



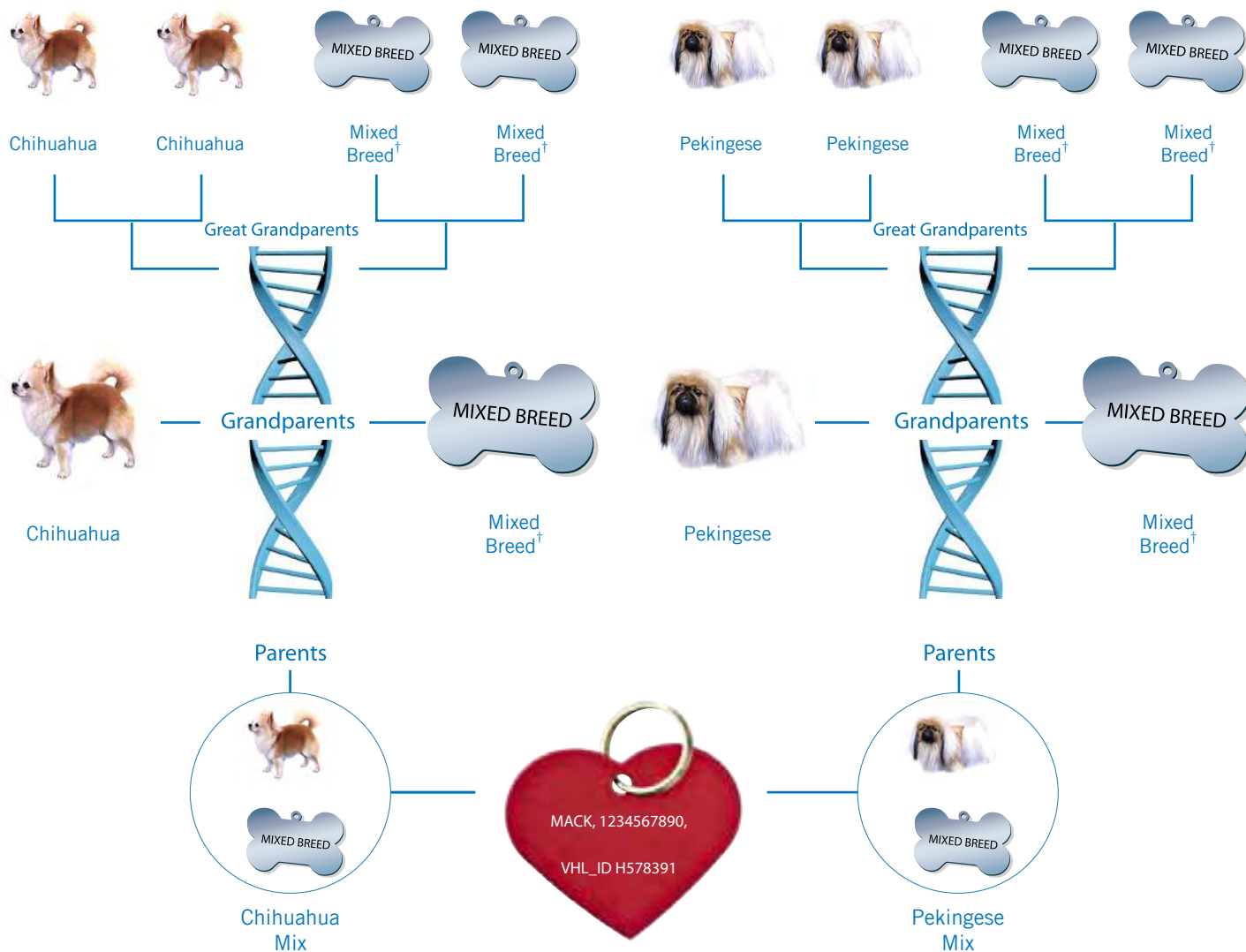
Congratulations!

MACK, 1234567890, VHL_ID
H578391 is a Chihuahua,
Pekingese Mix



YOU HAVE A CHIHUAHUA, PEKINGESE MIX

The 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 MACK, 1234567890, VHL_ID H578391. 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!

CHIHUAHUA



All dogs should be considered individual animals. Because each is a product of their unique environment and handling, they may exhibit different traits and behaviours than those listed here.

HEIGHT:

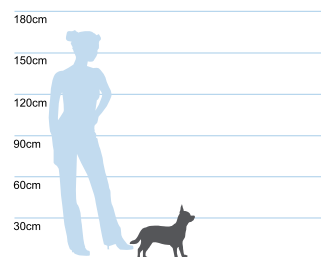
15 - 23 cm

WEIGHT (SHOW):

1 - 3 kg

WEIGHT (PET):

1 - 4 kg



EARS



MUZZLE

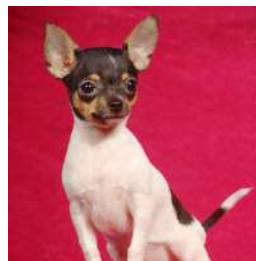


TAIL



The Chihuahua is one of the most ancient of dog breeds, with its origins dating back to the Mayan civilisation. 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 civilisations, the breed faced extinction. However, remnants of the breed survived in Mexico and the Chihuahua was introduced to the United States in 1898, where it has become a very popular breed.

The Chihuahua has a vast amount of variation partly due to the fact that any colour 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 colours range from blacks to various silver and fawn shades.



Do You Recognise Any of These Chihuahua Traits In MACK, 1234567890, VHL_ID H578391?

- ☐ Alert, active, and often playful dogs.
- ☐ Small size makes it easy for them to live in smaller places such as apartments.
- ☐ Responds well to reward-based training using treats or favourite toys.
- ☐ May be suspicious of strangers or bark at other dogs when intimidated by their size.



PEKINGESE



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HEIGHT:

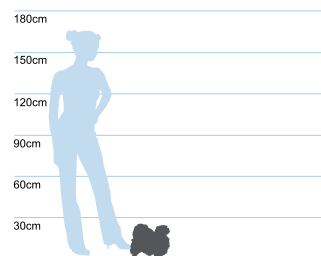
18 - 20 cm

WEIGHT (SHOW):

2 - 5 kg

WEIGHT (PET):

2 - 7 kg



EARS



MUZZLE



TAIL



The history of the Pekingese dates back as far as 2,000 years to ancient China. They were bred and established by the T'ang Dynasty in the eighth century and are one of the oldest breeds of dogs in existence today. The Pekingese were dogs of nobility and, for centuries, only members of the Chinese Imperial Palace could own them. In fact, Chinese custom demanded that commoners bow in the presence of the Pekingese. Custom also specified that the dog be sacrificed at the time of his master's death to protect him in the afterlife. In 1860, during the Second Opium War, British troops invaded the Forbidden City and wound up with five Pekingese dogs. The five dogs were bequeathed to various British nobility, including Queen Victoria. An official standard for the Pekingese was composed in 1898 and the Pekingese Club of England was founded in 1904.

The Pekingese breed standard allows all colours and markings, though these include black, black and tan, biscuit, cream, fawn, sable, grey, red, white and red brindle (red with shaded stripes). White markings are possible. The black mask is a common trait in this breed.



Do You Recognise Any of These Pekingese Traits In MACK, 1234567890, VHL_ID H578391?

- ☐ Alert, calm, and intelligent dogs. Need regular activity, however require less exercise than other breeds.
- ☐ Stubborn tendencies may be lessened by using reward-based training involving small treats and favourite toys.
- ☐ They tend to bark. They can be wary around strangers and may require careful socialisation to prevent or reduce defensive aggressive tendencies.
- ☐ May be intimidated by other dogs, causing defensive barking leading to confrontations.



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 the 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. However much more commonly your dog's looks and personality will blend aspects of these breeds. In the example below you can see how many of Frankie's physical traits are due to a blending of breed influences.

FEATHERING

The longer hair on the legs, tail and around the ears, is due to dominant modifier genes available from the Shetland Sheepdog.

BLACK PIGMENT

This colouring in the nose, eye rims, lips and pads on the feet is due to one copy of the black gene variant, available from all three ancestral breeds.

SHORT HAIR

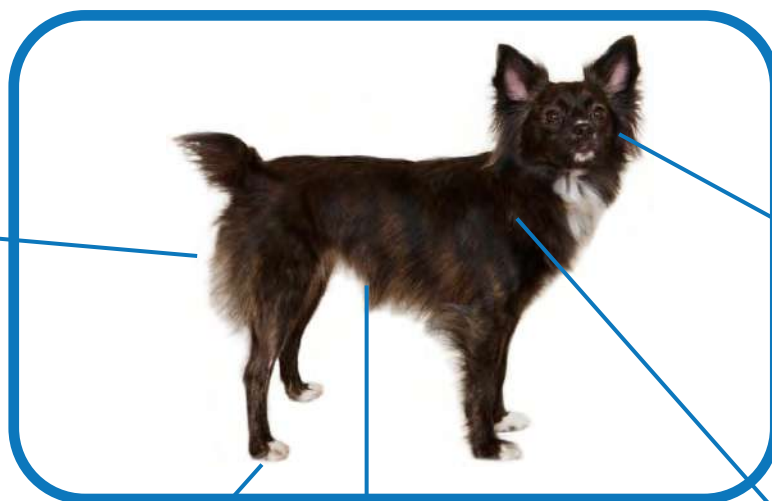
This is due to one copy of the gene variant from the Italian Greyhound or the Parson Russell Terrier that is dominant over the long coat gene from the Shetland Sheepdog.

WHITE SPOTTING

This is due to a lack of pigment and is often found in the extremities (feet, chest, face, etc.), but can also extend over more of the body. It can be due to many genes including those found in the three ancestral breeds here.

BRINDLE COAT COLOUR

The black and tan striping in Frankie's coat is a dominant trait coming from one copy of the brindle gene variant. This is available from the Italian Greyhound, Parson Russell Terrier and Shetland Sheepdog.



We found these breeds in our example dog Frankie:



Shetland Sheepdog



Italian Greyhound



Parson Russell Terrier





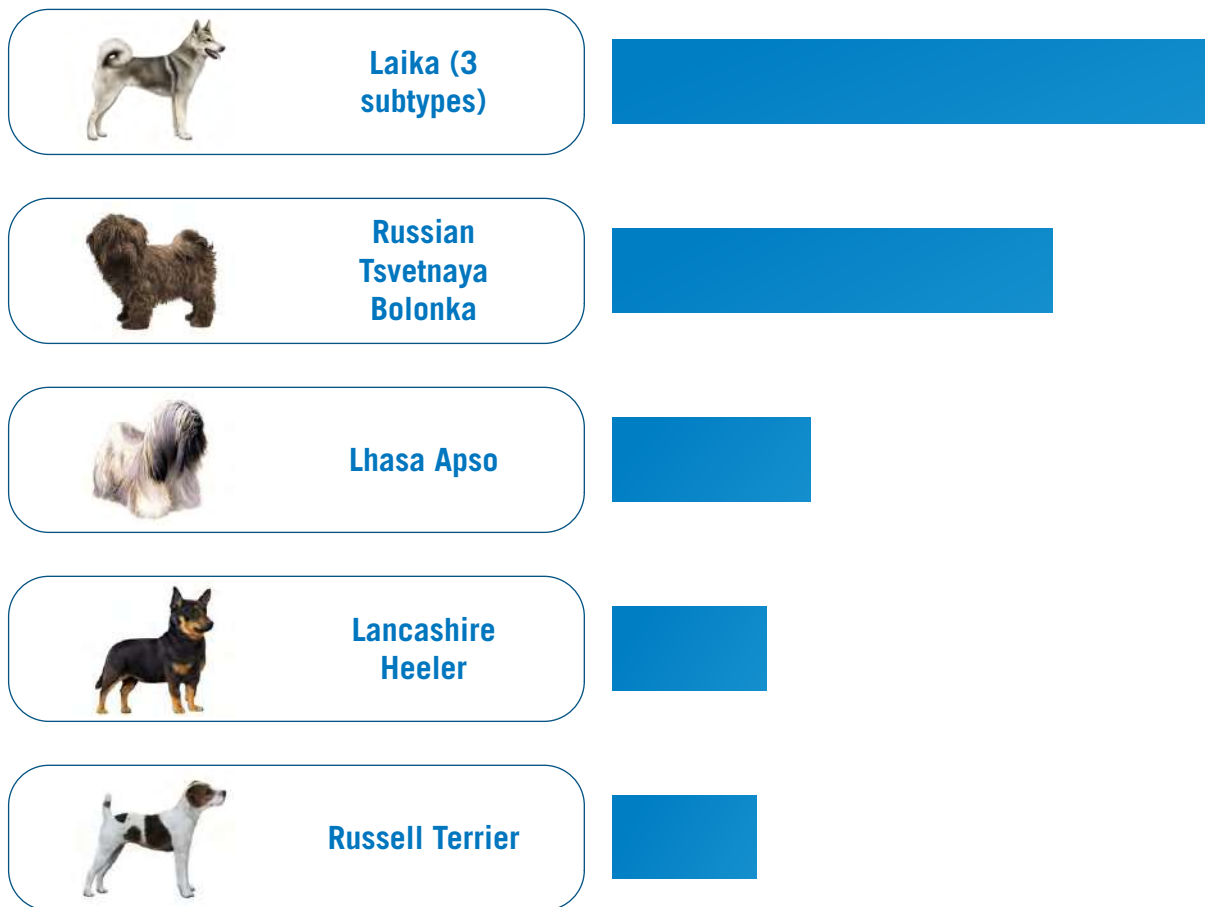
What Does the Mixed Breed Ancestry Mean for MACK, 1234567890, VHL_ID H578391?

A portion of MACK, 1234567890, VHL_ID H578391's ancestry was predicted to be mixed beyond the three generations we test for. It is difficult to identify strong breed signals in this mixed portion, so we have listed the five breeds with the strongest statistical likelihood below.

The breeds are listed in order of strength with the most likely at the top of the list. One or more of these breeds **MAY HAVE** contributed to the genetic makeup in the mixed breed icon(s), but it is **highly unlikely that all these breeds** are present in MACK, 1234567890, VHL_ID H578391's ancestry.

Note that there could also be a breed or breeds present in the mixed breed component that cannot be detected with the current database of over 185 breeds.

Detection
Threshold



Thank You for Using CombiBreed to Uncover the Story of Your Dog's Ancestry!

Congratulations on taking the steps to learn about your dog's ancestry and to understand what breeds are in your mixed breed dog ! 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 **CombiBreed** report to help better care for your dog. 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 The Test 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 185 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.

Terms And Conditions

Each dog is unique and their physical and behavioural traits will be the result of multiple factors, including genetics, training, handling, and environment. Using a proprietary analysis and database, we can provide insight into the breed ancestry of your dog. The 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, VHLGenetics 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.

The testing procedures are designed to provide reliable and accurate results. VHLGenetics 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 VHLGenetics or related companies and individuals is expressly disclaimed. Damages, if any, are limited to the payment actually received by VHLGenetics for the specified analysis at issue.

The test is based upon the 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. The test 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 the test intended to be used in any judicial proceedings. Rather, it is intended to be a tool or resource in determining a dog's genetic history. Neither VHLGenetics nor any related company is responsible for compliance or notification regarding these matters.



STATEMENT OF AUTHENTICATION

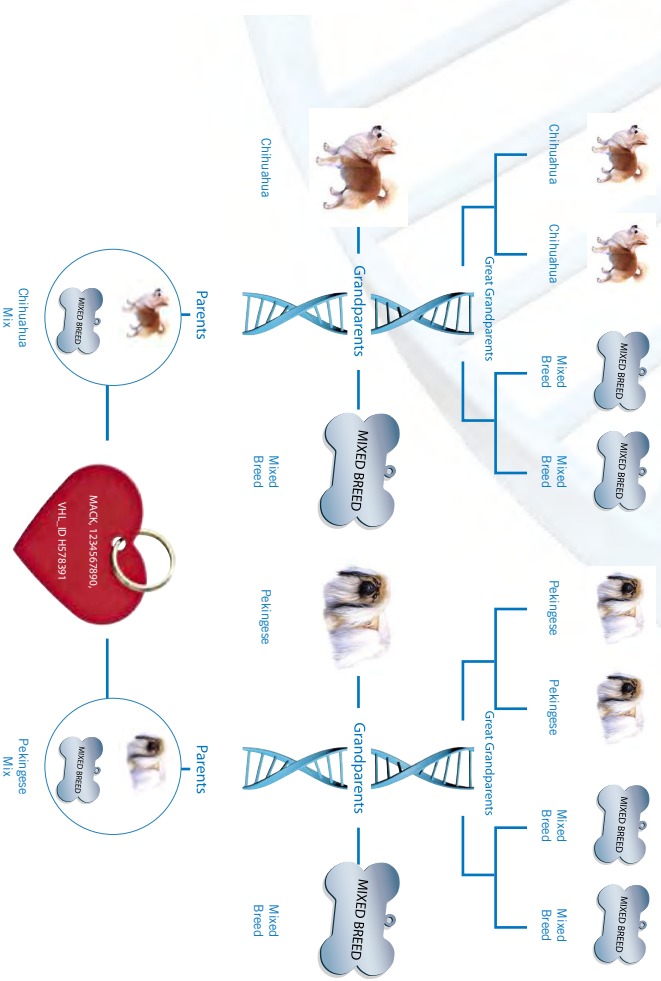
Dog's name: **MACK, 1234567890, VHL_ID H578391**

Date: **February 14, 2023**

This certifies the authenticity of MACK, 1234567890, VHL_ID H578391's canine genetic background as determined following careful analysis of more than 300 genetic markers.

The purebred dog breed signature matches included in this analysis are those that were detected in the last three generations of MACK, 1234567890, VHL_ID H578391's ancestry using the proprietary breed detection algorithm.

Dr. Daniel Mioch, PhD, CEO



MACK, 1234567890, VHL_ID H578391
is a Chihuahua, Pekingese Mix