Wisdom Panel® Insights™

Congratulations!

Pru is a Chihuahua, Pomeranian Mix

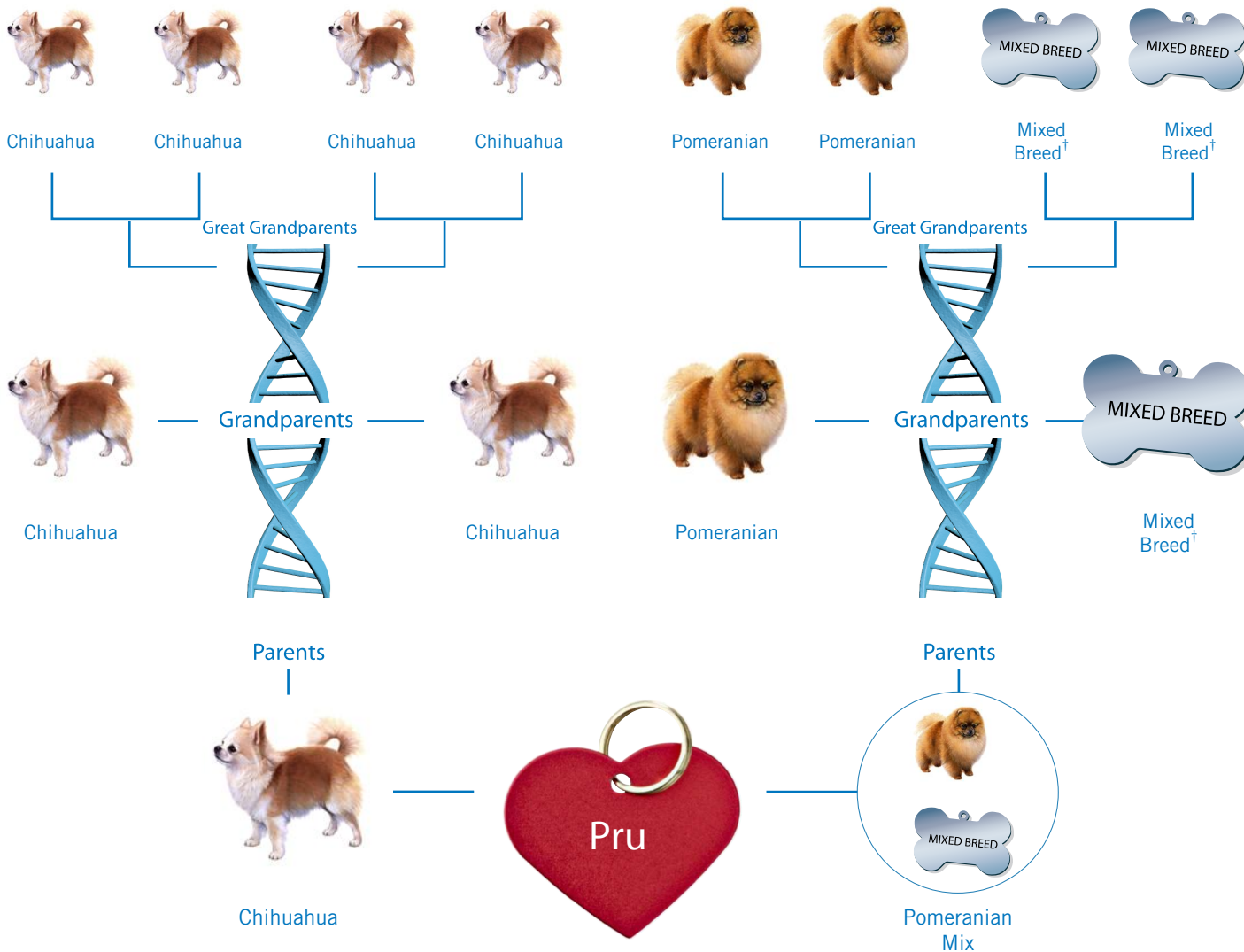**In the following pages, you will learn about:**

- **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**

PRU

Wisdom Panel® Insights™

➤ *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 CHIHUAHUA, POMERANIAN 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 Pru. The ancestry chart depicting the best statistical result of this analysis is shown in the picture below.

Chihuahua   Chihuahua   Chihuahua   Chihuahua   Pomeranian   Pomeranian   Mixed Breed†   Mixed Breed†

Great Grandparents   Great Grandparents

Grandparents   Grandparents

Chihuahua   Chihuahua   Pomeranian   Mixed Breed†

Parents   Parents

Chihuahua   Pru   Pomeranian Mix

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

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CHIHUAHUA
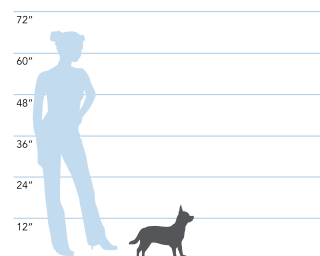
Chihuahua

HEIGHT:
6 - 9 in

WEIGHT (SHOW):
2 - 7.5 lb

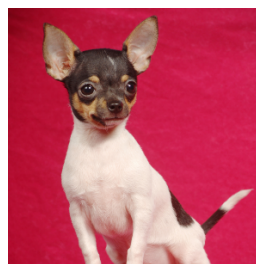**WEIGHT (PET):**
2 - 9 lb

EARS　　　**MUZZLE**　　　**TAIL**

The Chihuahua is one of the most ancient of dog breeds, with its origins dating back to the Mayan civilization. The breed is believed to have descended from the ancient Techichi, a dog that played an important role in both the Toltec and Aztec cultures. Some believe that the Chihuahua is a result of the crossing of the Techichi and the Chinese Crested, which came to South America from Alaska. Due to the destruction of the ancient civilizations, the breed faced extinction. However, remnants of the breed survived in Mexico and the Chihuahua was introduced to the United States in 1898. The Chihuahua was recognized as an official breed in 1904 by the American Kennel Club and by 1915, thirty Chihuahuas were registered in the States with that number jumping to over 25,000 by the early seventies.

The Chihuahua has a vast amount of variation partly due to the fact that any color or combination is permitted in the breed standard. The coat comes in either long or short hair, with traits including dark masks, merle, and white markings. The colors range from blacks to various silver and fawn shades.

DO YOU RECOGNIZE ANY OF THESE CHIHUAHUA TRAITS IN PRU?

○ Alert, active, and often playful dogs.

○ Responds well to reward-based training using treats or favorite toys.

○ Small size makes it easy for them to live in smaller places such as apartments.

○ May be suspicious of strangers or bark at other dogs when intimidated by their size.

Wisdom Panel® Insights™
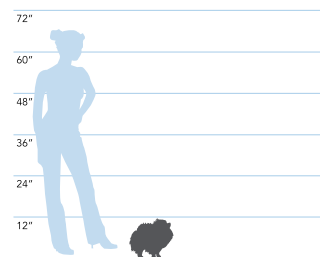
➢ KEY BREEDS DETECTED

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POMERANIAN

Pomeranian

HEIGHT:

7 - 12 in

WEIGHT (SHOW):

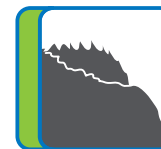3 - 7 lb

WEIGHT (PET):

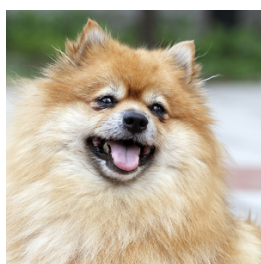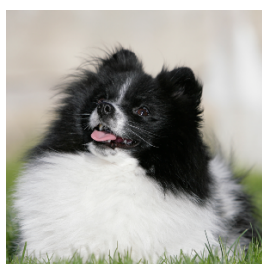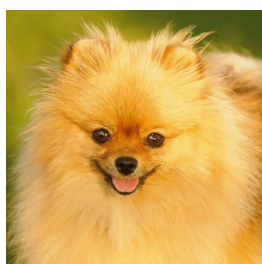3 - 10 lb

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 particolor. White markings and a black mask are also possible.

DO YOU RECOGNIZE ANY OF THESE POMERANIAN TRAITS IN PRU?

○ Active, intelligent, and alert dogs.

○ Pomeranians seem to enjoy dog sports such as agility, musical canine freestyle, rally and competitive obedience.

○ Eager to learn and responds well to reward-based training using treats or favorite toys.

○ They tend to bark. They can be reserved around strangers and may require careful socialization to prevent or reduce defensive aggressive tendencies.

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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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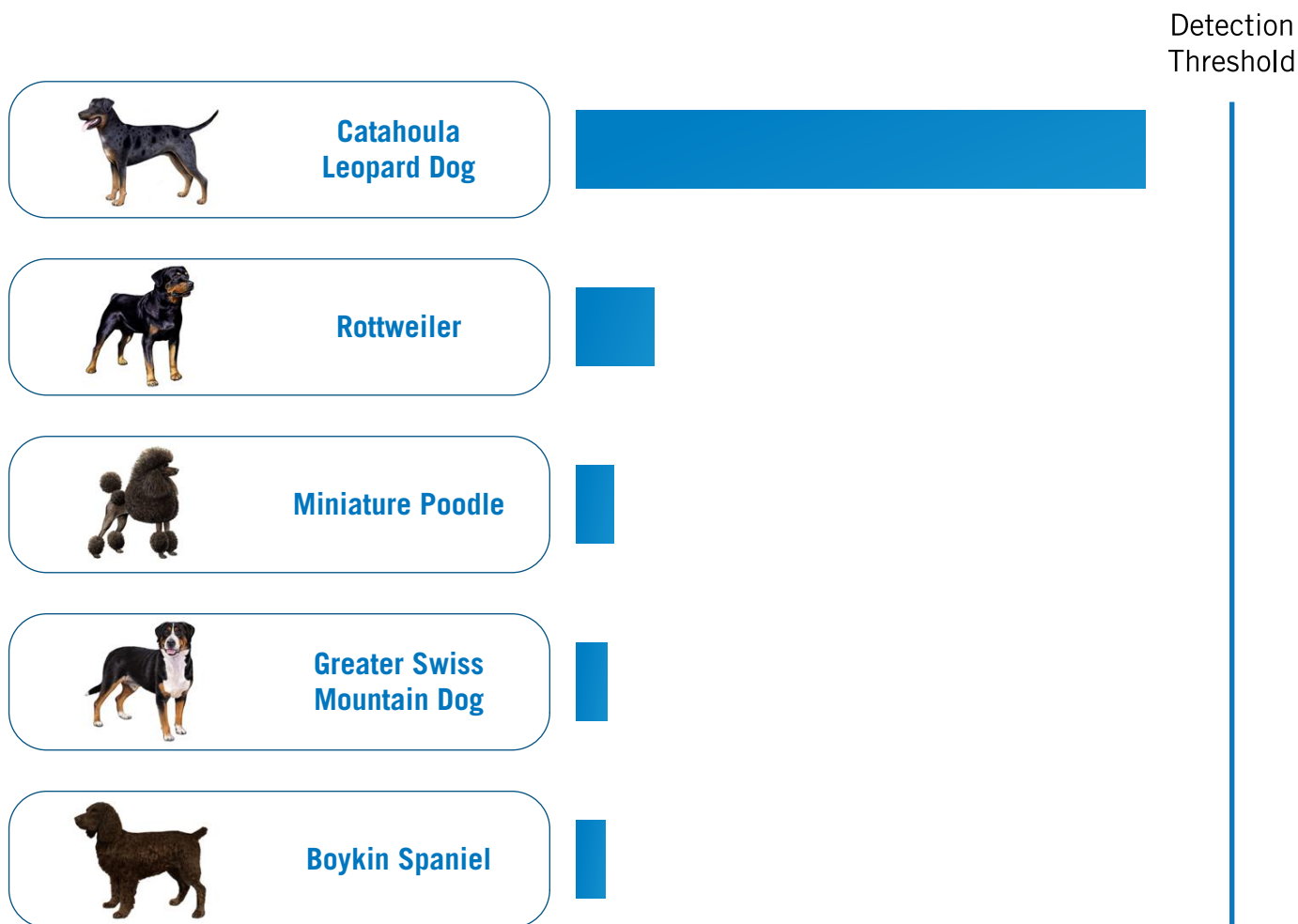➢ ADDITIONAL INFORMATION
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MIXED BREED WHAT DOES THE MIXED BREED ANCESTRY MEAN FOR PRU?

A portion of Pru'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 Pru'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.

Detection Threshold

Catahoula Leopard Dog	████████████████████
Rottweiler	██
Miniature Poodle	█
Greater Swiss Mountain Dog	█
Boykin Spaniel	█

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 Pru's ancestry and the genetic markers analyzed by **Wisdom Panel® Insights™**, as well as the information provided that Pru is **Female** and **Spayed**, we have calculated the likely weight that Pru 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 3 - 10 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: Christy Murphy
Report Code: 3000140700

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 Pru'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 Pru. 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.

Genesis Breed-Specific Health Care™
Because every pet is unique.™

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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 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.

Wisdom Panel® Insights™

MARS veterinary™

STATEMENT OF AUTHENTICATION

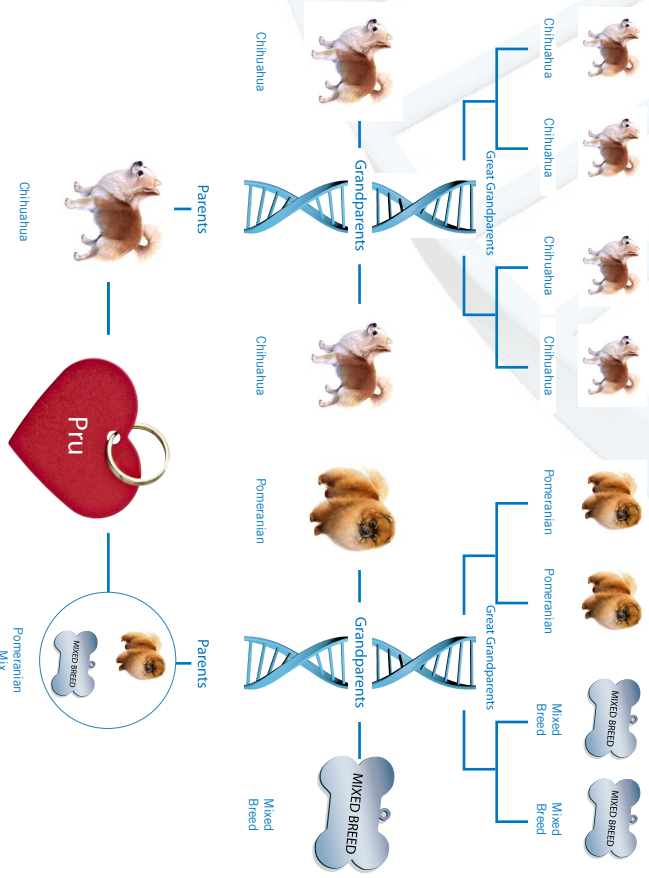Owner's name: **Christy Murphy**

Dog's name: **Pru**

Date: **July 23, 2013**

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

DR. NEALE FRETWELL
Research & Development Director

Pru is a Chihuahua, Pomeranian Mix

Great Grandparents	Grandparents	Parents	Pru
Chihuahua	Chihuahua	Chihuahua	Pru
Chihuahua			
Chihuahua	Chihuahua		
Chihuahua			
Pomeranian	Pomeranian	Pomeranian	Pomeranian Mix
Pomeranian			
Mixed Breed	Mixed Breed	Mixed Breed	
Mixed Breed			