine Elliptocytosis (SPTB Exon 30) Clear

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| Canine Fucosidosis (FUCA1) | Clear |

Canine Leukocyte Adhesion Deficiency Type I, CLAD I (ITGB2, Setter Variant) Clear

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| Canine Leukocyte Adhesion Deficiency Type III, CLAD III (FERMT3, German Shepherd Variant) | Clear |

Canine Multifocal Retinopathy, cmr1 (BEST1 Exon 2) Clear

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| Canine Multifocal Retinopathy, cmr2 (BEST1 Exon 5, Coton de Tulear Variant) | Clear |

Canine Multifocal Retinopathy, cmr3 (BEST1 Exon 10 Deletion, Finnish and Swedish Lapphund, Lapponian Clear

Herder Variant)

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| Canine Multiple System Degeneration (SERAC1 Exon 4, Chinese Crested Variant) | Clear |

Canine Multiple System Degeneration (SERAC1 Exon 15, Kerry Blue Terrier Variant) Clear

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| Cardiomyopathy and Juvenile Mortality (YARS2) | Clear |

Centronuclear Myopathy, CNM (PTPLA) Clear

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| Cerebellar Hypoplasia (VLDLR, Eurasier Variant) | Clear |

Chondrodystrophy (ITGA10, Norwegian Elkhound and Karelian Bear Dog Variant) Clear

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| Cleft Lip and/or Cleft Palate (ADAMTS20, Nova Scotia Duck Tolling Retriever Variant) | Clear |

Cleft Palate, CP1 (DLX6 intron 2, Nova Scotia Duck Tolling Retriever Variant) Clear

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| Cobalamin Malabsorption (CUBN Exon 8, Beagle Variant) | Clear |

Cobalamin Malabsorption (CUBN Exon 53, Border Collie Variant) Clear

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| Collie Eye Anomaly (NHEJ1) | Clear |

Complement 3 Deficiency, C3 Deficiency (C3) Clear

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| Congenital Cornification Disorder (NSDHL, Chihuahua Variant) | Clear |

Congenital Hypothyroidism (TPO, Rat, Toy, Hairless Terrier Variant) Clear

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| Congenital Hypothyroidism (TPO, Tenterfield Terrier Variant) | Clear |

Congenital Hypothyroidism with Goiter (TPO Intron 13, French Bulldog Variant) Clear

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| Congenital Hypothyroidism with Goiter (SLC5A5, Shih Tzu Variant) | Clear |

Congenital Macrothrombocytopenia (TUBB1 Exon 1, Cairn and Norfolk Terrier Variant)

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| Congenital Myasthenic Syndrome, CMS (COLQ, Labrador Retriever Variant) | Clear |

Congenital Myasthenic Syndrome, CMS (COLQ, Golden Retriever Variant) Clear

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| Congenital Myasthenic Syndrome, CMS (CHAT, Old Danish Pointing Dog Variant) | Clear |

Congenital Myasthenic Syndrome, CMS (CHRNE, Jack Russell Terrier Variant) Clear

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| Congenital Stationary Night Blindness (LRIT3, Beagle Variant) | Clear |

Congenital Stationary Night Blindness (RPE65, Briard Variant) Clear

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| Craniomandibular Osteopathy, CMO (SLC37A2) | Clear |

Craniomandibular Osteopathy, CMO (SLC37A2 Intron 16, Basset Hound Variant) Clear

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| Cystinuria Type I-A (SLC3A1, Newfoundland Variant) | Clear |

Cystinuria Type II-A (SLC3A1, Australian Cattle Dog Variant) Clear

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| Cystinuria Type II-B (SLC7A9, Miniature Pinscher Variant) | Clear |

Darier Disease (ATP2A2, Irish Terrier Variant) Clear

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| Day Blindness (CNGB3 Deletion, Alaskan Malamute Variant) | Clear |

Day Blindness (CNGA3 Exon 7, German Shepherd Variant) Clear

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| Day Blindness (CNGA3 Exon 7, Labrador Retriever Variant) | Clear |

Day Blindness (CNGB3 Exon 6, German Shorthaired Pointer Variant) Clear

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| Deafness and Vestibular Syndrome of Dobermans, DVDob, DINGS (MYO7A) | Clear |

Demyelinating Polyneuropathy (SBF2/MTRM13)

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| Dental-Skeletal-Retinal Anomaly (MIA3, Cane Corso Variant) | Clear |

Diffuse Cystic Renal Dysplasia and Hepatic Fibrosis (INPP5E Intron 9, Norwich Terrier Variant) Clear

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| Dilated Cardiomyopathy, DCM (RBM20, Schnauzer Variant) | Clear |

Dilated Cardiomyopathy, DCM1 (PDK4, Doberman Pinscher Variant 1) Clear

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| Dilated Cardiomyopathy, DCM2 (TTN, Doberman Pinscher Variant 2) | Clear |

Disproportionate Dwarfism (PRKG2, Dogo Argentino Variant) Clear

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| Dry Eye Curly Coat Syndrome (FAM83H Exon 5) | Clear |

Dystrophic Epidermolysis Bullosa (COL7A1, Central Asian Shepherd Dog Variant) Clear

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| Dystrophic Epidermolysis Bullosa (COL7A1, Golden Retriever Variant) | Clear |

Early Bilateral Deafness (LOXHD1 Exon 38, Rottweiler Variant) Clear

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| Early Onset Adult Deafness, EOAD (EPS8L2 Deletion, Rhodesian Ridgeback Variant) | Clear |

Early Onset Cerebellar Ataxia (SEL1L, Finnish Hound Variant) Clear

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| Ehlers Danlos (ADAMTS2, Doberman Pinscher Variant) | Clear |

Ehlers-Danlos Syndrome (EDS) (COL5A1, Labrador Retriever Variant) Clear

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| Enamel Hypoplasia (ENAM Deletion, Italian Greyhound Variant) | Clear |

Enamel Hypoplasia (ENAM SNP, Parson Russell Terrier Variant) Clear

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| Episodic Falling Syndrome (BCAN) | Clear |

Exercise-Induced Collapse, EIC (DNM1)

Factor XI Deficiency (F11 Exon 7, Kerry Blue Terrier Variant) Clear

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| Familial Nephropathy (COL4A4 Exon 3, Cocker Spaniel Variant) | Clear |

Familial Nephropathy (COL4A4 Exon 30, English Springer Spaniel Variant) Clear

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| Fanconi Syndrome (FAN1, Basenji Variant) | Clear |

Fetal-Onset Neonatal Neuroaxonal Dystrophy (MFN2, Giant Schnauzer Variant) Clear

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| Glanzmann's Thrombasthenia Type I (ITGA2B Exon 13, Great Pyrenees Variant) | Clear |

Glanzmann's Thrombasthenia Type I (ITGA2B Exon 12, Otterhound Variant) Clear

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| Globoid Cell Leukodystrophy, Krabbe disease (GALC Exon 5, Terrier Variant) | Clear |

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| Factor VII Deficiency (F7 Exon 5) | Clear |

Glycogen Storage Disease Type IA, Von Gierke Disease, GSD IA (G6PC, Maltese Variant) Clear

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| Glycogen Storage Disease Type IIIA, GSD IIIA (AGL, Curly Coated Retriever Variant) | Clear |

Glycogen storage disease Type VII, Phosphofructokinase Deficiency, PFK Deficiency (PFKM, Whippet and Clear

English Springer Spaniel Variant)

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| Glycogen storage disease Type VII, Phosphofructokinase Deficiency, PFK Deficiency (PFKM, Wachtelhund  Variant) | Clear |

GM1 Gangliosidosis (GLB1 Exon 2, Portuguese Water Dog Variant) Clear

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| GM1 Gangliosidosis (GLB1 Exon 15, Shiba Inu Variant) | Clear |

GM1 Gangliosidosis (GLB1 Exon 15, Alaskan Husky Variant) Clear

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| GM2 Gangliosidosis (HEXA, Japanese Chin Variant) | Clear |

GM2 Gangliosidosis (HEXB, Poodle Variant) Clear Golden Retriever Progressive Retinal Atrophy 2, GR-PRA2 (TTC8) Clear

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| Goniodysgenesis and Glaucoma, Pectinate Ligament Dysplasia, PLD (OLFM3) | Clear |

Hemophilia A (F8 Exon 11, German Shepherd Variant 1) Clear

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| Hemophilia A (F8 Exon 1, German Shepherd Variant 2) | Clear |

Hemophilia A (F8 Exon 10, Boxer Variant) Clear

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| Hemophilia B (F9 Exon 7, Terrier Variant) | Clear |

Hemophilia B (F9 Exon 7, Rhodesian Ridgeback Variant) Clear

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| Hereditary Ataxia, Cerebellar Degeneration (RAB24, Old English Sheepdog and Gordon Setter Variant) | Clear |

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| Golden Retriever Progressive Retinal Atrophy 1, GR-PRA1 (SLC4A3) | Clear |

Hereditary Cataracts (HSF4 Exon 9, Australian Shepherd Variant) Clear

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| Hereditary Footpad Hyperkeratosis (FAM83G, Terrier and Kromfohrlander Variant) | Clear |

Hereditary Footpad Hyperkeratosis (DSG1, Rottweiler Variant) Clear

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| Hereditary Nasal Parakeratosis (SUV39H2 Intron 4, Greyhound Variant) | Clear |

Hereditary Nasal Parakeratosis, HNPK (SUV39H2) Clear

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| Hereditary Vitamin D-Resistant Rickets (VDR) | Clear |

Hypocatalasia, Acatalasemia (CAT) Clear

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| Hypomyelination and Tremors (FNIP2, Weimaraner Variant) | Clear |

Hypophosphatasia (ALPL Exon 9, Karelian Bear Dog Variant) Clear Ichthyosis (ASPRV1 Exon 2, German Shepherd Variant) Clear

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| Ichthyosis (SLC27A4, Great Dane Variant) | Clear |

Ichthyosis, Epidermolytic Hyperkeratosis (KRT10, Terrier Variant) Clear

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| Ichthyosis, ICH1 (PNPLA1, Golden Retriever Variant) | Clear |

Ichthyosis, ICH2 (ABHD5, Golden Retriever Variant) Clear

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| Inflammatory Myopathy (SLC25A12) | Clear |

Inherited Myopathy of Great Danes (BIN1) Clear

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| Inherited Selected Cobalamin Malabsorption with Proteinuria (CUBN, Komondor Variant) | Clear |

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| Ichthyosis (NIPAL4, American Bulldog Variant) | Clear |

Intervertebral Disc Disease (Type I) (FGF4 retrogene - CFA12) Clear

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| Intestinal Lipid Malabsorption (ACSL5, Australian Kelpie) | Clear |

Junctional Epidermolysis Bullosa (LAMA3 Exon 66, Australian Cattle Dog Variant) Clear

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| Junctional Epidermolysis Bullosa (LAMB3 Exon 11, Australian Shepherd Variant) | Clear |

Juvenile Epilepsy (LGI2) Clear

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| Juvenile Laryngeal Paralysis and Polyneuropathy (RAB3GAP1, Rottweiler Variant) | Clear |

Juvenile Myoclonic Epilepsy (DIRAS1) Clear

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| L-2-Hydroxyglutaricaciduria, L2HGA (L2HGDH, Staffordshire Bull Terrier Variant) | Clear |

Lagotto Storage Disease (ATG4D) Clear Late Onset Spinocerebellar Ataxia (CAPN1) Clear

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| Late-Onset Neuronal Ceroid Lipofuscinosis, NCL 12 (ATP13A2, Australian Cattle Dog Variant) | Clear |

Leonberger Polyneuropathy 1 (LPN1, ARHGEF10) Clear

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| Leonberger Polyneuropathy 2 (GJA9) | Clear |

Lethal Acrodermatitis, LAD (MKLN1) Clear

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| Leukodystrophy (TSEN54 Exon 5, Standard Schnauzer Variant) | Clear |

Ligneous Membranitis, LM (PLG) Clear

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| Limb Girdle Muscular Dystrophy (SGCD, Boston Terrier Variant) | Clear |

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| Laryngeal Paralysis (RAPGEF6, Miniature Bull Terrier Variant) | Clear |

Limb-Girdle Muscular Dystrophy 2D (SGCA Exon 3, Miniature Dachshund Variant) Clear

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| Long QT Syndrome (KCNQ1) | Clear |

Lundehund Syndrome (LEPREL1) Clear

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| Macular Corneal Dystrophy, MCD (CHST6) | Clear |

Malignant Hyperthermia (RYR1) Clear

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| May-Hegglin Anomaly (MYH9) | Clear |

Medium-Chain Acyl-CoA Dehydrogenase Deficiency, MCADD (ACADM, Cavalier King Charles Spaniel Clear

Variant)

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| Methemoglobinemia (CYB5R3, Pit Bull Terrier Variant) | Clear |

Methemoglobinemia (CYB5R3) Clear Mucopolysaccharidosis IIIB, Sanfilippo Syndrome Type B, MPS IIIB (NAGLU, Schipperke Variant) Clear

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| Mucopolysaccharidosis Type IIIA, Sanfilippo Syndrome Type A, MPS IIIA (SGSH Exon 6, Dachshund Variant) | Clear |

Mucopolysaccharidosis Type IIIA, Sanfilippo Syndrome Type A, MPS IIIA (SGSH Exon 6, New Zealand Clear

Huntaway Variant)

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| Mucopolysaccharidosis Type VI, Maroteaux-Lamy Syndrome, MPS VI (ARSB Exon 5, Miniature Pinscher  Variant) | Clear |

Mucopolysaccharidosis Type VII, Sly Syndrome, MPS VII (GUSB Exon 3, German Shepherd Variant) Clear

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| Mucopolysaccharidosis Type VII, Sly Syndrome, MPS VII (GUSB Exon 5, Terrier Brasileiro Variant) | Clear |

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| Microphthalmia (RBP4 Exon 2, Soft Coated Wheaten Terrier Variant) | Clear |

Multiple Drug Sensitivity (ABCB1) Clear

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| Muscular Dystrophy (DMD, Cavalier King Charles Spaniel Variant 1) | Clear |

Muscular Dystrophy (DMD, Golden Retriever Variant) Clear

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| Musladin-Lueke Syndrome, MLS (ADAMTSL2) | Clear |

Myasthenia Gravis-Like Syndrome (CHRNE, Heideterrier Variant) Clear

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| Myotonia Congenita (CLCN1 Exon 23, Australian Cattle Dog Variant) | Clear |

Myotonia Congenita (CLCN1 Exon 19, Labrador Retriever Variant) Clear

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| Myotonia Congenita (CLCN1 Exon 7, Miniature Schnauzer Variant) | Clear |

Narcolepsy (HCRTR2 Exon 1, Dachshund Variant) Clear

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| Narcolepsy (HCRTR2 Intron 4, Doberman Pinscher Variant) | Clear |

Narcolepsy (HCRTR2 Intron 6, Labrador Retriever Variant) Clear Neonatal Cerebellar Cortical Degeneration (SPTBN2, Beagle Variant) Clear

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| Neonatal Encephalopathy with Seizures, NEWS (ATF2) | Clear |

Neonatal Interstitial Lung Disease (LAMP3) Clear

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| Neuroaxonal Dystrophy, NAD (VPS11, Rottweiler Variant) | Clear |

Neuroaxonal Dystrophy, NAD (TECPR2, Spanish Water Dog Variant) Clear

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| Neuronal Ceroid Lipofuscinosis 1, NCL 1 (PPT1 Exon 8, Dachshund Variant 1) | Clear |

Neuronal Ceroid Lipofuscinosis 10, NCL 10 (CTSD Exon 5, American Bulldog Variant) Clear

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| Neuronal Ceroid Lipofuscinosis 2, NCL 2 (TPP1 Exon 4, Dachshund Variant 2) | Clear |

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| Nemaline Myopathy (NEB, American Bulldog Variant) | Clear |

Neuronal Ceroid Lipofuscinosis 5, NCL 5 (CLN5 Exon 4 SNP, Border Collie Variant) Clear

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| Neuronal Ceroid Lipofuscinosis 5, NCL 5 (CLN5 Exon 4 Deletion, Golden Retriever Variant) | Clear |

Neuronal Ceroid Lipofuscinosis 6, NCL 6 (CLN6 Exon 7, Australian Shepherd Variant) Clear

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| Neuronal Ceroid Lipofuscinosis 7, NCL 7 (MFSD8, Chihuahua and Chinese Crested Variant) | Clear |

Neuronal Ceroid Lipofuscinosis 8, NCL 8 (CLN8, Australian Shepherd Variant) Clear

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| Neuronal Ceroid Lipofuscinosis 8, NCL 8 (CLN8 Exon 2, English Setter Variant) | Clear |

Neuronal Ceroid Lipofuscinosis 8, NCL 8 (CLN8 Insertion, Saluki Variant) Clear

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| Neuronal Ceroid Lipofuscinosis, Cerebellar Ataxia, NCL4A (ARSG Exon 2, American Staffordshire Terrier  Variant) | Clear |

Oculocutaneous Albinism, OCA (SLC45A2 Exon 6, Bullmastiff Variant) Clear

Oculoskeletal Dysplasia 2 (COL9A2, Samoyed Variant) Clear

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| Osteochondrodysplasia (SLC13A1, Poodle Variant) | Clear |

Osteogenesis Imperfecta (COL1A2, Beagle Variant) Clear

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| Osteogenesis Imperfecta (SERPINH1, Dachshund Variant) | Clear |

Osteogenesis Imperfecta (COL1A1, Golden Retriever Variant) Clear

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| P2Y12 Receptor Platelet Disorder (P2Y12) | Clear |

Pachyonychia Congenita (KRT16, Dogue de Bordeaux Variant) Clear

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| Paroxysmal Dyskinesia, PxD (PIGN) | Clear |

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| Oculocutaneous Albinism, OCA (SLC45A2, Small Breed Variant) | Clear |

Persistent Mullerian Duct Syndrome, PMDS (AMHR2) Clear

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| Pituitary Dwarfism (POU1F1 Intron 4, Karelian Bear Dog Variant) | Clear |

Platelet Factor X Receptor Deficiency, Scott Syndrome (TMEM16F) Clear

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| Polycystic Kidney Disease, PKD (PKD1) | Clear |

Pompe's Disease (GAA, Finnish and Swedish Lapphund, Lapponian Herder Variant) Clear

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| Prekallikrein Deficiency (KLKB1 Exon 8) | Clear |

Primary Ciliary Dyskinesia, PCD (NME5, Alaskan Malamute Variant) Clear

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| Primary Ciliary Dyskinesia, PCD (STK36, Australian Shepherd Variant) | Clear |

Primary Ciliary Dyskinesia, PCD (CCDC39 Exon 3, Old English Sheepdog Variant)

Primary Lens Luxation (ADAMTS17) Clear

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| Primary Open Angle Glaucoma (ADAMTS17 Exon 11, Basset Fauve de Bretagne Variant) | Clear |

Primary Open Angle Glaucoma (ADAMTS10 Exon 17, Beagle Variant) Clear

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| Primary Open Angle Glaucoma (ADAMTS10 Exon 9, Norwegian Elkhound Variant) | Clear |

Primary Open Angle Glaucoma and Primary Lens Luxation (ADAMTS17 Exon 2, Chinese Shar-Pei Variant) Clear

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| Progressive Retinal Atrophy (SAG) | Clear |

Progressive Retinal Atrophy (IFT122 Exon 26, Lapponian Herder Variant) Clear

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| Progressive Retinal Atrophy, Bardet-Biedl Syndrome (BBS2 Exon 11, Shetland Sheepdog Variant) | Clear |

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| Primary Hyperoxaluria (AGXT) | Clear |

Progressive Retinal Atrophy, CNGA (CNGA1 Exon 9) Clear

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| Progressive Retinal Atrophy, crd1 (PDE6B, American Staffordshire Terrier Variant) | Clear |

Progressive Retinal Atrophy, crd4/cord1 (RPGRIP1) Clear

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| Progressive Retinal Atrophy, PRA1 (CNGB1) | Clear |

Progressive Retinal Atrophy, PRA3 (FAM161A) Clear

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| Progressive Retinal Atrophy, prcd (PRCD Exon 1) | Clear |

Progressive Retinal Atrophy, rcd1 (PDE6B Exon 21, Irish Setter Variant) Clear

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| Progressive Retinal Atrophy, rcd3 (PDE6A) | Clear |

Proportionate Dwarfism (GH1 Exon 5, Chihuahua Variant)

Pyruvate Dehydrogenase Deficiency (PDP1, Spaniel Variant) Clear

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| Pyruvate Kinase Deficiency (PKLR Exon 5, Basenji Variant) | Clear |

Pyruvate Kinase Deficiency (PKLR Exon 7, Beagle Variant) Clear

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| Pyruvate Kinase Deficiency (PKLR Exon 10, Terrier Variant) | Clear |

Pyruvate Kinase Deficiency (PKLR Exon 7, Labrador Retriever Variant) Clear

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| Pyruvate Kinase Deficiency (PKLR Exon 7, Pug Variant) | Clear |

Raine Syndrome (FAM20C) Clear

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| Recurrent Inflammatory Pulmonary Disease, RIPD (AKNA, Rough Collie Variant) | Clear |

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| Protein Losing Nephropathy, PLN (NPHS1) | Clear |

Renal Cystadenocarcinoma and Nodular Dermatofibrosis (FLCN Exon 7) Clear

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| Retina Dysplasia and/or Optic Nerve Hypoplasia (SIX6 Exon 1, Golden Retriever Variant) | Clear |

Sensory Neuropathy (FAM134B, Border Collie Variant) Clear

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| Severe Combined Immunodeficiency, SCID (PRKDC, Terrier Variant) | Clear |

Severe Combined Immunodeficiency, SCID (RAG1, Wetterhoun Variant) Clear

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| Shaking Puppy Syndrome (PLP1, English Springer Spaniel Variant) | Clear |

Shar-Pei Autoinflammatory Disease, SPAID, Shar-Pei Fever (MTBP) Clear

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| Skeletal Dysplasia 2, SD2 (COL11A2, Labrador Retriever Variant) | Clear |

Skin Fragility Syndrome (PKP1, Chesapeake Bay Retriever Variant)

Spinocerebellar Ataxia with Myokymia and/or Seizures (KCNJ10) Clear

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| Spongy Degeneration with Cerebellar Ataxia 1 (KCNJ10) | Clear |

Spongy Degeneration with Cerebellar Ataxia 2 (ATP1B2) Clear

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| Stargardt Disease (ABCA4 Exon 28, Labrador Retriever Variant) | Clear |

Succinic Semialdehyde Dehydrogenase Deficiency (ALDH5A1 Exon 7, Saluki Variant) Clear

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| Thrombopathia (RASGRP1 Exon 5, American Eskimo Dog Variant) | Clear |

Thrombopathia (RASGRP1 Exon 5, Basset Hound Variant) Clear

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| Thrombopathia (RASGRP1 Exon 8, Landseer Variant) | Clear |

|  |  |
| --- | --- |
| Spinocerebellar Ataxia (SCN8A, Alpine Dachsbracke Variant) | Clear |

Trapped Neutrophil Syndrome, TNS (VPS13B) Clear

|  |  |
| --- | --- |
| Ullrich-like Congenital Muscular Dystrophy (COL6A3 Exon 10, Labrador Retriever Variant) | Clear |

Ullrich-like Congenital Muscular Dystrophy (COL6A1 Exon 3, Landseer Variant) Clear

|  |  |
| --- | --- |
| Unilateral Deafness and Vestibular Syndrome (PTPRQ Exon 39, Doberman Pinscher) | Clear |

Urate Kidney & Bladder Stones (SLC2A9) Clear

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| --- | --- |
| Von Willebrand Disease Type II, Type II vWD (VWF, Pointer Variant) | Clear |

Von Willebrand Disease Type III, Type III vWD (VWF Exon 4, Terrier Variant) Clear

|  |  |
| --- | --- |
| Von Willebrand Disease Type III, Type III vWD (VWF Intron 16, Nederlandse Kooikerhondje Variant) | Clear |

Von Willebrand Disease Type III, Type III vWD (VWF Exon 7, Shetland Sheepdog Variant)

## OTHER RESULTS

|  |  |
| --- | --- |
| X-Linked Hereditary Nephropathy, XLHN (COL4A5 Exon 35, Samoyed Variant 2) | Clear |

X-Linked Myotubular Myopathy (MTM1, Labrador Retriever Variant) Clear

|  |  |
| --- | --- |
| X-Linked Progressive Retinal Atrophy 1, XL-PRA1 (RPGR) | Clear |

X-linked Severe Combined Immunodeficiency, X-SCID (IL2RG Exon 1, Basset Hound Variant) Clear

|  |  |
| --- | --- |
| X-linked Severe Combined Immunodeficiency, X-SCID (IL2RG, Corgi Variant) | Clear |

Xanthine Urolithiasis (XDH, Mixed Breed Variant) Clear

|  |  |
| --- | --- |
| β-Mannosidosis (MANBA Exon 16, Mixed-Breed Variant) | Clear |

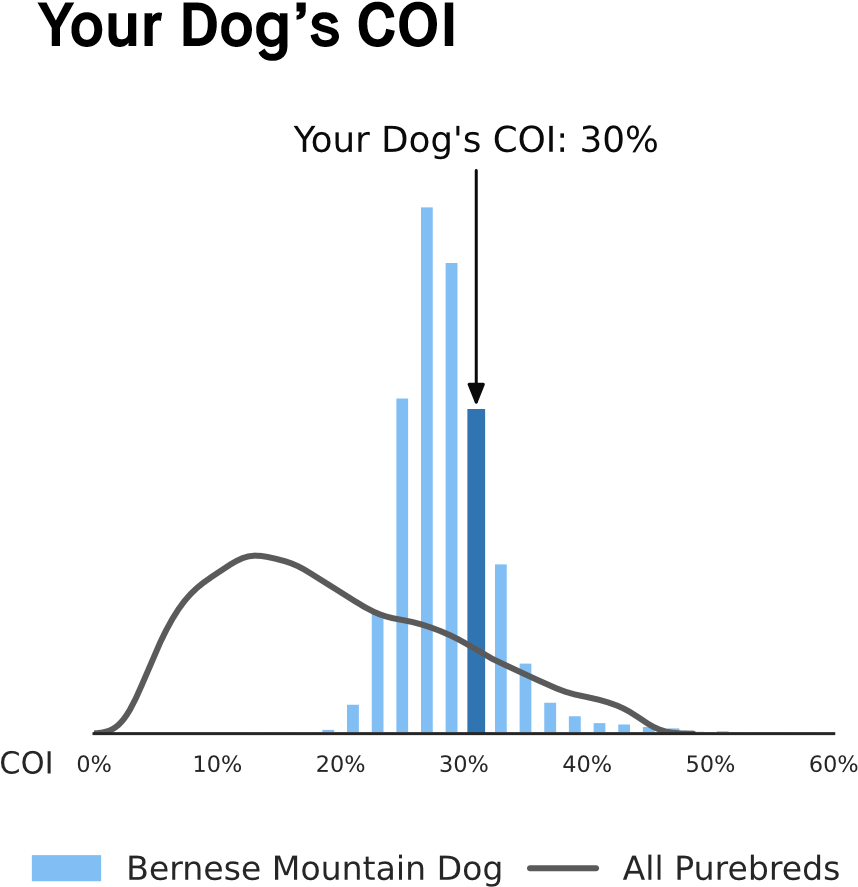
Mast Cell Tumor No result

# Genetic Diversity and Inbreeding

## Coefficient of Inbreeding (COI)

**Genetic Result: 30%**

Our genetic COI measures the proportion of your dog’s genome (her genes) where the genes on the mother’s side are identical by descent to those on the father’s side. The higher your dog’s coefficient of inbreeding (the percentage), the more inbred your dog is.



This graph represents where your dog’s inbreeding levels fall on a scale compared to both dogs with a similar breed makeup to her (the blue bars) and all purebred dogs (the grey line).

# Genetic Diversity and Inbreeding

**More on the Science**

Embark scientists, along with our research partners at Cornell University, have shown the impact of inbreeding on longevity and fertility and developed a state-of-the-art, peer-reviewed method for accurately measuring COI and predicting average COI in litters.

**Citations**

[Sams & Boyko 2019 "Fine-Scale Resolution of Runs of Homozygosity Reveal Patterns of Inbreeding and Substantial Overlap with](https://www.ncbi.nlm.nih.gov/pubmed/30429214)

[Recessive Disease Genotypes in Domestic Dogs" (https://www.ncbi.nlm.nih.gov/pubmed/30429214)](https://www.ncbi.nlm.nih.gov/pubmed/30429214)

[Chu et al 2019 "Inbreeding depression causes reduced fecundity in Golden Retrievers"](https://link.springer.com/article/10.1007/s00335-019-09805-4)

[(https://link.springer.com/article/10.1007/s00335-019-09805-4)](https://link.springer.com/article/10.1007/s00335-019-09805-4)

[Yordy et al 2019 "Body size, inbreeding, and lifespan in domestic dogs" (https://www.semanticscholar.org/paper/Body-size%2Cinbreeding%2C-and-lifespan-in-domestic-Yordy-Kraus/61d0fa7a71afb26f547f0fb7ff71e23a14d19d2c)](https://www.semanticscholar.org/paper/Body-size%2C-inbreeding%2C-and-lifespan-in-domestic-Yordy-Kraus/61d0fa7a71afb26f547f0fb7ff71e23a14d19d2c)

# About Embark

Embark Veterinary is a canine genetics company offering research-grade genetic tests to pet owners and breeders. Every Embark test examines over 200,000 genetic markers, and provides results for over 250 genetic health conditions, breed identification, clinical tools, and more.

Embark is a research partner of the Cornell University College of Veterinary Medicine and collaborates with scientists and registries to accelerate genetic research in canine health. We make it easy for customers and vets to understand, share and make use of their dog’s unique genetic profile to improve canine health and happiness.

Learn more at embarkvet.com

Veterinarians and hospitals can send inquiries to veterinarians@embarkvet.com.