

Guess the Dog's Mix!

Identify the breeds in three mixed-breed dogs, then see what two testing companies revealed.

By Maureen Kochan

Since breed-identification DNA testing entered the market last year, thousands of dog owners have forked over between \$60 and \$170 to shake out their mutt's family tree – sometimes to surprising results.

We found three owners willing to submit their dog's DNA for analysis – to two competing testing companies. Would the results be different? And if so, why? Read on to find out.

Why test?

The motivations for finding out a dog's genetic background are as varied as the dogs and owners involved, says Kevin Jones, Ph.D., chief scientific officer of BioPet Vet Lab, the maker of the DNA Breed Identification test, which detects 61 breeds. Some owners want to satisfy old-fashioned curiosity, others want an explanation for certain physical or behavioral traits. Still others want to learn about their dog's predisposition to diseases, though experts caution that – just like in humans – it's hard to say which traits or conditions a dog might inherit from his ancestors, says Theresa Brady, communications specialist for MetaMorphix, the maker of the Canine Heritage XL Breed Test, which detects 108 breeds.

Most tests involve a painless cheek swab, which the owner uses to collect the dog's DNA. The owner mails the sample back to the testing company, which returns the results by mail four to six weeks later. One exception is the Wisdom Panel MX Mixed Breed Analysis test, which requires a simple blood test by a participating vet.

Can different testing companies get different results for the same dog?

It's possible. Since there is no national dog DNA database, testing labs studied the DNA of thousands of dogs to develop their own reference breed signatures – the “maps” that plot which DNA markers combine to make a particular breed, says Neale Fretwell, Ph.D., genetic research scientist for Mars Veterinary, the maker of the Wisdom Panel MX test, which detects 134 breeds. Different results are especially common in very mixed dogs, who contain low concentrations of many breeds, Fretwell says. Also, “different companies will have different numbers of breeds that their test is able to detect and consider as potential ancestors,” he says.

Molly Lague says her dog Koji's results confirmed some of her and husband Darren's suspicions. “All I can say is that we have no chance of ever replicating him,” she says. “I guess he's just going to have to keep to his word about living forever.”

Guess the Mix!

Meet Koji

Owners: Molly Lague and Darren Domingue

What breeds are in Koji?

- a) English Coonhound, Chow Chow, Australian Shepherd, Labrador Retriever
- b) Chow Chow, German Shepherd Dog, Poodle, Saint Bernard
- c) Saint Bernard, German Shorthaired Pointer, Bernese Mountain Dog
- d) Belgian Sheepdog, Chow Chow, Collie, German Shepherd Dog, Labrador Retriever, Scottish Deerhound

ANSWER: (a) or (d) The Canine Heritage XL Breed Test revealed trace amounts of English Coonhound, Chow Chow, Australian Shepherd, and Labrador Retriever. The Wisdom Panel revealed trace amounts of Belgian Sheepdog, Chow Chow, Collie, German Shepherd Dog, Labrador Retriever, and Scottish Deerhound.

Meet Max

Owners: Rob Auffrey and Teresa McGowan

What breeds are in Max?

- a) Samoyed, Alaskan Malamute, Greyhound

- b) Pomeranian, Keeshond, Poodle
 - c) Dachshund, Miniature Schnauzer
 - d) English Bulldog, German Pinscher, Harrier
- ANSWER: (b) or (c) The Canine Heritage XL Breed Test revealed some Pomeranian and trace amounts of Keeshond and Poodle. The Wisdom Panel revealed some Dachshund and trace amounts of Miniature Schnauzer.

Meet Hattie
Owner: Cindy Spence

What breeds are in Hattie?

- a) Rottweiler, Cocker Spaniel, Labrador Retriever
- b) Samoyed, Cocker Spaniel, Golden Retriever
- c) Samoyed, Irish Terrier, Norwegian Elkhound
- d) Australian Shepherd, Labrador Retriever, Chihuahua, Miniature Schnauzer

ANSWER: (d) The Wisdom Panel revealed trace amounts of Australian Shepherd, Labrador Retriever, Chihuahua, and Miniature Schnauzer. The Canine Heritage XL Breed Test couldn't detect any of Hattie's influential breeds.