

Coat Color and Trait Certificate

Call Name:	IZZY	Laboratory #:	340074
Registered Name:	Twin Rivers Legacy Lives On	Registration #:	5538305901
Breed:	Labrador Retriever	Microchip #:	956000015178888
Sex:	Female	Certificate Date:	Dec. 12, 2024
DOB:	Nov. 2022		

This canine's DNA showed the following genotype(s):

Coat Color/Trait Test	Gene	Genotype	Interpretation
B Locus (Brown) - b ^a , b ^c , b ^d , b ^s	TYRP1	B/B	Black coat, nose and foot pads (does not carry brown)
D Locus (Dilute) - d ¹ , d ²	MLPH	D/D	Non-dilute (does not carry dilute)
E Locus - e (Apricot/Cream/Red/Yellow, Common Variant Found in Many Breeds)	MC1R	E/E	Black
K Locus (Dominant Black)	CBD103	K ^B /K ^B	No agouti expression allowed
L Locus (Long Hair/Fluffy) - Lh ¹ (Common Variant Found in Many Breeds)	FGF5	Sh/Sh	Shorthaired (does not carry long hair)

Interpretation:

This dog does not carry any copies of the b^a, b^c, b^d or b^s mutations and has a B locus genotype of **B/B**. Thus, this dog typically will have a black coat, nose, and foot pads. However, this dog's coat color is dependent on the genotypes of many other genes. This dog will pass one copy of **B** to 100% of its offspring and cannot produce b/b dogs.

This dog does not carry any copies of the d¹ or d² mutations and has a D locus genotype of **D/D** which does not result in the "dilution" or lightening of the pigments that produce the dog's coat color. This dog will pass one copy of **D** to 100% of its offspring and cannot produce d/d dogs.

This dog carries two copies of **E** which allows for the production of black pigment. However, this dog's coat color is also dependent on the K, A, and B genes. This dog will pass on **E** to 100% of its offspring.

The K locus genotype for this dog is **K^B/K^B** which prevents expression of the agouti gene (A locus) and allows for solid eumelanin (black pigment) production in pigmented areas of the dog. However, this dog's coat color is also dependent on its genotypes at the E and B loci. This dog will pass on **K^B** to 100% of its offspring.

This dog carries two copies of **Sh** which results in short hair. This dog will pass on **Sh** to 100% of its offspring.

Paw Print Genetics® has genetic counseling available to you at no additional charge to answer any questions about these test results, their implications and potential outcomes in breeding this dog.

NOTE: The following fields were adjusted at the client's request on Dec 12, 2024: Name, Registered Name, Microchip Id, Registration ID