

# WHAT'S YOUR DOG'S TALE?

## Congratulations!

You're about to uncover the  
story of your dog's ancestry.

In this report, you will find detailed results from Rocco's  
ADVANCE® Mixed Breed Identification DNA Test.

In the following pages, you will learn about:

**Chapter 1: Breed Detection**

**Chapter 2: Appearance, Behaviour and History**

**Chapter 3: Nutrition and Wellness**

It is important to carefully review your entire report and discuss the results with your  
veterinarian to gain the most valuable insight into Rocco.

Owner Name: Ryan O'Donnell

Test Report Code: 8000034

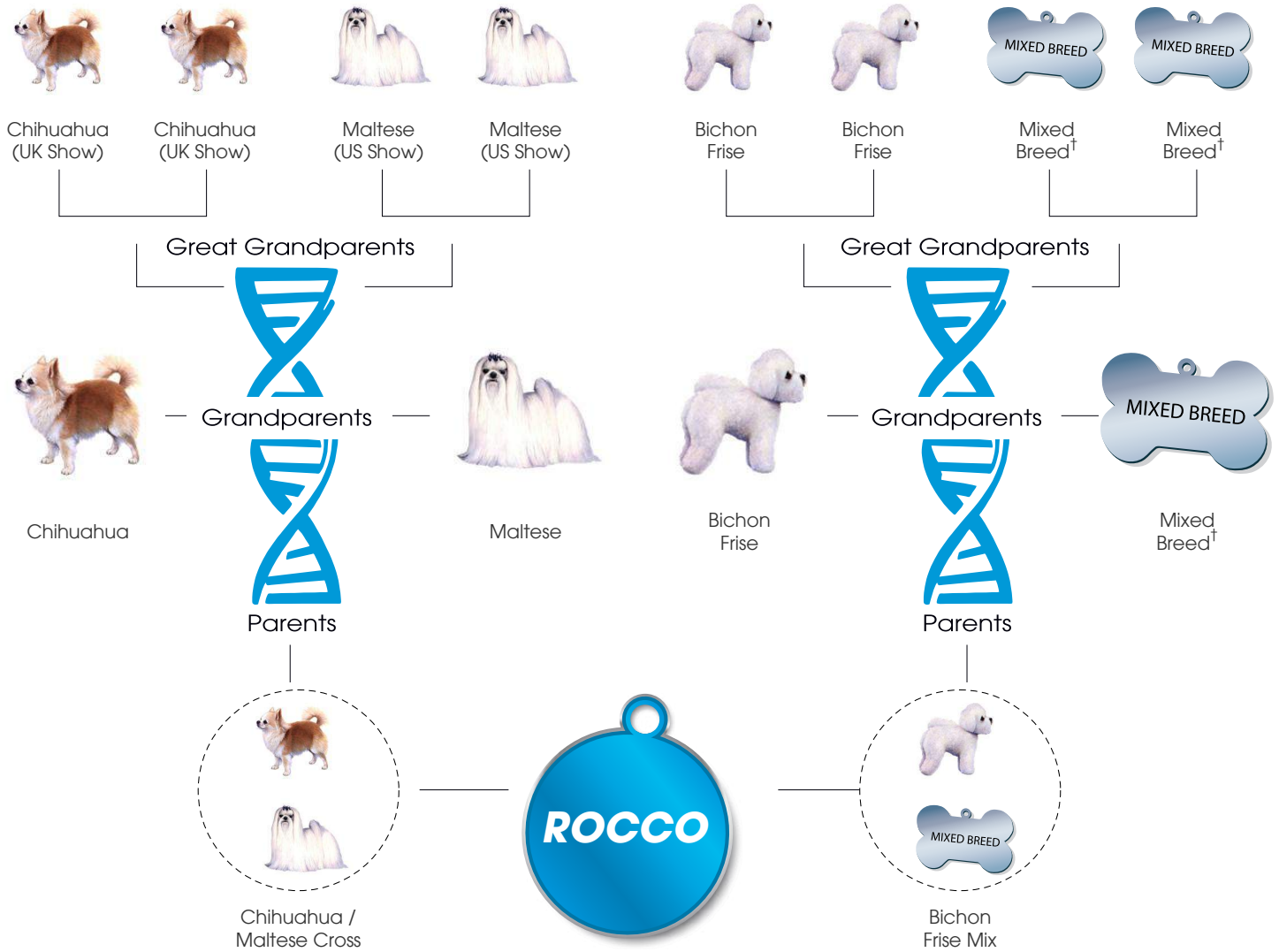
Date Printed: May 9, 2012



Powered by **Wisdom Panel®**

## WHAT BREEDS MAKE UP ROCCO?

The ADVANCE® Mixed Breed Identification DNA Test 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 three ancestral generations that best fit the DNA marker pattern observed in Rocco. The ancestry chart depicting the best statistical result of this analysis is shown in the diagram below.



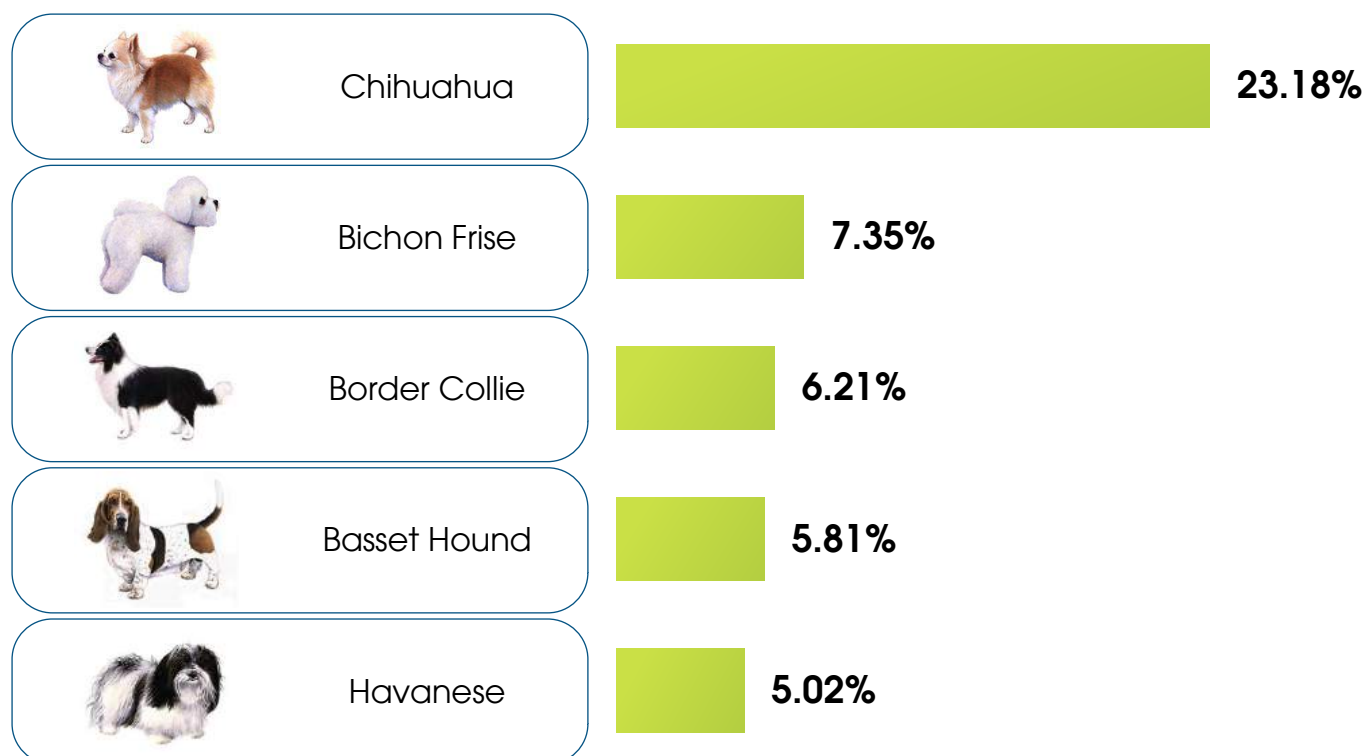
**Chihuahua / Maltese Cross crossed with Bichon Frise Mix**

 † Curious about the Mixed breed ancestry? Take a look at the next page!



## What does the Mixed Breed Ancestor mean for my dog?

We have identified for you the 5 next best breed matches which appeared in the analysis of your dog's DNA. One or more of these breeds could have contributed to the genetic makeup of the ancestors indicated by the mixed breed icon. The breeds are listed by the relative strength of each result in our analysis with the most likely at the top of the list. There could also be a breed or breeds present in the mixed breed component that we cannot detect with our current database of purebred dogs.



### How the ADVANCE® Mixed Breed Identification DNA 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 for over 200 breeds, varieties, and types 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.

## THE INFLUENCE OF BREEDS ON APPEARANCE AND BEHAVIOUR

This report reveals the breeds detected in your dog's DNA. It also includes checklists of physical and behavioural 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...

**ADVANCE® Mixed Breed Identification DNA Test found these breeds in our example dog Riff:**



**Chihuahua**



**Toy Fox Terrier**



**Japanese Chin**

In this example, while many of Riff's physical and behavioural traits suggest a blending of breed influences, there are certain aspects of her appearance and personality that suggest the influence of specific breeds.

### PHYSICAL TRAITS:

#### CHIHUAHUA

An upright forward curving tail with a plume of hair is typical of the Chihuahua breed.



#### TOY FOX TERRIER

A strong broad muzzle, parallel to the skull beneath clear, bright dark-rimmed eyes as a common trait of Toy Fox Terriers.

### BEHAVIORAL TRAITS:

#### JAPANESE TERRIER

Japanese Chins are known for being quiet, docile and relaxed with their human companions.



# Maltese

Maltese



Height: less than 25 cm  
 Weight (Show): 3 - 4 kg  
 Weight (Pet): 2 - 6 kg



The history of this breed traces back at least twenty-eight centuries and the Maltese is one of the few known breeds to have retained its name of origin. The Roman Emperor Claudius, and Rome's Governor of Malta, Publius each owned a Maltese. Publius was known to indulge his devotion to his pet with poetry and art immortalising the dog. It was once believed that the Maltese possessed curative powers. The dog was placed on a pillow and given the finest foods. The Maltese was imported into Britain during the nineteenth century and became the preferred pet of the aristocracy. By the 1990's, the Maltese was ranked in the top 15 of all breeds in the United States, still remaining a very popular breed today. [The DNA detected from this breed is most similar to DNA sampled from American Kennel Club registered dogs.](#)

The Maltese has been bred to have little variation in appearance. It has silky long white hair which almost scrapes the ground. Sometimes the ears have some slight lemon or tan colouring, though this is discouraged.



## Do you recognise any of these Maltese traits in Rocco?

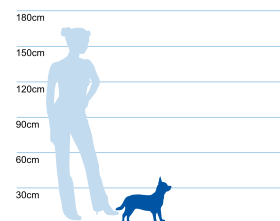
- Intelligent, lively, and playful dogs.
- Maltese can be energetic, although because of their small size they do well in flats or small houses.
- Maltese can be quick learners doing well with reward-based training using treats or favourite toys.
- Can be quite gentle. Can also bark to defend itself from strangers or other animals.

# Chihuahua

Chihuahua

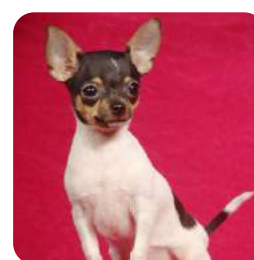


Height: 15 - 23 cm  
 Weight (Show): 1.8 - 2.7 kg  
 Weight (Pet): 1 - 4 kg



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 DNA detected from this breed is most similar to DNA sampled from British Kennel Club registered dogs.](#)

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 Rocco?

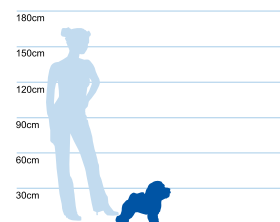
- Alert, active, and often playful dogs.
- Responds well to reward-based training using treats or favourite toys.
- Small size makes it easy for them to live in smaller places such as apartments.
- May be suspicious of strangers or bark at other dogs when intimidated by their size.

## Bichon Frise

Bichon Frise

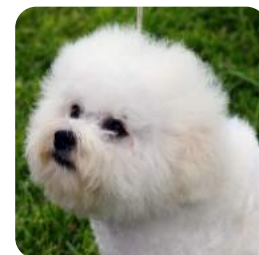


Height: 23 - 28 cm  
 Weight (Show): 3 - 5 kg  
 Weight (Pet): 2 - 7 kg



The Bichon Frise has been in existence since the Renaissance period and is thought to have descended from the Barbet or Water Spaniel. Spanish sailors brought the dogs with them to the Canary Islands, where they were re-imported into Europe as a pet for Italian and Spanish noblemen. The early popularity of the breed is evident, as the French invaders of Italy in the sixteenth century brought many of the dogs home with them. The Bichon Frise became established in French royal court society. Its peak of popularity came under the reign of Henry III. Treated almost as though they themselves were of royal blood, the royal court Bichons had loving attention lavished on them. Towards the end of the nineteenth century, the Bichon Frise was associated with travelling circuses and served as catchpennies for street beggars, somehow having fallen out of the favour of the royal court. At the end of World War I, the Bichon Frise became popular again in France. The first litter was born in the United States in 1956 and the Bichon Frise was officially admitted to the American Kennel Club Studbook in 1972.

The Bichon Frise has little variation, commonly being a white dog with a voluminous curly coat. Some dogs have shading of buff, cream, or apricot around the ears or body, though this is discouraged under the breed standard.



### Do you recognise any of these Bichon Frise traits in Rocco?

- Happy, active, intelligent, and usually friendly dogs.
- Respond well to reward-based training techniques.
- Bichon Frises enjoy learning tricks, and dog sports such as retrieving, agility, rally and competitive obedience.
- Good family dogs, but should be closely supervised around children to avoid accidental injury to the dog or child.

### Predicted Adult Weight Profile for Rocco:

Based upon the breeds detected in Rocco's ancestry and the genetic markers analysed by ADVANCE® Mixed Breed Identification DNA Test, we have calculated the likely weight that Rocco should reach when an adult. ADVANCE® Mixed Breed Identification DNA Test target weight profile is presented for a neutered Male as a range based on the unique mix and proportion of breeds detected.

Male Neutered  
3 - 6 kg

### Recommended Diet:

Adult Total Wellbeing All Breed - Chicken (Dry)

Adult All Breed - Chicken Turkey & Rice 410g (Wet)

If feeding dry and wet food, feed half the amount of each

### Feeding Guide (Dry):

| SIZE OF DOG |            | INACTIVE/INDOOR |           | ACTIVE/OUTDOOR |           |
|-------------|------------|-----------------|-----------|----------------|-----------|
|             |            | g/day           | cup/day   | g/day          | cup/day   |
| TOY         | < 5 kg     | < 80            | < 0.7     | < 100          | < 0.9     |
| SMALL       | 5 - 10 kg  | 80 - 140        | 0.7 - 1.3 | 100 - 170      | 0.9 - 1.5 |
| MEDIUM      | 10 - 25 kg | 140 - 275       | 1.3 - 2.5 | 170 - 340      | 1.5 - 3.1 |
| LARGE       | 25 - 50 kg | 275 - 465       | 2.5 - 4.2 | 340 - 570      | 3.1 - 5.2 |
| GIANT       | > 50 kg    | > 465           | > 4.2     | > 570          | > 5.2     |

1 Standard metric cup = 115g. The above is a guide only, monitor your pets body condition for optimal health



**\$10 off** next purchase of **ADVANCE®**

at

Dr Tom's Veterinary Practice  
95 BENTINCK ST, BATHURST NSW 2795  
Dr. Tom McClelland

**ROCCO**

Owner: Ryan O'Donnell  
8000034 May 9, 2012

TERMS AND CONDITIONS: Present this voucher at your local veterinary clinic to receive \$10 off your next purchase of any ADVANCE® dry product. One coupon per dog. Only valid at the above named veterinary clinic. Not valid with other promotions. Offer valid up to 12 months from date of report.



## Thank you for choosing the ADVANCE® Mixed Breed Identification DNA Test to uncover the story of your dog's ancestry!

Congratulations on taking the steps to learn your dog's ancestry and to understand what breeds are in your mixed breed dog using the ADVANCE® Mixed Breed Identification DNA Test. Knowledge of your dog's genetic ancestry is more than a novelty – it is important to their health and wellbeing. Each breed in your dog's genetic family tree has unique health concerns you should know about so that you can provide a lifetime of excellent care.

### Screen Rocco for over 35 genetic diseases

|                                       |                                   |                                     |
|---------------------------------------|-----------------------------------|-------------------------------------|
| Boxer Cardiomyopathy                  | GM1 – Gangliosidosis              | Progressive Retinal Atrophy - cord1 |
| Canine Hyperuricosuria                | Hereditary Cataract               | Progressive Retinal Atrophy - rcd 3 |
| Canine Leucocyte Adhesion Deficiency  | Ivermectin Sensitivity MDR1       | Progressive Retinal Atrophy -Rcd1   |
| Cerebella Ataxia                      | L-2- hydroxygutric Aciduria       | Progressive Retinal Atrophy -rcd1a  |
| Congenital Hypothyroidism             | Mucopolysaccharidosis             | Pyruvate Kinase Deficiency          |
| Congenital Stationary Night Blindness | Muscular Dystrophy X-linked (MDX) | Renal Dysplasia                     |
| Copper Toxicosis                      | Myotonia Congenita                | von Willebrand's Disease Type I     |
| Cystinuria                            | Myotubular Myopathy X linked      | von Willebrand's Disease Type III   |
| Degenerative Myelopathy               | Narcolepsy                        |                                     |
| Dilated Cardiomyopathy                | Natural Bob Tail                  |                                     |
| Exercise Induced Collapse             | Neonatal Encephalopathy           |                                     |
| Factor VII Deficiency                 | Neuronal Ceroid Lipofuscinosis    |                                     |
| Familial Nephropathy                  | PDP Deficiency                    |                                     |
| Fucosidosis                           | Phosphofructokinase Deficiency    |                                     |
| Globoid Cell Leukodystrophy           | Primary Lens Luxation             |                                     |

Highlighted diseases are those associated with the breeds discovered in Rocco's genetic ancestry.

Visit [www.asaplab.com.au/breedspecifichealth](http://www.asaplab.com.au/breedspecifichealth) to find out more about the genetic diseases associated with the breeds detected. You will find out about the genetic diseases relevant to breeds and incidence of these diseases. Screening for these diseases is simple and requires no further sample to be submitted (please note that samples are stored for three months). Simply discuss the request with your veterinarian and they will contact ASAP to organise a full genetic health screen. This may help in the early detection of diseases as well as assist in planning a care and wellness program for Rocco.

Proudly distributed by:  1300 VET LAB

### Tell Your Dog's Tale



Visit [www.facebook.com/ADVANCEpet](http://www.facebook.com/ADVANCEpet) and join our online community of dog lovers and share your dog's ADVANCE® Mixed Breed Identification DNA Test report.

PLEASE NOTE: Each dog is unique and their physical and behavioural traits will be the result of multiple factors, including genetics, training, handling, and environment. ADVANCE® Mixed Breed Identification DNA Test's proprietary genetic analysis provides insight into the behavioural traits in breed that have been identified in your dog, the predicted genetic adult weight and breed related risk of developing certain genetic diseases. A dog's weight range can vary significantly depending on age, diet and exercise. The ADVANCE® Mixed Breed Identification DNA Test is not intended to diagnose diseases or predict behaviour in any particular dog.

If the test results indicate that your dog is partly or wholly of a breed that is restricted in your State or Territory, you may have obligations to update the registration information for your dog, to apply for a special permit, or to meet other requirements relating to the ownership and care of your dog. Please contact your local council for further information regarding which breeds are restricted in your State or Territory and your obligations in respect of such dogs.

Breeds restricted in most parts of Australia include: Perro de Presa Canario (Presa Canario), American Pit Bull Terrier (Pit Bull Terrier), Japanese Tosa, Dogo Argentino and Fila Brasileiro.

This test may not identify all of these restricted breeds. If you are concerned that your dog may be partly or wholly of a restricted breed, you should contact your local council for information about how to obtain further testing.

ADVANCE® Mixed Breed Identification DNA Test is designed and intended to be used solely to identify the genetic make-up of a mixed-breed dog. It is not designed to validate the purity of a purebred dog, and test results should not be relied upon as official certification of your dog's genetic make-up, including for the purposes of the laws relating to restricted breeds.

The ADVANCE® Mixed Breed Identification DNA Test has been adapted from the US Wisdom Panel Professional Mixed-Breed Identification test for use on Australian dogs. Validation testing conducted for the Wisdom Panel Professional test resulted in Sensitivity of 97% and Positive Predictive Value of 90% in first-generation US crossbred dogs of known parentage. The breeds included in the panel for the Wisdom Panel validation study represented 45% of American Kennel Club registrations. Breeds detected at the lowest level of certainty were not included in the accuracy calculation.

The ADVANCE® Mixed Breed Identification DNA Test has not undergone equivalent validation trials for Australian dogs, but modelling and research indicate that it is likely to have similar average accuracy to the Wisdom Panel Professional test. Accuracy for an individual dog may be greater or less than average, depending on an individual dog's lineage and origin.

Should you have any queries about this product, please contact us: Telephone 1800 640 111, or write to Reply Paid No 4, ADVANCE® Customer Enquiries, PO Box 153, Wodonga, VIC 3689 © Registered Trademark. TM Trademark. © Mars.

# Breed Ancestry Certification

The ADVANCE® Mixed Breed Identification DNA Test certifies that:

## Rocco

is a genetic mixture of the following canine breeds:  
Maltese, Chihuahua and Bichon Frise.

### Statement of Authenticity

This certifies the authenticity of Rocco's canine genetic background as determined following careful analysis of more than 300 genetic markers using the ADVANCE® Mixed Breed Identification DNA Test. The purebred dog breed signature matches included in this analysis are those that were detected in the last three generations of Rocco's ancestry using the proprietary breed detection algorithm.



Powered by **Wisdom Panel®**

The ADVANCE® Mixed Breed Identification DNA Test should not be relied upon as official certification of your dog's genetic make-up, including for the purposes of the laws relating to restricted breeds.

