# ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

PINECREEK ROCKY TOP
*registered name*

POODLE
*breed*

992000001783816
*tattoo/microchip/DNA profile*

2619556
*application number*

4/18/2025
*date of report*

PR26556409
*registration no.*

M
*sex*

12/9/2022
*date of birth*

27
*age at evaluation in months*

A Not-For-Profit Organization

PO-EL10025M27-C-VPI
*O.F.A. NUMBER*

*This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.*

*RESULTS:*
The elbows are normal. No radiographic evidence of elbow dysplasia is present.

NORMAL

owner
WAYNE MILLER
3750 TR 124
MILLERSBURG, OH 44654

OFA Certificate
Verify with QR Scan

G.G.KELLER. D.V.M., M.S., DACVR
CHIEF OF VETERINARY SERVICES

www.ofa.org


# ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

PINECREEK ROCKY TOP
*registered name*

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992000001783816
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2619556
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4/18/2025
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PR26556409
*registration no.*

M
*sex*

12/9/2022
*date of birth*

27
*age at evaluation in months*

A Not-For-Profit Organization


PO-35671G27M-C-VPI
*O.F.A. NUMBER*


*This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.*


*RESULTS:*
No radiographic evidence of hip dysplasia is present. The consensus evaluation is:

GOOD


owner
WAYNE MILLER
3750 TR 124
MILLERSBURG, OH 44654

OFA Certificate
Verify with QR Scan

G.G.KELLER. D.V.M., M.S., DACVR
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# ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

PINECREEK ROCKY TOP
*registered name*

POODLE
*breed*

992000001783816
*tattoo/microchip/DNA profile*

2619556
*application number*

4/10/2025
*date of report*

PR26556409
*registration no.*

M
*sex*

12/9/2022
*date of birth*

27
*age at evaluation in months*

PO-BCA6554/27M/P-VPI
*O.F.A. NUMBER*

*This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.*

A Not-For-Profit Organization

***RESULTS:***
Normal cardiovascular examination via auscultation - No evidence of congenital or acquired heart disease was noted. Since acquired heart disease may develop later, these evaluation results remain valid for one year, and annual examinations are recommended to continue to monitor cardiac health.

NORMAL/CLEAR - PRACTITIONER

owner

WAYNE MILLER
3750 TR 124
MILLERSBURG, OH 44654

OFA Certificate
Verify with QR Scan

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www.ofa.org


# ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

PINECREEK ROCKY TOP
*registered name*

POODLE
*breed*

992000001783816
*tattoo/microchip/DNA profile*

2619556
*application number*

4/10/2025
*date of report*


PR26556409
*registration no.*

M
*sex*

12/9/2022
*date of birth*

27
*age at evaluation in months*

PO-PA13133/27M/P-VPI
*O.F.A. NUMBER*


*This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.*

A Not-For-Profit Organization

***RESULTS:***

The results of the examination submitted to OFA indicate that no evidence of patellar luxation was recognized.

NORMAL - PRACTITIONER


owner

WAYNE MILLER
3750 TR 124
MILLERSBURG, OH 44654

OFA Certificate
Verify with QR Scan

G.G.KELLER. D.V.M., M.S., DACVR
CHIEF OF VETERINARY SERVICES

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# ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

PINECREEK ROCKY TOP
*registered name*

PR26556409
*registration no.*

POODLE, MINIATURE
*breed*

M
*sex*

12/09/2022
*date of birth*

*film/test/lab #*

992000001783816
*tattoo/microchip/DNA profile*

29
*age at evaluation in months*

2619556
*application number*

07/17/2025
*date of report*

PO-EYE13611/29M-VPI
*O.F.A. NUMBER*

*This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.*

*RESULTS:*

Based upon the exam dated 05/09/2025, this dog has been found to be free of observable inherited eye disease and has been issued an Eye Certification Registry Number which is valid for one year from the time of the exam.

NORMAL

owner
WAYNE MILLER
NAOMI MILLER
3750 TR 124
MILLERSBURG OH 44654

*OFA eCert*

*Verify QR scan*

G.G. KELLER, DVM, MS, DACVR
CHIEF OF VETERINARY SERVICES

**www.ofa.org**

This electronic OFA certificate was generated on: 07/17/2025

This certification can be verified on the OFA website by entering the dog's registration number into the orange search box located at the top of the page or by scanning the QR code above.

If there are any errors on this certificate, please email CORRECTIONS@OFA.ORG to request a correction.

Orthopedic Foundation for Animals, Inc.
2300 E. Nifong Blvd.
Columbia, MO 65201-3806

OFA website: www.ofa.org
E-mail address: ofa@ofa.org
Phone number: 573-442-0418
Fax number: 573-875-5073

# “ROCKY”

## PINECREEK ROCKY TOP

DNA Test Report | Test Date: April 11th, 2023 | embk.me/pinecreekrockytop

## BREED ANCESTRY

Poodle (Small) : 73.4%

Poodle (Standard) : 26.6%

## GENETIC STATS

Predicted adult weight: **34 lbs**

Life stage: **Young adult**

Based on your dog’s date of birth provided.

## TEST DETAILS

Kit number: EM-21844612

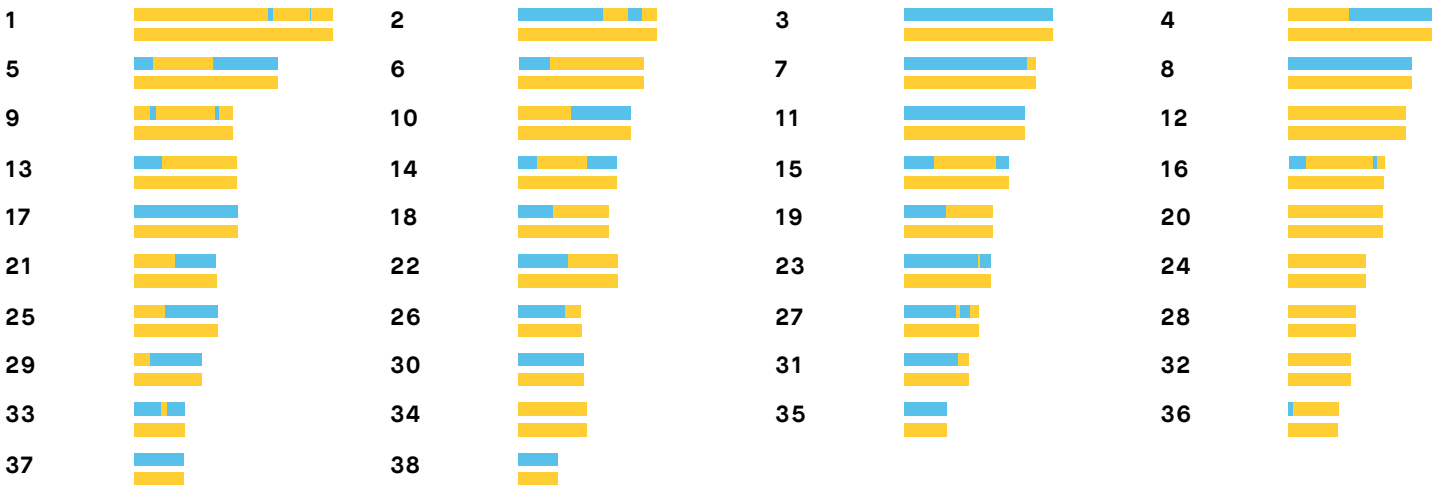
Swab number: 31220411607224

## BREED ANCESTRY BY CHROMOSOME

Our advanced test identifies from where Rocky inherited every part of the chromosome pairs in his genome.

Breed colors:

Poodle (Small) Poodle (Standard)




Registration: American Kennel Club (AKC)

# “ROCKY”

## PINECREEK ROCKY TOP

DNA Test Report | Test Date: April 11th, 2023 | embk.me/pinecreekrockytop

## TRAITS: COAT COLOR

| TRAIT | RESULT |
|---|---|
| **E Locus (MC1R)**<br><br>The E Locus determines if and where a dog can produce dark (black or brown) hair. Dogs with two copies of the recessive **e** allele do not produce dark hairs at all, and will be “red” over their entire body. The shade of red, which can range from a deep copper to yellow/gold to cream, is dependent on other genetic factors including the Intensity loci. In addition to determining if a dog can develop dark hairs at all, the E Locus can give a dog a black “mask” or “widow’s peak,” unless the dog has overriding coat color genetic factors. Dogs with one or two copies of the **Em** allele usually have a melanistic mask (dark facial hair as commonly seen in the German Shepherd and Pug). Dogs with no copies of **Em** but one or two copies of the **Eg** allele usually have a melanistic "widow's peak" (dark forehead hair as commonly seen in the Afghan Hound and Borzoi, where it is called either “grizzle” or “domino”). | **Can have a melanistic mask ($E^mE$)** |
| **K Locus (CBD103)**<br><br>The K Locus **$K^B$** allele “overrides” the A Locus, meaning that it prevents the A Locus genotype from affecting coat color. For this reason, the **$K^B$** allele is referred to as the “dominant black” allele. As a result, dogs with at least one **$K^B$** allele will usually have solid black or brown coats (or red/cream coats if they are **ee** at the E Locus) regardless of their genotype at the A Locus, although several other genes could impact the dog’s coat and cause other patterns, such as white spotting. Dogs with the **$k^yk^y$** genotype will show a coat color pattern based on the genotype they have at the A Locus. Dogs who test as **$K^Bk^y$** may be brindle rather than black or brown. | **More likely to have a patterned haircoat ($k^yk^y$)** |

# “ROCKY”

## PINECREEK ROCKY TOP

DNA Test Report | Test Date: April 11th, 2023 | embk.me/pinecreekrockytop

## TRAITS: COAT COLOR (CONTINUED)

| TRAIT | RESULT |
|---|---|
| **Intensity Loci LINKAGE**<br><br>Areas of a dog's coat where dark (black or brown) pigment is not expressed either contain red/yellow pigment, or no pigment at all. Five locations across five chromosomes explain approximately 70% of red pigmentation "intensity" variation across all dogs. Dogs with a result of **Intense Red Pigmentation** will likely have deep red hair like an Irish Setter or "apricot" hair like some Poodles, dogs with a result of **Intermediate Red Pigmentation** will likely have tan or yellow hair like a Soft-Coated Wheaten Terrier, and dogs with **Dilute Red Pigmentation** will likely have cream or white hair like a Samoyed. Because the mutations we test may not directly cause differences in red pigmentation intensity, we consider this to be a linkage test. | **Any light hair likely yellow or tan (Intermediate Red Pigmentation)** |
| **A Locus (ASIP)**<br><br>The A Locus controls switching between black and red pigment in hair cells, but it will only be expressed in dogs that are not **ee** at the E Locus and are **$k^y k^y$** at the K Locus. Sable (also called "Fawn") dogs have a mostly or entirely red coat with some interspersed black hairs. Agouti (also called "Wolf Sable") dogs have red hairs with black tips, mostly on their head and back. Black and tan dogs are mostly black or brown with lighter patches on their cheeks, eyebrows, chest, and legs. Recessive black dogs have solid-colored black or brown coats. | **Black/Brown and tan coat color pattern ($a^t a^t$)** |
| **D Locus (MLPH)**<br><br>The D locus result that we report is determined by two different genetic variants that can work together to cause diluted pigmentation. These are the common **d** allele, also known as **“d1”**, and a less common allele known as **“d2”**. Dogs with two **d** alleles, regardless of which variant, will have all black pigment lightened (“diluted”) to gray, or brown pigment lightened to lighter brown in their hair, skin, and sometimes eyes. There are many breed-specific names for these dilute colors, such as “blue”, “charcoal”, “fawn”, “silver”, and "Isabella”. Note that in certain breeds, dilute dogs have a higher incidence of Color Dilution Alopecia. Dogs with one **d** allele will not be dilute, but can pass the **d** allele on to their puppies. To view your dog’s **d1** and **d2** test results, click the "SEE DETAILS” link in the upper right hand corner of the "Base Coat Color” section of the Traits page, and then click the "VIEW SUBLOCUS RESULTS” link at the bottom of the page. | **Dark areas of hair and skin are not lightened (DD)** |

# “ROCKY”

## PINECREEK ROCKY TOP

DNA Test Report | Test Date: April 11th, 2023 | embk.me/pinecreekrockytop

## TRAITS: COAT COLOR (CONTINUED)

| TRAIT | RESULT |
|---|---|
| **Cocoa (HPS3)**<br><br>Dogs with the **coco** genotype will produce dark brown pigment instead of black in both their hair and skin. Dogs with the **Nco** genotype will produce black pigment, but can pass the **co** allele on to their puppies. Dogs that have the **coco** genotype as well as the **bb** genotype at the B locus are generally a lighter brown than dogs that have the **Bb** or **BB** genotypes at the B locus. | **No co alleles, not expressed (NN)** |
| **B Locus (TYRP1)**<br><br>Dogs with two copies of the **b** allele produce brown pigment instead of black in both their hair and skin. Dogs with one copy of the **b** allele will produce black pigment, but can pass the **b** allele on to their puppies. E Locus **ee** dogs that carry two **b** alleles will have red or cream coats, but have brown noses, eye rims, and footpads (sometimes referred to as "Dudley Nose" in Labrador Retrievers). "Liver" or "chocolate" is the preferred color term for brown in most breeds; in the Doberman Pinscher it is referred to as "red". | **Black or gray hair and skin (Bb)** |
| **Saddle Tan (RALY)**<br><br>The "Saddle Tan" pattern causes the black hairs to recede into a "saddle" shape on the back, leaving a tan face, legs, and belly, as a dog ages. The Saddle Tan pattern is characteristic of breeds like the Corgi, Beagle, and German Shepherd. Dogs that have the **II** genotype at this locus are more likely to be mostly black with tan points on the eyebrows, muzzle, and legs as commonly seen in the Doberman Pinscher and the Rottweiler. This gene modifies the A Locus $\mathbf{a^t}$ allele, so dogs that do not express $\mathbf{a^t}$ are not influenced by this gene. | **Not saddle tan patterned (II)** |
| **S Locus (MITF)**<br><br>The S Locus determines white spotting and pigment distribution. MITF controls where pigment is produced, and an insertion in the MITF gene causes a loss of pigment in the coat and skin, resulting in white hair and/or pink skin. Dogs with two copies of this variant will likely have breed-dependent white patterning, with a nearly white, parti, or piebald coat. Dogs with one copy of this variant will have more limited white spotting and may be considered flash, parti or piebald. This MITF variant does not explain all white spotting patterns in dogs and other variants are currently being researched. Some dogs may have small amounts of white on the paws, chest, face, or tail regardless of their S Locus genotype. | **Likely solid colored, but may have small amounts of white (Ssp)** |

# “ROCKY”

## PINECREEK ROCKY TOP

DNA Test Report | Test Date: April 11th, 2023 | embk.me/pinecreekrockytop

## TRAITS: COAT COLOR (CONTINUED)

| TRAIT | RESULT |
|---|---|
| **M Locus (PMEL)**<br><br>Merle coat patterning is common to several dog breeds including the Australian Shepherd, Catahoula Leopard Dog, and Shetland Sheepdog, among many others. Merle arises from an unstable SINE insertion (which we term the "M*" allele) that disrupts activity of the pigmentary gene PMEL, leading to mottled or patchy coat color. Dogs with an **M*m** result are likely to be phenotypically merle or could be "non-expressing" merle, meaning that the merle pattern is very subtle or not at all evident in their coat. Dogs with an **M*M*** result are likely to be phenotypically merle or double merle. Dogs with an **mm** result have no merle alleles and are unlikely to have a merle coat pattern.<br><br>Note that Embark does not currently distinguish between the recently described cryptic, atypical, atypical+, classic, and harlequin merle alleles. Our merle test only detects the presence, but not the length of the SINE insertion. We do not recommend making breeding decisions on this result alone. Please pursue further testing for allelic distinction prior to breeding decisions. | **Two merle alleles; may express merle or double merle (M*M*)**<br><br>**Note:** This locus includes several alleles. At the time this dog was genotyped Embark we could not distinguish all of the possible alleles. |
| **R Locus (USH2A) LINKAGE**<br><br>The R Locus regulates the presence or absence of the roan coat color pattern. Partial duplication of the USH2A gene is strongly associated with this coat pattern. Dogs with at least one **R** allele will likely have roaning on otherwise uniformly unpigmented white areas. Roan appears in white areas controlled by the S Locus but not in other white or cream areas created by other loci, such as the E Locus with **ee** along with Dilute Red Pigmentation by I Locus (for example, in Samoyeds). Mechanisms for controlling the extent of roaning are currently unknown, and roaning can appear in a uniform or non-uniform pattern. Further, non-uniform roaning may appear as ticked, and not obviously roan. The roan pattern can appear with or without ticking. | **Likely no impact on coat pattern (rr)** |
| **H Locus (Harlequin)**<br><br>This pattern is recognized in Great Danes and causes dogs to have a white coat with patches of darker pigment. A dog with an **Hh** result will be harlequin if they are also **M*m** or **M*M*** at the M Locus and are not **ee** at the E locus. Dogs with a result of **hh** will not be harlequin. This trait is thought to be homozygous lethal; a living dog with an **HH** genotype has never been found. | **No harlequin alleles (hh)** |

# “ROCKY”

## PINECREEK ROCKY TOP

DNA Test Report | Test Date: April 11th, 2023 | embk.me/pinecreekrockytop

## TRAITS: OTHER COAT TRAITS

| TRAIT | RESULT |
|---|---|
| **Furnishings (RSPO2) LINKAGE**<br>Dogs with one or two copies of the **F** allele have "furnishings": the mustache, beard, and eyebrows characteristic of breeds like the Schnauzer, Scottish Terrier, and Wire Haired Dachshund. A dog with two **I** alleles will not have furnishings, which is sometimes called an "improper coat" in breeds where furnishings are part of the breed standard. The mutation is a genetic insertion which we measure indirectly using a linkage test highly correlated with the insertion. | **Likely furnished (mustache, beard, and/or eyebrows) (FF)** |
| **Coat Length (FGF5)**<br>The FGF5 gene is known to affect hair length in many different species, including cats, dogs, mice, and humans. In dogs, the **T** allele confers a long, silky haircoat as observed in the Yorkshire Terrier and the Long Haired Whippet. The ancestral **G** allele causes a shorter coat as seen in the Boxer or the American Staffordshire Terrier. In certain breeds (such as Corgi), the long haircoat is described as "fluff." | **Likely long coat (TT)** |
| **Shedding (MC5R)**<br>Dogs with at least one copy of the ancestral **C** allele, like many Labradors and German Shepherd Dogs, are heavy or seasonal shedders, while those with two copies of the **T** allele, including many Boxers, Shih Tzus and Chihuahuas, tend to be lighter shedders. Dogs with furnished/wire-haired coats caused by RSPO2 (the furnishings gene) tend to be low shedders regardless of their genotype at this gene. | **Likely light shedding (TT)** |
| **Hairlessness (FOXI3) LINKAGE**<br>A duplication in the FOXI3 gene causes hairlessness over most of the body as well as changes in tooth shape and number. This mutation occurs in Peruvian Inca Orchid, Xoloitzcuintli (Mexican Hairless), and Chinese Crested (other hairless breeds have different mutations). Dogs with the **NDup** genotype are likely to be hairless while dogs with the **NN** genotype are likely to have a normal coat. The **DupDup** genotype has never been observed, suggesting that dogs with that genotype cannot survive to birth. Please note that this is a linkage test, so it may not be as predictive as direct tests of the mutation in some lines. | **Very unlikely to be hairless (NN)** |
| **Hairlessness (SGK3)**<br>Hairlessness in the American Hairless Terrier arises from a mutation in the SGK3 gene. Dogs with the **DD** result are likely to be hairless. Dogs with the **ND** genotype will have a normal coat, but can pass the **D** | **Very unlikely to be hairless (NN)** |

# “ROCKY”

## PINECREEK ROCKY TOP



## TRAITS: OTHER COAT TRAITS (CONTINUED)

| TRAIT | RESULT |
|---|---|
| **Oculocutaneous Albinism Type 2 (SLC45A2) LINKAGE**<br><br>Dogs with two copies **DD** of this deletion in the SLC45A2 gene have oculocutaneous albinism (OCA), also known as Doberman Z Factor Albinism, a recessive condition characterized by severely reduced or absent pigment in the eyes, skin, and hair. Affected dogs sometimes suffer from vision problems due to lack of eye pigment (which helps direct and absorb ambient light) and are prone to sunburn. Dogs with a single copy of the deletion **ND** will not be affected but can pass the mutation on to their offspring. This particular mutation can be traced back to a single white Doberman Pinscher born in 1976, and it has only been observed in dogs descended from this individual. Please note that this is a linkage test, so it may not be as predictive as direct tests of the mutation in some lines. | **Likely not albino (NN)** |
| **Coat Texture (KRT71)**<br><br>Dogs with a long coat and at least one copy of the **T** allele have a wavy or curly coat characteristic of Poodles and Bichon Frises. Dogs with two copies of the ancestral **C** allele are likely to have a straight coat, but there are other factors that can cause a curly coat, for example if they at least one **F** allele for the Furnishings (RSPO2) gene then they are likely to have a curly coat. Dogs with short coats may carry one or two copies of the **T** allele but still have straight coats. | **Likely curly coat (TT)** |

# “ROCKY”

## PINECREEK ROCKY TOP

DNA Test Report | Test Date: April 11th, 2023 | embk.me/pinecreekrockytop

## TRAITS: OTHER BODY FEATURES

| TRAIT | RESULT |
|---|---|
| **Muzzle Length (BMP3)**<br><br>Dogs in medium-length muzzle (mesocephalic) breeds like Staffordshire Terriers and Labradors, and long muzzle (dolichocephalic) breeds like Whippet and Collie have one, or more commonly two, copies of the ancestral **C** allele. Dogs in many short-length muzzle (brachycephalic) breeds such as the English Bulldog, Pug, and Pekingese have two copies of the derived **A** allele. At least five different genes affect muzzle length in dogs, with BMP3 being the only one with a known causal mutation. For example, the skull shape of some breeds, including the dolichocephalic Scottish Terrier or the brachycephalic Japanese Chin, appear to be caused by other genes. Thus, dogs may have short or long muzzles due to other genetic factors that are not yet known to science. | **Likely medium or long muzzle (AC)** |
| **Tail Length (T)**<br><br>Whereas most dogs have two **C** alleles and a long tail, dogs with one **G** allele are likely to have a bobtail, which is an unusually short or absent tail. This mutation causes natural bobtail in many breeds including the Pembroke Welsh Corgi, the Australian Shepherd, and the Brittany Spaniel. Dogs with **GG** genotypes have not been observed, suggesting that dogs with the **GG** genotype do not survive to birth.<br>Please note that this mutation does not explain every natural bobtail! While certain lineages of Boston Terrier, English Bulldog, Rottweiler, Miniature Schnauzer, Cavalier King Charles Spaniel, and Parson Russell Terrier, and Dobermans are born with a natural bobtail, these breeds do not have this mutation. This suggests that other unknown genetic mutations can also lead to a natural bobtail. | **Likely normal-length tail (CC)** |
| **Hind Dewclaws (LMBR1)**<br><br>Common in certain breeds such as the Saint Bernard, hind dewclaws are extra, nonfunctional digits located midway between a dog's paw and hock. Dogs with at least one copy of the **T** allele have about a 50% chance of having hind dewclaws. Note that other (currently unknown to science) mutations can also cause hind dewclaws, so some **CC** or **TC** dogs will have hind dewclaws. | **Unlikely to have hind dew claws (CC)** |

# “ROCKY”

## PINECREEK ROCKY TOP



## TRAITS: OTHER BODY FEATURES (CONTINUED)

| TRAIT | RESULT |
| --- | --- |
| **Blue Eye Color (ALX4) LINKAGE**<br><br>Embark researchers discovered this large duplication associated with blue eyes in Arctic breeds like Siberian Husky as well as tri-colored (non-merle) Australian Shepherds. Dogs with at least one copy of the duplication (**Dup**) are more likely to have at least one blue eye. Some dogs with the duplication may have only one blue eye (complete heterochromia) or may not have blue eyes at all; nevertheless, they can still pass the duplication and the trait to their offspring. **NN** dogs do not carry this duplication, but may have blue eyes due to other factors, such as merle. Please note that this is a linkage test, so it may not be as predictive as direct tests of the mutation in some lines. | **Less likely to have blue eyes (NN)** |
| **Back Muscling & Bulk, Large Breed (ACSL4)**<br><br>The **T** allele is associated with heavy muscling along the back and trunk in characteristically "bulky" large-breed dogs including the Saint Bernard, Bernese Mountain Dog, Greater Swiss Mountain Dog, and Rottweiler. The "bulky" **T** allele is absent from leaner shaped large breed dogs like the Great Dane, Irish Wolfhound, and Scottish Deerhound, which are fixed for the ancestral **C** allele. Note that this mutation does not seem to affect muscling in small or even mid-sized dog breeds with notable back muscling, including the American Staffordshire Terrier, Boston Terrier, and the English Bulldog. | **Likely normal muscling (CC)** |

# “ROCKY”

## PINECREEK ROCKY TOP

DNA Test Report | Test Date: April 11th, 2023 | embk.me/pinecreekrockytop

## TRAITS: BODY SIZE

| TRAIT | RESULT |
| --- | --- |
| **Body Size (IGF1)**<br>The **I** allele is associated with smaller body size. | **Smaller (II)** |
| **Body Size (IGFR1)**<br>The **A** allele is associated with smaller body size. | **Intermediate (GA)** |
| **Body Size (STC2)**<br>The **A** allele is associated with smaller body size. | **Larger (TT)** |
| **Body Size (GHR - E191K)**<br>The **A** allele is associated with smaller body size. | **Larger (GG)** |
| **Body Size (GHR - P177L)**<br>The **T** allele is associated with smaller body size. | **Larger (CC)** |

# “ROCKY”

## PINECREEK ROCKY TOP

DNA Test Report | Test Date: April 11th, 2023 | embk.me/pinecreekrockytop

## TRAITS: PERFORMANCE

| TRAIT | RESULT |
|---|---|
| **Altitude Adaptation (EPAS1)**<br>This mutation causes dogs to be especially tolerant of low oxygen environments (hypoxia), such as those found at high elevations. Dogs with at least one **A** allele are less susceptible to "altitude sickness." This mutation was originally identified in breeds from high altitude areas such as the Tibetan Mastiff. | **Normal altitude tolerance (GG)** |
| **Appetite (POMC) LINKAGE**<br>This mutation in the POMC gene is found primarily in Labrador and Flat Coated Retrievers. Compared to dogs with no copies of the mutation (**NN**), dogs with one (**ND**) or two (**DD**) copies of the mutation are more likely to have high food motivation, which can cause them to eat excessively, have higher body fat percentage, and be more prone to obesity. Read more about the genetics of POMC, and learn how you can contribute to research, in our blog post (https://embarkvet.com/resources/blog/pomc-dogs/). We measure this result using a linkage test. | **Normal food motivation (NN)** |

# “ROCKY”

## PINECREEK ROCKY TOP

DNA Test Report | Test Date: April 11th, 2023 | embk.me/pinecreekrockytop

## HEALTH REPORT

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

If Rocky 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 Rocky 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**

Of the 255 genetic health risks we analyzed, we found 1 result that you should learn about.

**Notable results** (1)

**Progressive Retinal Atrophy, prcd**

**Clear results**

**Breed-relevant** (6)

**Other** (248)

Registration: American Kennel Club (AKC)

# “ROCKY”

## PINECREEK ROCKY TOP

DNA Test Report | Test Date: April 11th, 2023 | embk.me/pinecreekrockytop

## BREED-RELEVANT RESULTS

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

| | |
|---|---|
| Progressive Retinal Atrophy, prcd (PRCD Exon 1) | Notable |
| Degenerative Myelopathy, DM (SOD1A) | Clear |
| GM2 Gangliosidosis (HEXB, Poodle Variant) | Clear |
| Intervertebral Disc Disease (Type I) (FGF4 retrogene - CFA12) | Clear |
| Neonatal Encephalopathy with Seizures, NEWS (ATF2) | Clear |
| Osteochondrodysplasia (SLC13A1, Poodle Variant) | Clear |
| Von Willebrand Disease Type I, Type I vWD (VWF) | Clear |

Registration: American Kennel Club (AKC)

# “ROCKY”

## PINECREEK ROCKY TOP

DNA Test Report | Test Date: April 11th, 2023 | embk.me/pinecreekrockytop

## HEALTH REPORT

**Notable result**

**Progressive Retinal Atrophy, prcd**

Pinecreek Rocky Top inherited one copy of the variant we tested for Progressive Retinal Atrophy, prcd

**What does this result mean?**
This variant should not impact Rocky’s health. This variant is inherited in an autosomal recessive manner, meaning that a dog needs two copies of the variant to show signs of this condition. Rocky is unlikely to develop this condition due to this variant because he only has one copy of the variant.

**Impact on Breeding**
Your dog carries this variant and will pass it on to ~50% of his offspring. You can email breeders@embarkvet.com to discuss with a genetic counselor how the genotype results should be applied to a breeding program.

**What is Progressive Retinal Atrophy, prcd?**
PRA-prcd is a retinal disease that causes progressive, non-painful vision loss. The retina contains cells, called photoreceptors, that collect information about light and send signals to the brain. There are two types of photoreceptors: rods, for night vision and movement, and cones, for day vision and color. This type of PRA leads to early loss of rod cells, leading to night blindness before day blindness.

**When signs & symptoms develop in affected dogs**
The age affected dogs will first show signs of visual impairment varies by breed. However, most begin showing clinical signs in early adulthood.

**How vets diagnose this condition**
Veterinarians use a focused light to examine the pupils. In affected dogs, the pupils will appear more dilated and slower to contract. Your vet may also use a lens to visualize the retina at the back of the eye to look for changes in the optic nerve or blood vessels. You may be referred to a veterinary ophthalmologist for a definitive diagnosis.

**How this condition is treated**
Currently, there is no definitive treatment for PRA. Supplements, including antioxidants, have been proposed for management of the disease, but have not been scientifically proven effective.

**Actions to take if your dog is affected**

- Careful monitoring by your veterinarian will be required for the rest of your affected dog's life as secondary complications, including cataracts, can develop.
- With blind dogs, keeping furniture in the same location, making sure they are on a leash in unfamiliar territory, and training them to understand verbal commands are some of the ways to help them at home.

# “ROCKY”

## PINECREEK ROCKY TOP

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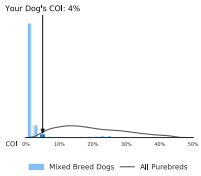
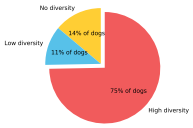
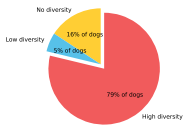
## INBREEDING AND DIVERSITY

| CATEGORY | RESULT |
|---|---|
| **Coefficient Of Inbreeding**<br><br>Our genetic COI measures the proportion of your dog's genome where the genes on the mother’s side are identical by descent to those on the father’s side. | **4%**<br><br>  |
| **MHC Class II - DLA DRB1**<br><br>A Dog Leukocyte Antigen (DLA) gene, DRB1 encodes a major histocompatibility complex (MHC) protein involved in the immune response. Some studies have shown associations between certain DRB1 haplotypes and autoimmune diseases such as Addison's disease (hypoadrenocorticism) in certain dog breeds, but these findings have yet to be scientifically validated. | **High Diversity**<br><br>How common is this amount of diversity in mixed breed dogs:<br><br>  |
| **MHC Class II - DLA DQA1 and DQB1**<br><br>DQA1 and DQB1 are two tightly linked DLA genes that code for MHC proteins involved in the immune response. A number of studies have shown correlations of DQA-DQB1 haplotypes and certain autoimmune diseases; however, these have not yet been scientifically validated. | **High Diversity**<br><br>How common is this amount of diversity in mixed breed dogs:<br><br>  |