

Wisdom Panel[®] Insights[™]

Congratulations!

Bella is a German Shepherd Dog,
Pomeranian, Whippet Mix

In the following pages, you will learn about:

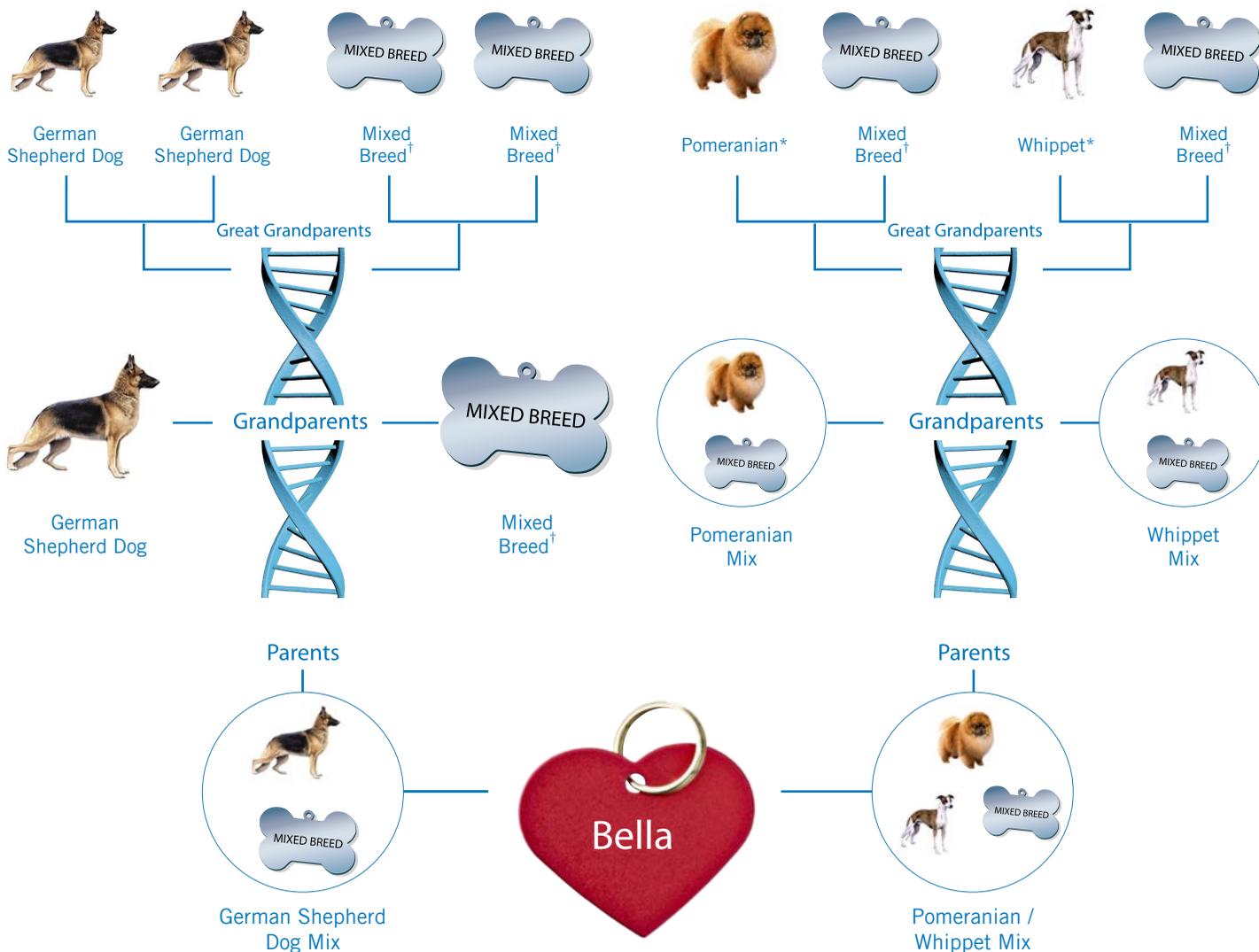
- **KEY BREEDS DETECTED**
- **KEY BREED HISTORY, APPEARANCE, AND BEHAVIOR**
- **HOW KEY PHYSICAL TRAITS ARE INHERITED**
- **OTHER POSSIBLE MIXED BREED SIGNATURES**
- **PREDICTED WEIGHT**
- **HOW TO UPLOAD A PHOTO AND SHARE YOUR STORY**
- **ADDITIONAL INFORMATION**



- **KEY BREEDS DETECTED**
- **KEY BREED HISTORY, APPEARANCE & BEHAVIOR**
- **HOW KEY PHYSICAL TRAITS ARE INHERITED**
- **MIXED BREED SIGNATURES (IF DETECTED)**
- **ADDITIONAL INFORMATION**
- **CERTIFICATE**

YOU HAVE A GERMAN SHEPHERD DOG, POMERANIAN, WHIPPET MIX

The **Wisdom Panel® Insights™** computer algorithm performed over seven million calculations using 11 different models (from a single breed to complex combinations of breeds) to predict the most likely combination of pure and mixed breed dogs in the last 3 ancestral generations that best fit the DNA marker pattern observed in Bella. The ancestry chart depicting the best statistical result of this analysis is shown in the picture below.



MIXED BREED

† Interested in the Mixed Breed ancestry? Look for the Mixed Breed Signatures page later in the report!

*Breed detected, however at a lower confidence. Such results are not included in accuracy calculations.

GERMAN SHEPHERD DOG



HEIGHT:

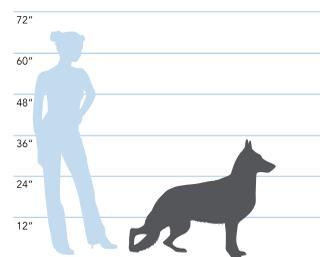
22 - 26 in

WEIGHT (SHOW):

48 - 89 lb

WEIGHT (PET):

48 - 97 lb



EARS



MUZZLE



TAIL



The modern day German Shepherd breed is a cross between the long-haired, short-haired and wire-haired shepherd dogs of the German regions of Württemberg, Thuringia and Bavaria. Initially bred for herding, due to their strength, intelligence and excellent temperament, they became popular as guard dogs, guide dogs, search and rescue dogs, police dogs and military dogs. Max Emil Von Stephanitz sought to protect and refine the German Shepherd breed at the end of the nineteenth Century. German Shepherds were used as German police and military dogs during World Wars I and II. Allied soldiers during World War I took notice of the Shepherd's use as messenger dogs or search and rescue dogs as they were very good at locating wounded soldiers. Some soldiers introduced the breed to their home countries and the popularity of the German Shepherd took off, making it one of the most popular breeds in the world today. The German Shepherd Dog was recognized by the American Kennel Club in 1908.

German Shepherd Dogs are generally a combination of black and tan, though more or less black may be seen. There is also a "gray" variant where the tip of the hair is black and the rest is tan. A black mask and a black "saddle" are both common traits in this breed. Although not an AKC variant, all-white German Shepherds exist as a separate FCI breed. The coat comes in long and short varieties.



DO YOU RECOGNIZE ANY OF THESE GERMAN SHEPHERD DOG TRAITS IN BELLA?

- Personalities can vary from calm and watchful/observant to energetic.
- Eager to learn and respond well to reward-based training.
- Enjoy participating in dog sports such as agility, tracking, flyball, and competitive obedience.
- There have been reported incidents of German Shepherd Dogs being aggressive with other pets or people.



POMERANIAN



HEIGHT:

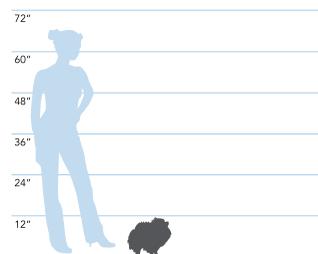
7 - 12 in

WEIGHT (SHOW):

3 - 7 lb

WEIGHT (PET):

3 - 10 lb



EARS



MUZZLE



TAIL



The roots of today's Pomeranian breed can be traced back to Prussia, in the region of Pomerania – which stretches across modern Germany and Poland along the southern coast of the Baltic Sea. Around 1850, the breed was brought to England where it was given the name Pomeranian, in honor of its homeland, and recognized by the English Kennel Club in 1870. At that time, Pomeranians were much larger than the breed standard we know today. Today's more diminutive Pomeranian was established when breeders set out to create a breed adequate for city living. Through selective breeding, English breeders were finally able to produce a dog that weighed less than twenty pounds and today's breed standard of around five pounds demonstrates just how much the breed has evolved. In 1888, Queen Victoria was gifted with a Pomeranian, and the breed's association with this influential monarch did much for its popularity all over the world. By 1900, the Pomeranian had been recognized by the American Kennel Club and today, the Pomeranian's manageable size and feisty character have made it one of the most popular breeds.

The Pomeranian has a thick double coat which puffs out around the shoulders and chest. All colors are acceptable in the breed standard, and Pomeranians may be black, brindle (black and brown striped), apricot, red, cream, sable, chocolate, or particolored. White markings and a black mask are also possible.



DO YOU RECOGNIZE ANY OF THESE POMERANIAN TRAITS IN BELLA?

- 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.



WHIPPET



HEIGHT:

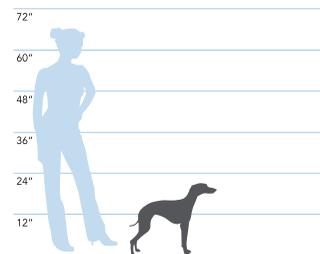
17 - 18 in

WEIGHT (SHOW):

25 - 40 lb

WEIGHT (PET):

26 - 45 lb



EARS



MUZZLE



TAIL



Many people believe that the Whippet's origins began in nineteenth century England when miners bred the Whippet to race in farmer's fields when they had a day off. The races were known as "rag races" and the dogs were commonly referred to as "the poor man's racehorse" and "the poor man's greyhound." However, this origin story is not true. While the miners of that area did indeed breed the dogs, that is not where the breed originated. The name "Whippet" was actually given to the breed in 1610 and Louis XV was presented with two of the dogs as a gift. In fact, a famous portrait of Louis XV shows him with Misse, one of the two Whippets he was given. It's not hard to see why the breed was used for racing. The Whippet is definitely a fast runner, being able to reach speeds of up to thirty-five miles per hour, and they are also known to be great hunting dogs. The Whippet was imported to the United States by English mill operators in Massachusetts and the popularity of the breed quickly spread. The Whippet was recognized by the American Kennel Club in 1888.

The Whippet may be any color, which includes black, fawn, blue (gray), red, sable, white, tan, or brindle (black and brown stripes). White markings are common, as well as lighter brindle shades, fawn markings, and black masks.



DO YOU RECOGNIZE ANY OF THESE WHIPPET TRAITS IN BELLA?

- Intelligent, quiet, and usually friendly.
- May chase and potentially harm cats or wildlife.
- As Whippets are sensitive, they respond best to reward-based training using treats or toys.
- Whippets enjoy dog sports such as lure coursing, racing, flyball, Frisbee, agility, and obedience.



HOW ARE KEY PHYSICAL TRAITS INHERITED?

THE INFLUENCE OF BREEDS ON APPEARANCE

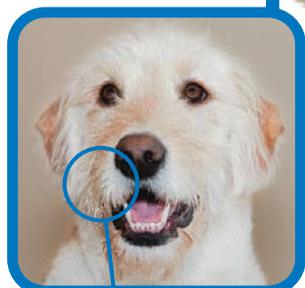
This report reveals the breeds detected in your dog's DNA. It also includes checklists of physical traits associated with these breeds. Breeds can combine their influences in countless, fascinating ways. It's a unique combination that makes your dog one-of-a-kind.

Your dog may behave like - or strongly resemble - just one of the breeds in its makeup, but - much more commonly - your dog's looks and personality will blend aspects of these breeds. Consider the example below...

In this example, you can see how many of Tula's physical traits are due to a blending of breed influences.

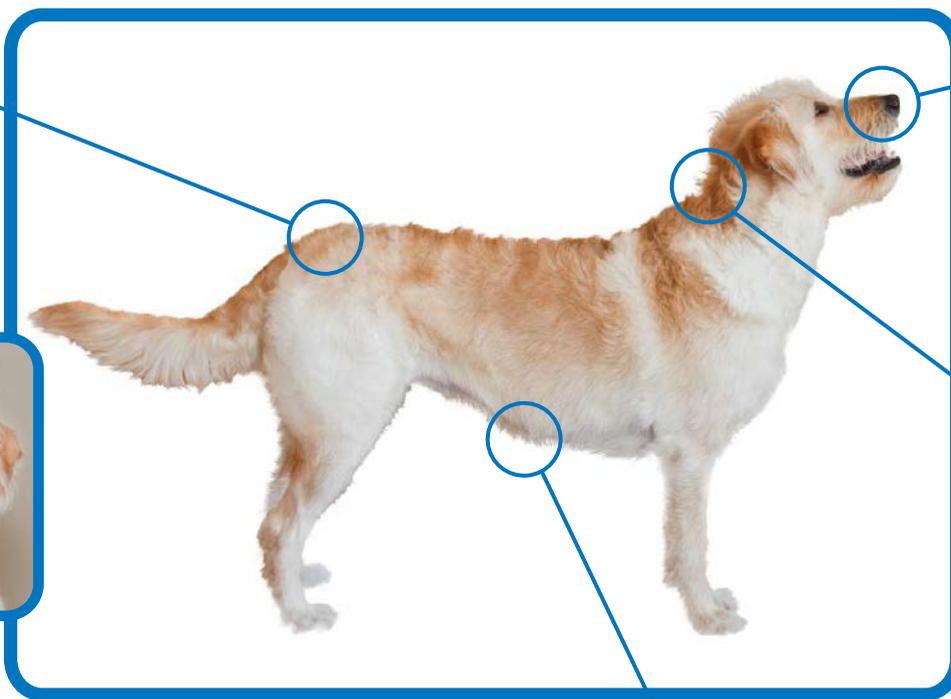
YELLOW COAT COLOR

requires two copies of a gene variant and is available from the Labrador Retriever, Poodle, and Golden Retriever.



FURNISHINGS

- the "beard" and "eyebrows" - is due to one copy of the furnishing gene variant from the Poodle.



BLACK NOSE

eye rims, lips, and pads on her feet are all due to one copy of the black gene variant that is available from all three ancestral breeds.

SOFT CURL

is coming from one copy of the curly gene variant from the Poodle and one copy of the straight variant from the Golden Retriever parent.

SHORT HAIR

is due to one copy of the gene variant from the Labrador Retriever that is dominant to the long coat of the Golden Retriever and Poodle.

Wisdom Panel® Insights™ found these breeds in our example dog Tula:



Golden Retriever



Labrador Retriever



Standard Poodle



For additional information, watch an illustrative video at <http://youtu.be/UAcPOch4-C8> - it provides educational content around canine DNA, the basic blueprint for life, and a closer look at inherited genes.

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- KEY BREED HISTORY, APPEARANCE & BEHAVIOR
- HOW KEY PHYSICAL TRAITS ARE INHERITED
- *MIXED BREED SIGNATURES (IF DETECTED)*
- ADDITIONAL INFORMATION
- CERTIFICATE

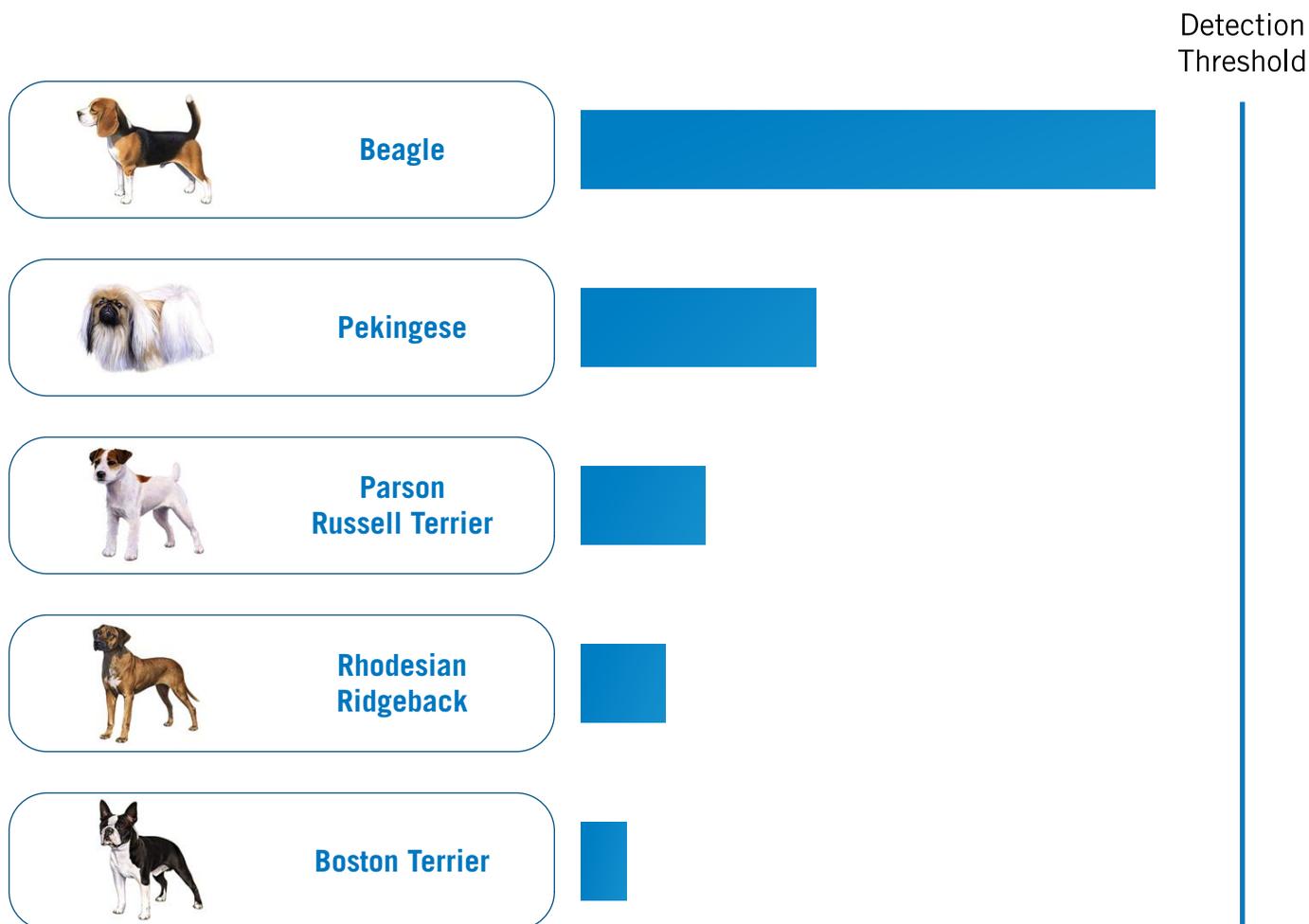


WHAT DOES THE MIXED BREED ANCESTRY MEAN FOR BELLA?

A portion of Bella’s ancestry was predicted to be mixed beyond 3 generations. While it is difficult to identify strong breed signals in this mixed portion, the 5 breeds with the strongest statistical likelihood identified in the analysis of your dog’s DNA are listed below.

The breeds are listed by the relative strength of each result in the analysis with the most likely at the top of the list. One or more of these breeds **could have** contributed to the genetic makeup of the ancestors indicated by the mixed breed icon. Note that it is highly unlikely that all these breeds are present in Bella’s ancestry.

There could also be a breed or breeds present in the mixed breed component that cannot be detected with the current database of over 200 breeds.



For more information about how Wisdom Panel Insights is performed, please see the “HOW WISDOM PANEL INSIGHTS WORKS” section later in this report.



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PREDICTED ADULT WEIGHT PROFILE:

Based upon the breeds detected in Bella's ancestry and the genetic markers analyzed by **Wisdom Panel® Insights™**, as well as the information provided that Bella is **Female** and **Intact**, we have calculated the likely weight that Bella should reach when an adult. The **Wisdom Panel Insights** target weight profile is presented as a range based on the unique mix and proportion of breeds detected.

- If Intact, the adult weight is predicted to be between 37 - 49 lbs.
- If Spayed, the adult weight is predicted to be between 39 - 52 lbs.

Many factors can influence an adult dog's weight, including sex and neuter status. Both of these factors have been used to calculate the predicted weight profile. Another major influence on canine weight is body condition score, which is a factor of your dog's lifetime nutrition and exercise regimen. If your dog's body condition is different from the ideal body condition score, we anticipate that your dog might be under (if underweight) or over (if overweight) the weight predicted by **Wisdom Panel Insights**.

To learn more about assessing body condition score, please use the Royal Canin™ Body Condition Score Chart: <http://www.royalcanin.co.uk/products/products/dog-s-body-condition2>

More information on this can be found at: <http://www.wisdompanelpro.com/sizeprediction/>



CUSTOMIZE YOUR DOG'S CERTIFICATE:

You can now include a photo of your dog on your certificate.

- Simply go to: http://www.wisdompanel.com/test_status_checker/ or go to www.wisdompanel.com and click on the TEST STATUS CHECKER box at the top
- Enter your last name and test sample ID #
- Click on the UPLOAD PHOTO button
- Follow the pop-up instructions to upload your dog's photo



BECAUSE YOU LOVE YOUR DOG - SHARE THEIR STORY!

Join our online community of dog owners and share your dog's **Wisdom Panel Insights** story with the world. At **WisdomPanel.com** you can:

- Register your dog and upload photos into our Wisdom Panel photo gallery at: http://www.wisdompanel.com/photo_gallery/
- Get help to show off your dog's breed profile on your blog, Facebook and Twitter

Use these details to create your dog's profile at wisdompanel.com:

Owner: Mary Smith
Report Code: 1234567890



You can also post your story on our Facebook page, Doggie DNA, and don't forget to follow us on Twitter!



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Thank you for using Wisdom Panel® Insights™ to uncover the story of your dog's ancestry!

Congratulations on taking the steps to learn about Bella's ancestry and to understand what breeds are in your mixed breed dog using **Wisdom Panel Insights!** Knowing your dog's breeds is more than a novelty - it is a medical necessity. Each breed in your pooch's genetic paw print has unique health concerns you should know about so that you can provide a lifetime of excellent care.



We recommend discussing your dog's ancestry report with your veterinarian, as he or she can help you use your **Wisdom Panel Insights** report to help better care for Bella. The next time you visit your veterinarian, consider asking these questions in addition to any you come up with on your own:

- Are there any specific issues that may be relevant to my dog's well-being?
- Are there any special techniques that may help in training a dog with this particular mix?
- Are there any particular dietary considerations to bear in mind for a dog like mine?

HOW WISDOM PANEL INSIGHTS WORKS

The process started when you sent a sample to our laboratory, where the DNA was extracted from the cells and examined for the 321 markers that are used in the test. The results for these markers were sent to a computer, that evaluated them using a program designed to consider all of the pedigree trees that are possible in the last three generations. The trees considered include a simple pedigree with a single breed (a likely pure-bred dog), two different breeds at the parental level (a first-generation cross), all the way up to a complex tree with eight different great-grandparent breeds allowed.

Our computer used information from over 200 breeds and varieties from our breed database to fill these potential pedigrees. For each of the millions of combinations of ancestry trees built and considered, the computer gave each a score representing how well that selected combination of breeds matched to your dog's data. The pedigree with the overall best score is the one which is shown on the ancestry chart. Only breeds that reached our set confidence threshold for reporting are reported in the ancestry chart.

MORE BREED INFORMATION

Visit www.Genesis4Pets.com to find out more about your dog's health-care needs: you'll feel better knowing that you're doing everything you can to keep your pal happy and healthy. In addition to loads of free, easy-to-understand information based on the latest medical research, you will receive a 50% discount on all downloadable health-care booklets that explain the common health concerns for individual breeds. Simply enter promotional code **WISDOM** when you check out to receive your discount (expires 30 days after you receive your Wisdom Panel report).

Accessing your test status checker online also lets you view Mixed-Breed Genesis health reports provided by VetThink™ which are designed to assist you to take the best possible care of your dog throughout its life.



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TERMS AND CONDITIONS

Each dog is unique and their physical and behavioral traits will be the result of multiple factors, including genetics, training, handling, and environment. Using a proprietary analysis and database, **Wisdom Panel[®] 2.0** product can provide insight into the breed ancestry of your dog. The **Wisdom Panel 2.0** product is designed and intended to be used solely to either identify the genetic breed makeup and predict the adult size of such a mixed-breed dog, or to confirm the genetic profile observed in a tested dog matches a particular breed profile. No other purpose is intended, authorized, or permitted.

Upon receipt of your sample, Mars Veterinary will analyze your dog's DNA to determine the breed(s) present in your dog's recent ancestry. In the case of a likely purebred dog, this will involve a comparison of genetic profile in your dog to a proposed breed. In the case of a proposed crossbred dog (i.e. a dog with ancestry from two different purebred parents), this will involve determining the heritage of your dog's sire and dam. In all cases this is done with a reasonable degree of certainty.

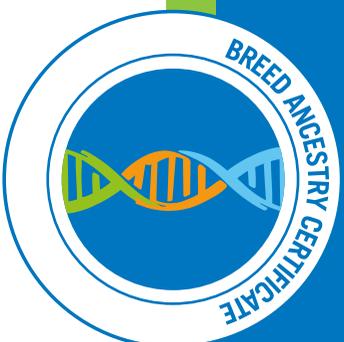
Mars Veterinary's testing procedures are designed to provide reliable and accurate results. Mars Veterinary is not responsible for any errors in obtaining the swab sample or for any injuries or loss that may occur as a result.

In the unlikely event that it is not possible to determine breed history or that an error in the analysis occurs, liability by Mars Veterinary or related companies and individuals is expressly disclaimed. Damages, if any, are limited to the payment actually received by Mars Veterinary for the specified analysis at issue.

Wisdom Panel 2.0 is based upon the Mars Veterinary database of validated breeds. If your dog contains other breeds, it may result in the identification of breeds, or a combination of breeds in the database, related to the breeds in your pet's history.

Many countries and provinces have breed-specific ordinances and laws that may require special handling or prohibit the ownership of some dogs with a particular breed in their genetic background. **Wisdom Panel 2.0** is not intended to be used by regulatory or animal control officials to determine whether a particular breed is legislated or banned in a particular country or province. Nor is **Wisdom Panel 2.0** intended to be used in any judicial proceedings. Rather, it is intended to be used as a tool or resource in determining a dog's genetic history. Neither Mars Veterinary nor any related company is responsible for compliance or notification regarding these matters.





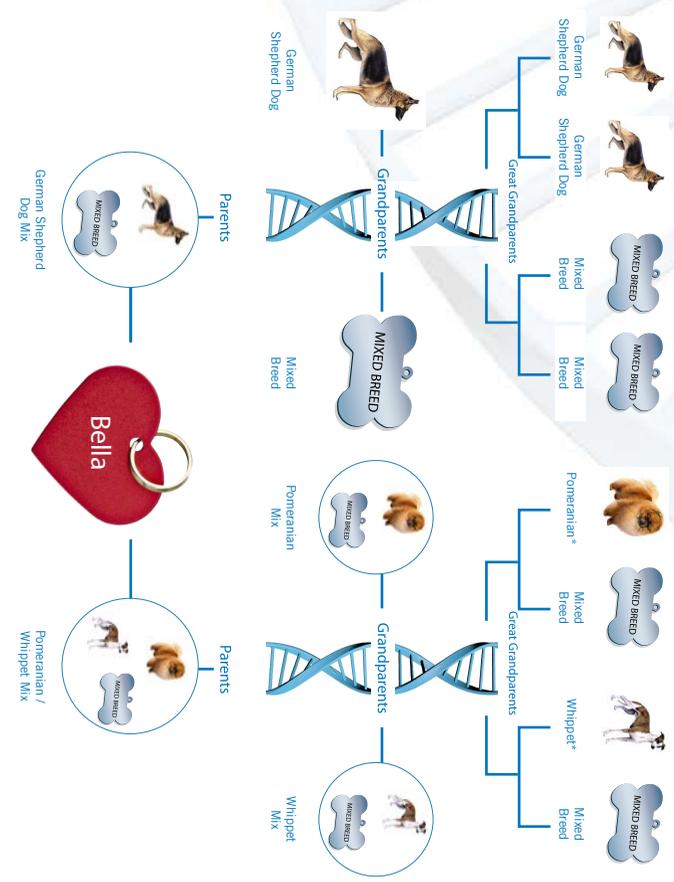
STATEMENT OF AUTHENTICATION

Owner's name: **Mary Smith**

Dog's name: **Bella**

Date: **January 6, 2014**

This certifies the authenticity of Bella's canine genetic background as determined following careful analysis of more than 300 genetic markers using **Wisdom Panel® Insights™**. The purebred dog breed signature matches included in this analysis are those that were detected in the last three generations of Bella's ancestry using the proprietary breed detection algorithm at Mars Veterinary.



DR. NEALE FRETWELL

Research & Development Director

**Bella is a German Shepherd
Dog, Pomeranian, Whippet Mix**