

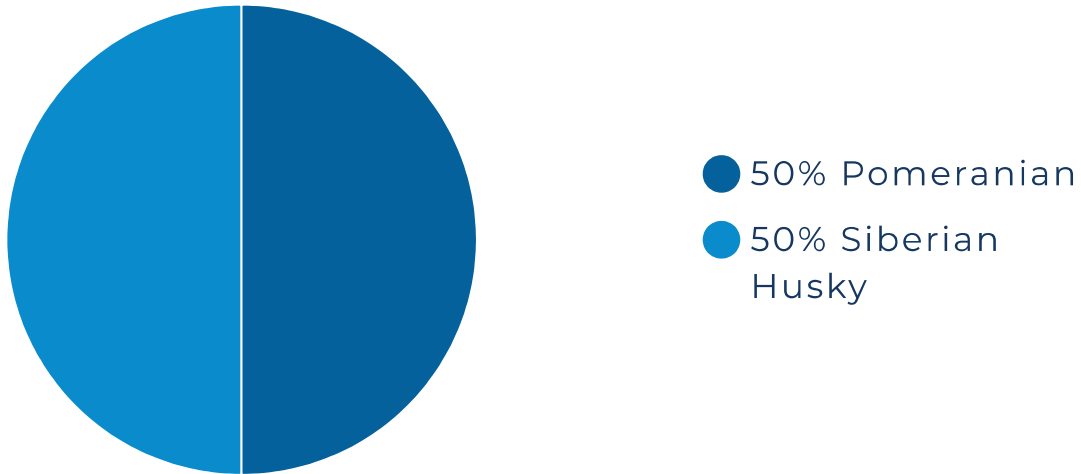
DISCOVER ALL

# ABOUT NEBULA

The results are in! Let's take a look at what the DNA told us about Nebula's ancestry...

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# NEBULA'S BREED BY PERCENTAGE



Exciting news, the results are in! Here's what makes Nebula so unique. Using the data generated from Nebula's DNA, our sophisticated computer algorithm performed over 17 million calculations! What you see here is Nebula's ancestry by percentage.

# POMERANIAN

## A UNIQUE CHARACTER AND A CHEEKY APPEARANCE.

- Active, intelligent, and alert dogs.
- Eager to learn and responds well to reward-based training using treats or favorite toys.
- Pomeranians seem to enjoy dog sports such as agility, musical canine freestyle, rally and competitive obedience.
- They tend to bark. They can be reserved around strangers and may require careful socialization to prevent or reduce defensive aggressive tendencies.

▶ **Height**  
**7 - 12 in**

▶ **Weight (show)**  
**3 - 7 lb**

▶ **Weight (pet)**  
**3 - 10 lb**



## DID YOU KNOW?

With their unique character and cheeky appearance, these great little companions have been captivating people for over 150 years. The 'Poms' you see nowadays are toy dogs, but they didn't always look like this. Think more Golden Retriever, with a bushy tail, and you'd be closer. It was Queen Victoria who influenced the change. She was given a tiny one as a present in 1888, which launched a fashion for the 'pocket-sized' dogs that went global. And the trend continues today, as breeders maintain the quality that keeps these trustworthy little fellows as popular as ever. Pomeranians unsurprisingly are from Pomerania in north-eastern Europe, and were originally known as Zwergspitz. Zwerg means 'dwarf' and 'spitz' is the German breed of its bigger ancestor. From the freezing Prussian Baltics, bred to a dinky size, and with a royal connection, the Pomeranian has been on a worldwide journey of success. No wonder this tiny dog is a giant favorite.

# SIBERIAN HUSKY

## INTELLIGENT AND HARD-WORKING DOGS.

- Active, social, and usually friendly dogs; often do well with children and other dogs.
- Siberian Huskies are energetic dogs and participate in dog sports such as sledding, skijoring (pulling a skier), and carting.
- Stubborn tendencies may be lessened by using reward-based training involving small treats and favorite toys.
- May engage in digging; might chase wildlife.

▶ **Height**  
**21 - 23 in**

▶ **Weight (show)**  
**35 - 60 lb**

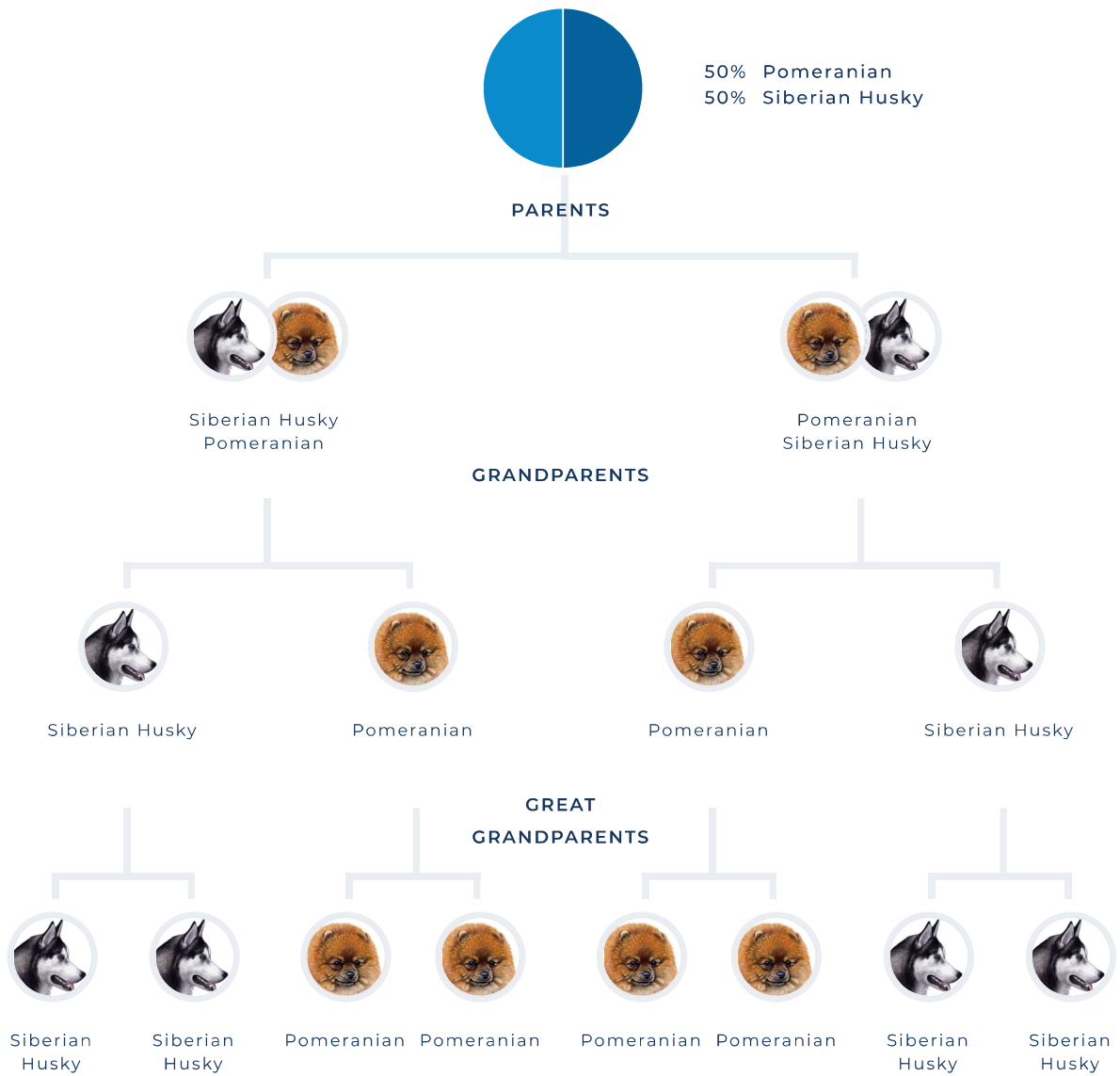
▶ **Weight (pet)**  
**34 - 67 lb**



## DID YOU KNOW?

These intelligent and hard-working dogs have been used in a number of roles over the centuries. In no particular order, they include herding reindeer, pulling sleds and even keeping children warm. They have a long history of helping humans, in fact. Some say the breed began with the Chukchi tribe of Siberia, though various other tribes are occasionally credited with helping them evolve too. Siberian Huskies were made famous in 1925 when they delivered a diphtheria serum after a city was stricken by an epidemic. Though built for the harsher climates of Siberia, they managed to find their way to America in 1909. As one of the most popular dogs in the United States today, we're glad they made the journey.

# NEBULA'S FAMILY TREE



# NEBULA'S HEALTH RESULTS

SAMPLE ID: 00BAN\_5077MARS000AP

We have tested Nebula's DNA for more than 150 disease-causing mutations. Below is a summary of our findings. For more detailed information on each of these diseases, please log into your account and review your comprehensive health results.



## AT RISK - 0

Being "At Risk" means Nebula may show or develop signs of one of the following genetic diseases. Please be sure to read the condition information carefully and share these results with your veterinarian.



## CARRIER - 0

Carrier status is where a dog has inherited one copy of a disease-causing mutation, when two copies are usually needed for disease signs to occur. The good news is that carriers are unlikely to show disease signs, but there may be a slight increase in risk of disease for some conditions. Please be sure to read the condition information carefully and share these results with your veterinarian.



## CLEAR - 159

Nebula inherited zero copies of these disease mutations. Be sure to use our share feature to let your veterinarian know about Nebula's results. For some of the conditions there may still be undiscovered mutations and/or environmental factors that could lead to similar disease signs. These clear results will help narrow down a future diagnosis if Nebula ever gets sick.

# NEBULA'S TRAITS

SAMPLE ID: 00BAN\_5077MARS000AP

**Furnishings**

Nebula does not carry any copies of the gene for 'furnishings' (which would give them a fuzzy beard and eyebrows). This means they probably have smooth, short facial hair. Did you know you can often get 'furnished' and 'unfurnished' dogs within the same breed?

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**Coat Color Subtypes**  
**Genotype: aw/at m/m h/h S/sp**

Nebula carries one copy of the gene for white spotting so might have a fair bit of white in their coat. (Did you know white is not a color but a lack of pigment which acts to cover up a dog's natural base color?)

---

**Leg Length**  
**Genotype: DD**

Nebula's legs should be relatively long in length, based on this marker (though there can be other genes that affect leg length). Did you know different dogs can have different leg lengths even if they are the same breed?

---

**Ear Carriage**  
**Genotype: TT**

A lot of factors can decide the shape of a dog's ear. But as far as we can tell, Nebula probably has perk or upright ears. Did you know this type of ear is recessive (which means you need a copy from each parent to show it)? Common breeds with upright ears include German Shepherd, Chihuahua and Husky.

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**Tail Length**  
**Genotype: CC**

Nebula likely was born with a long tail - although the exact length can vary from dog to dog. Long tails are sometimes known as 'coffee table clearers'. (If you've ever seen a long-tailed dog get excited near one, you'll know exactly why.)

# NEBULA'S TRAITS CONTINUED

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**Base Pigment Color**  
**Genotype: B/B**

Nebula carries the gene for the 'expression' of black pigment. This means that even though their overall coat color may not be black, they are still able to make black pigment. They will also likely have black around their eyes, a black nose, and may even have black pads on their feet.

**Coat Length and Type**  
**Genotype: GT CC**

Nebula's coat is probably on the short side. The exact length of a dog's coat is down to several factors so it can vary. Did you know some genes can even change how a short coat looks, including adding 'feathering', which results in longer hairs behind the ears, under the belly, and behind the legs?

**Coat Color Main Possibilities**  
**Genotype: aw/at E/e ky/ky I/wt**

Nebula likely has a wolf-gray color coat, which could be banded with darker and lighter areas. This will be thanks to the 'agouti' gene, though the exact pattern of their coat will also be affected by other genes. Some dogs with this result also have tan markings in some areas. (If they do, congratulations by the way. This is seriously rare).

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# IDEAL WEIGHT

**SAMPLE ID: 00BAN\_5077MARS000AP**

Based on our findings, we've calculated that Nebula's ideal, adult weight should be:

**13 lbs - 24 lbs**

We've factored everything we know about Nebula in predicting a healthy, adult weight. However environmental factors such as the nutrition of Nebula's mom during pregnancy and nursing, Nebula's nutrition during critical growth months, illness/parasites/ticks/fleas, and exercise levels can affect the actual weight of Nebula.

## CALCULATING WEIGHT

Our weight-predictive algorithm uses a combination of the following to calculate Nebula's ideal, adult weight:

- The published weight ranges of more than 200 purebred dogs.
- The observed weights of purebred dogs, each with an ideal Body Condition Score, from the Banfield® Pet Hospital database.
- Breeds the WISDOM PANEL™ test analysis has identified that reflect a dog's true heritage and genetic complexity.
- A genetic algorithm based on mixed-breed data that calculates the contribution of each set of chromosomal genetic markers.

## ENVIRONMENTAL EFFECTS ON WEIGHT

A dog's early life is very important in determining how they will grow and develop. They can fail to reach their ideal weight for a number of reasons, including the diet of their mother during pregnancy and nursing (as well as their own diet as puppies). Illness and disease can play a part too, as can having parasites like roundworms or fleas and ticks. For dogs who are adopted after they are fully-grown, it may be harder to find the historical background on these factors.

Maintaining a healthy weight is a key factor in Nebula having a long and healthy life.

# WISDOM<sup>TM</sup> PANEL



## STATEMENT OF AUTHENTICATION

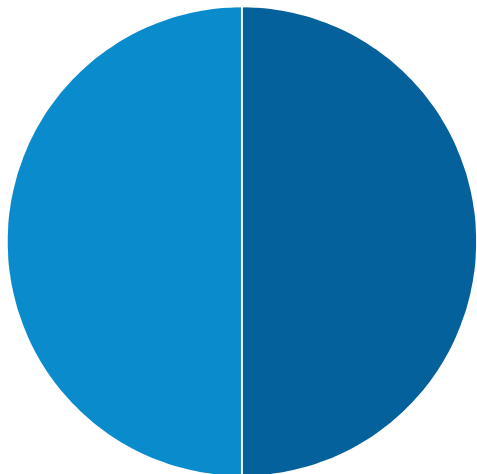
Owner's Name:

Dog's Name: **Nebula**

Sample Id: **00BAN\_5077MARS000AP**

Date: **November 29, 2020**

This certifies the authenticity of Nebula's canine genetic background as determined, following the careful analysis of more than 1800 genetic markers, by the WISDOM PANEL<sup>TM</sup> Canine DNA Test. The purebred breed signature matches included in the analysis are those that were detected in the last three generations of Nebula's ancestry using the Wisdom Health proprietary breed detection algorithm.



● 50% Pomeranian

● 50% Siberian Husky