

# Wisdom Panel<sup>®</sup> Insights<sup>™</sup>

## Congratulations!

Odin is a Golden Retriever,  
Chinese Shar-Pei, Collie, Saint  
Bernard Mix

In the following pages, you will learn about:

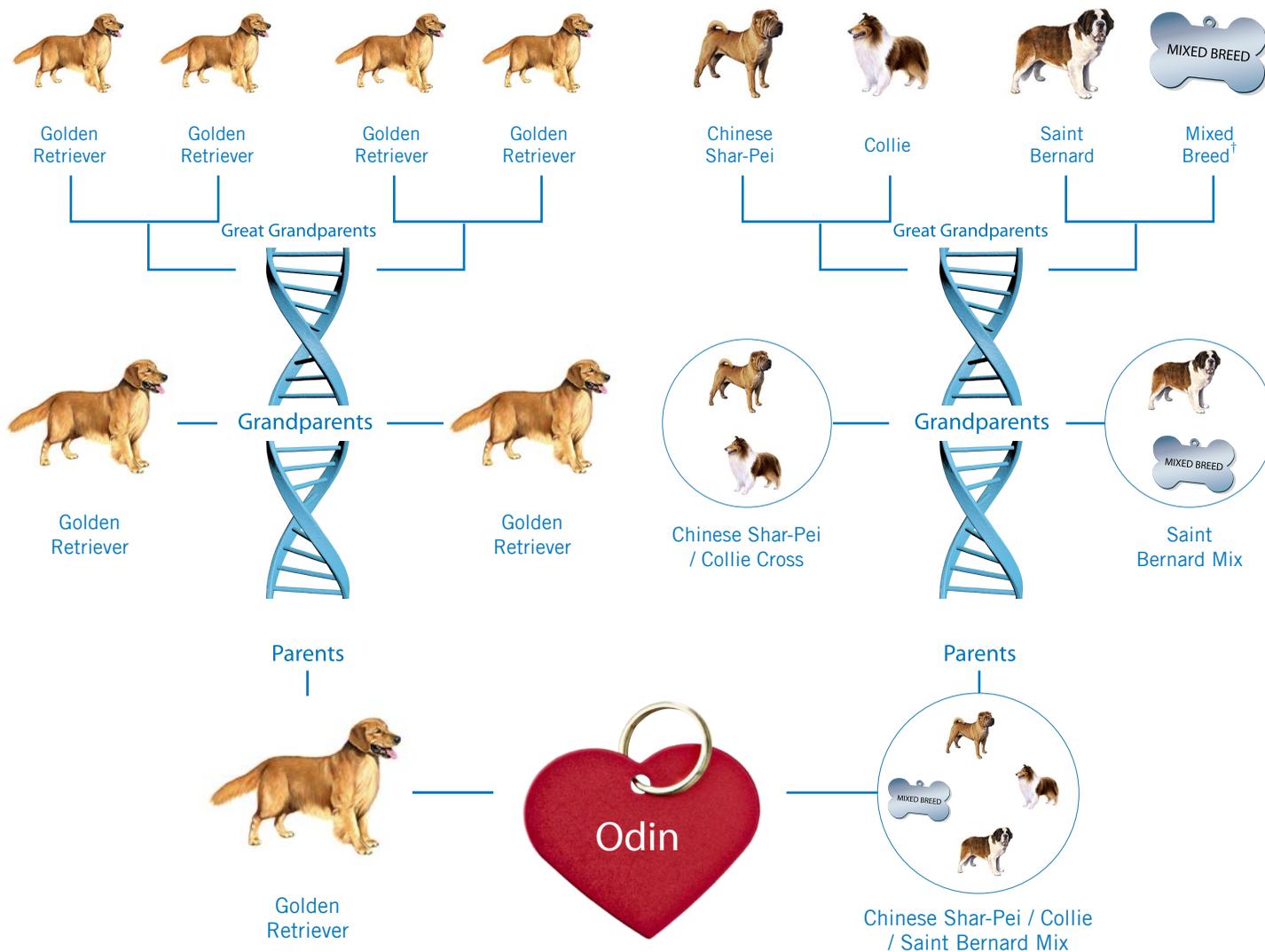
- **KEY BREEDS DETECTED**
- **KEY BREED HISTORY, APPEARANCE, AND BEHAVIOR**
- **HOW KEY PHYSICAL TRAITS ARE INHERITED**
- **OTHER POSSIBLE MIXED BREED SIGNATURES**
- **PREDICTED WEIGHT**
- **HOW TO UPLOAD A PHOTO AND SHARE YOUR STORY**
- **ADDITIONAL INFORMATION**



- 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 GOLDEN RETRIEVER, CHINESE SHAR-PEI, COLLIE, SAINT BERNARD 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 Odin. 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!

# GOLDEN RETRIEVER



**HEIGHT:**

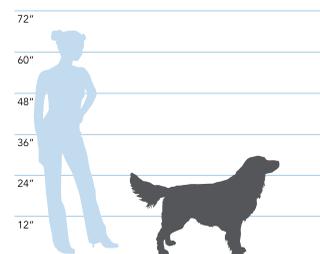
20 - 24 in

**WEIGHT (SHOW):**

55 - 70 lb

**WEIGHT (PET):**

46 - 80 lb



**EARS**



**MUZZLE**

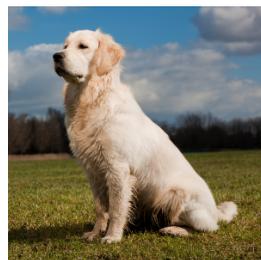


**TAIL**



Golden Retrievers are very popular dogs that can trace their lineage back to nineteenth century Scotland. They were bred as hunting dogs, used to locate and retrieve game from land and water. Initial efforts to breed the Golden Retriever were conducted by Sir Dudley Majoribanks, Lord of Tweedmouth, who spent twenty years secretly developing the breed. He began with a yellow dog from Brighton and an English retriever with a liver-colored curly coat called a Tweedwater Spaniel, now extinct. He later introduced Labrador Retrievers, Newfoundlands, Red Setters and Bloodhounds into the mix. The breed was accepted by the Kennel Club of England in 1903 as the “Golden Flat Coat” and they were first shown in an English dog show in 1908. Golden Retrievers were introduced to the United States in the late 1890’s and the name Golden Retriever was given to them in 1920. The American Kennel Club recognized the breed in 1925.

Golden Retrievers, like their name suggests are generally a rich golden color, which ranges from a light gold to a darker reddish gold. The coat and tail is feathered with paler creams though the dog is never white. The coat is dense enough to be textured though is neither short nor especially long.



**DO YOU RECOGNIZE ANY OF THESE GOLDEN RETRIEVER TRAITS IN ODIN?**

- Happy-go-lucky, calm, or easy-going dogs, although some can be energetic or nervous.
- Usually friendly and are generally good family dogs.
- Enjoys sports such as hunting, tracking, agility and retrieving items such as floating toys that use the breed’s swimming ability.
- Quite food motivated, which may make it easier to teach the Golden Retriever to drop retrieved items not intended for play.



## CHINESE SHAR-PEI



### HEIGHT:

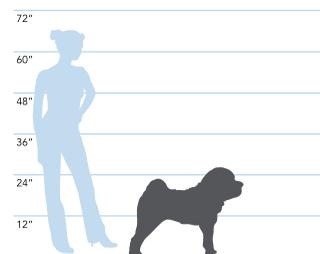
18 - 20 in

### WEIGHT (SHOW):

40 - 60 lb

### WEIGHT (PET):

40 - 68 lb



### EARS



### MUZZLE



### TAIL



The Shar-Pei is an early breed whose origins date back to the Han Dynasty in Southern China. The first recorded history of the Shar-Pei is in artwork dating back to 200 BC. They were believed to have descended from the Nordic and Mastiff breeds of ages past. Some even believe that the Chow Chow may share some heritage with the Chinese Shar-Pei, due to the breeds' characteristic black tongues. The Shar-Pei was originally bred to be a farming dog, but they were also used to hunt and were sometimes used for dog fighting. The breed faced the threat of extinction when the communist regime in China outlawed them during the revolution. In 1978 it was recognized in the Guinness Book of Records as the rarest dog breed in existence. They were first introduced to the United States in 1966. When an article was published in 1973 asking the United States to assist with the survival of the breed, American breeders responded and the numbers began to rise. Today the Shar Pei, while not exactly common, is no longer in danger of extinction. The American Kennel Club recognized the breed in October of 1991.

The Chinese Shar-Pei can be a range of solid colors including black, white, cream, apricot, brown, red, chocolate, brindle (black and brown striped), and blue (a gray color) with darker shading around the back and muzzle. The muzzle may have a black mask, but the breed always has a blue-black tongue.



### DO YOU RECOGNIZE ANY OF THESE CHINESE SHAR-PEI TRAITS IN ODIN?

- Intelligent, independent, and alert dogs with a reputation of being loyal to the family.
- Chinese Shar-Pei are moderately active dogs.

- Independent spirit but responds well to a reward-based approach to training involving treats or favorite toys.

- May be wary or reserved around strangers. There have been reported incidents of Chinese Shar Peis being aggressive with other pets or people.



# COLLIE



**HEIGHT:**

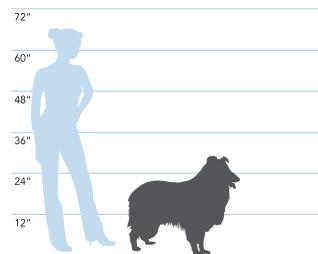
20 - 24 in

**WEIGHT (SHOW):**

45 - 75 lb

**WEIGHT (PET):**

44 - 79 lb



**EARS**



**MUZZLE**



**TAIL**



The Collie originated in Scotland, where they were bred for hundreds of years to work as shepherds and guard dogs. Today the Collie is one of the most popular breeds in the world. Over the years, the Collie has developed an amazing level of intelligence and the breed has been used for herding, protection, water rescue and as a guide for the blind. Queen Victoria, J.P. Morgan, Jim Reeves, Cecil Hepworth, Brooke Langton, Mario Lemieux, David Duchovny, President Coolidge and President Hoover have all owned Collies at some point during history. The Collie's reputation for bravery, loyalty and intelligence was further enforced after the release of the film, "Lassie Come Home" in 1943 and popularity soared through the '40's and '50's when the TV Lassie series idealized the Collie as a family dog. The health of the breed suffered somewhat as indiscriminate breeding took place to capitalize upon the breed's popularity, but today Collies remain consistently popular with pet owners. The breed received American Kennel Club recognition in 1885.

The four main AKC coat descriptions are "Sable and White" (Sable is a variety of tan shades), "Tri-Color" (Mainly black with white and tan markings), "Blue Merle" (A mottled coat of various shades) and "White" (One of the other types with more white in the coat). The coat may be either short (Smooth) or long (Rough). Blazes of white across the muzzle and chest are common in this breed.



**DO YOU RECOGNIZE ANY OF THESE COLLIE TRAITS IN ODIN?**

- Intelligent, obedient, active, and watchful dogs.
- Collies seem to enjoy dog sports such as agility, flyball, Frisbee, tracking, rally and competitive obedience.
- Collies are eager to learn especially with reward-based training,
- Although they are often good with children and are usually friendly, some Collies can be wary or reserved with strangers.



# SAINT BERNARD



**HEIGHT:**

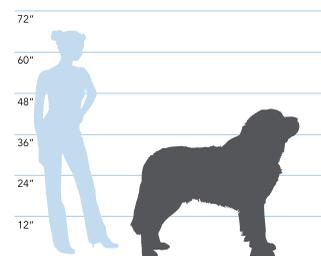
32 - 36 in

**WEIGHT (SHOW):**

121 - 200 lb

**WEIGHT (PET):**

106 - 186 lb



**EARS**



**MUZZLE**



**TAIL**



The St. Bernard was developed in the Swiss-Italian Alps some 350 years ago and their rescuing abilities are legendary. The breed was developed by a group of monks tending a hospice at the Great Saint Bernard Pass. They are likely descended from the Asian “Molosser,” which was introduced to Switzerland by Roman armies long ago. St. Bernards were trained to work their rescue missions in packs of four. Once a victim was found, two of the dogs would lay near to keep them warm, one would try to revive the victim by licking his face and the fourth would go off to seek help. Since the time the breed began working as rescue dogs, they are believed to have saved over 2000 people. The most famous St. Bernard (Barry) is credited with saving somewhere between 40 and 100 lives. His body was preserved and still stands in the Natural History Museum in Berne. The modern name, St. Bernard, was given the breed in the 1850’s, and they were introduced to the United States in 1870. They were recognized by the American Kennel Club in 1885.

The Saint Bernard can be short or longhaired with a particolored coat of white and either black, brindle, or a range of brown shades from light tan to a deep mahogany as well as brighter rust shades. The black mask is also a common trait in this breed.



**DO YOU RECOGNIZE ANY OF THESE SAINT BERNARD TRAITS IN ODIN?**

- Intelligent, hard working, calm, and usually friendly dogs.

Saint Bernards enjoy dog sports such as draft

- work pulling carts, weight pulling, agility, tracking, and obedience.

Stubborn tendencies may be reduced by using

- motivational tools such as treats and favorite toys in reward-based training.

- May be protective around strangers.



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- *HOW KEY PHYSICAL TRAITS ARE INHERITED*
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## 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.

#### BLACK NOSE

eyerims, 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.

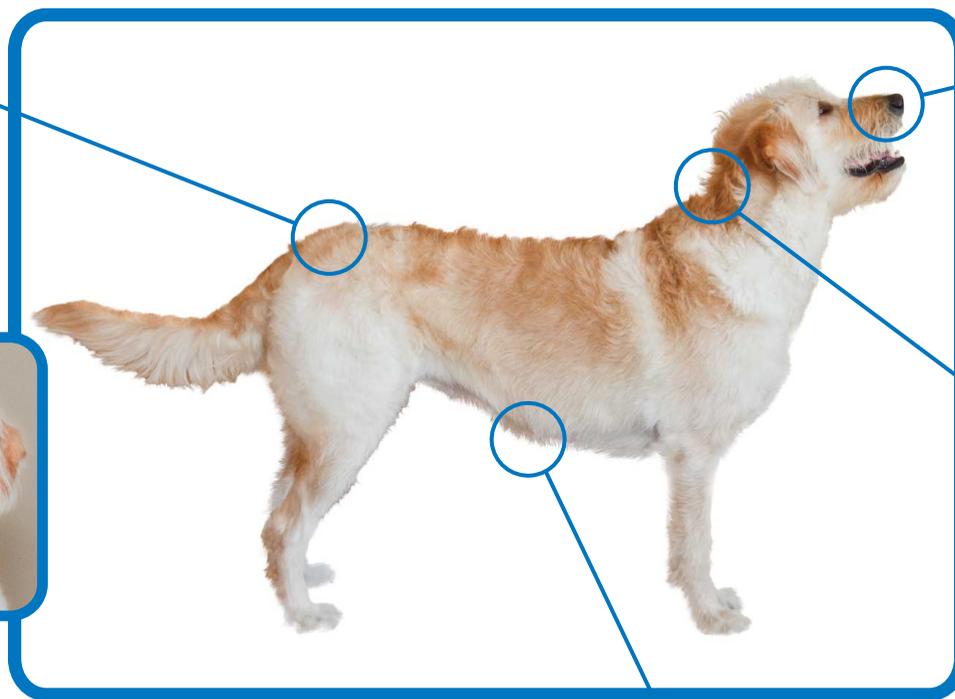


#### FURNISHINGS

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

#### SHORT HAIR

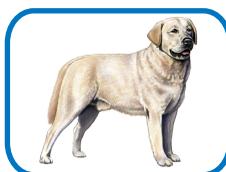
is due to one copy of one gene variant from the Labrador Retriever that is dominant to the long coat of the Golden Retriever and Poodle.



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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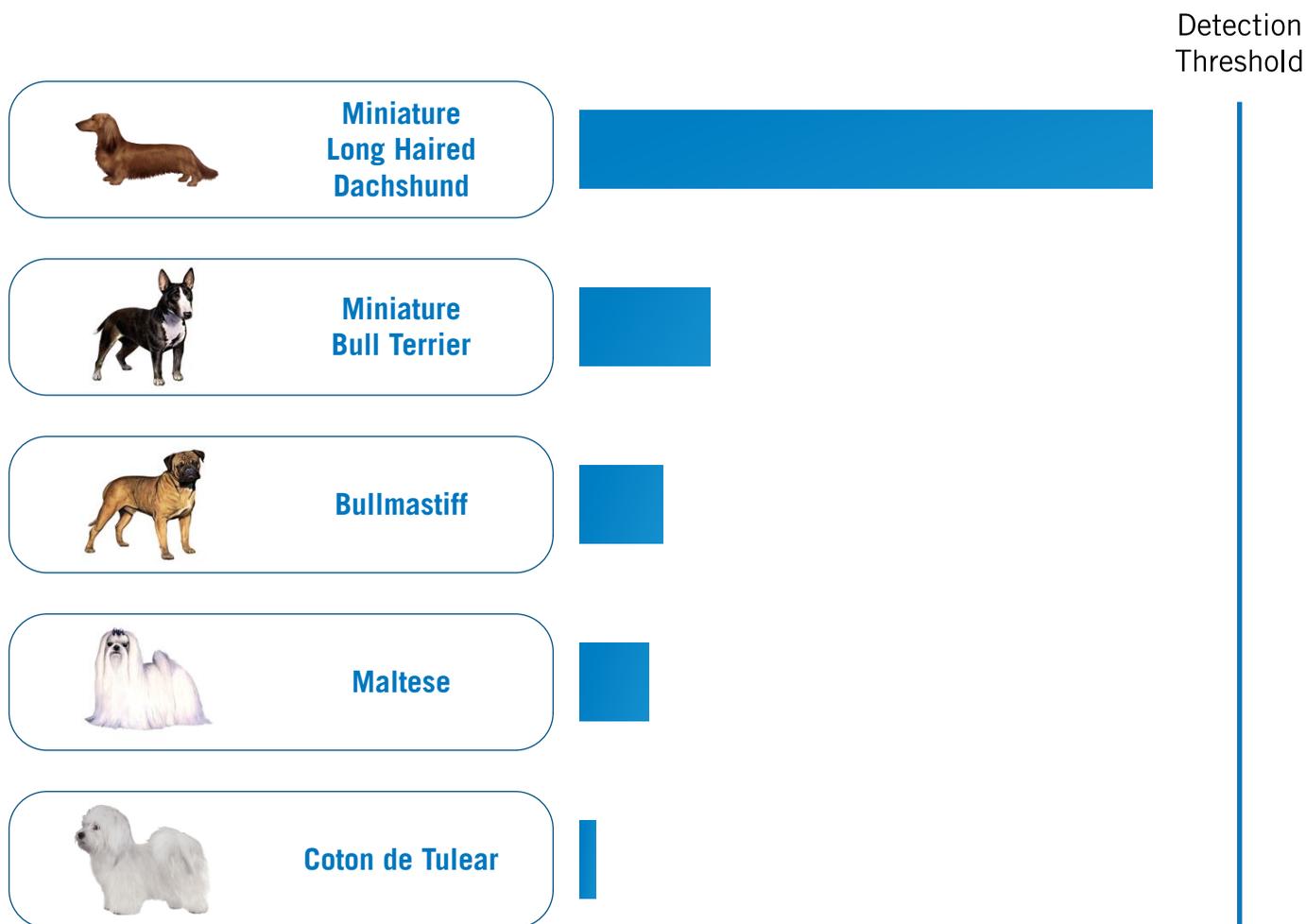


## WHAT DOES THE MIXED BREED ANCESTRY MEAN FOR ODIN?

A portion of Odin’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 Odin’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 Odin's ancestry and the genetic markers analyzed by **Wisdom Panel® Insights™**, as well as the information provided that Odin is **Male** and **Neutered**, we have calculated the likely weight that Odin 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.

- The adult weight is predicted to be between 58 - 86 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/](http://www.wisdompanel.com/test_status_checker/) or go to [www.wisdompanel.com](http://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/](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](http://wisdompanel.com):

**Owner: Brian Rude**  
**Report Code: 3302979**



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 Odin'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 Odin. 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

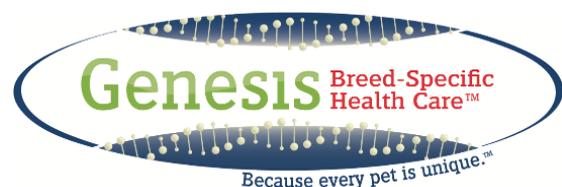
The process started when you sent a sample to our laboratory, where the DNA was extracted from the cells and examined for the 321 markers that are used in the test. The results for these markers were sent to a computer, that evaluated them using a program designed to consider all of the pedigree trees 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](http://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<sup>®</sup> 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 cities and communities 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 community. Neither Mars Veterinary nor any related company is responsible for compliance or notification regarding these matters.





# STATEMENT OF AUTHENTICATION

Owner's name: **Brian Rude**

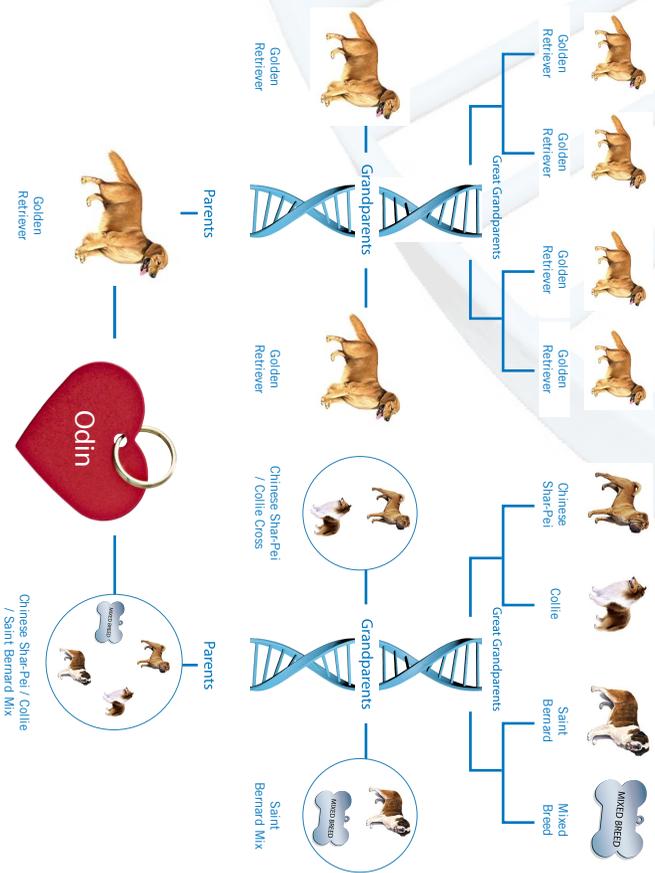
Dog's name: **Odin**

Date: **December 30, 2013**

This certifies the authenticity of Odin'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 Odin's ancestry using the proprietary breed detection algorithm at Mars Veterinary.

**DR. NEALE FRETWELL**

Research & Development Director



**Odin is a Golden Retriever, Chinese Shar-Pei, Collie, Saint Bernard Mix**