

Coat Color and Trait Certificate

Call Name:	Hilde	Laboratory #:	225775
Registered Name:	HILDE OF THE KINNI	Registration #:	SS24183005
Breed:	Golden Retriever	Microchip #:	933000320385045
Sex:	Female	Certificate Date:	April 8, 2021
DOB:	Jan. 2021		

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

Coat Color/Trait Test	Gene	Genotype	Interpretation
A Locus (Agouti)	<i>ASIP</i>	a/a	Bicolor/solid
A ^S Locus (Saddle Tan)	<i>RALY</i>	A ^S /A ^S	Saddle tan/creeping tan
B Locus (Brown)	<i>TYRP1</i>	B/B	Black coat, nose and foot pads (does not carry brown)
E Locus (Yellow/Red)	<i>MC1R</i>	e/e	Yellow/red
IC Locus (Improper Coat/Furnishings)	<i>RSPO2</i>	IC/IC	No furnishings, improper coat
K Locus (Dominant Black)	<i>CBD103</i>	K ^B /K ^B	No agouti expression allowed

Interpretation:

This dog carries two copies of **a** and will have a solid black or bicolor coat color and no tan points. However, this dog's coat color is dependent on the E, K, and B genes. This dog will pass on **a** to 100% of its offspring.

This dog carries two copies of an **A^S** allele which is found in dogs with a saddle tan coat color. However, this dog's coat color is also dependent on the E, A, and K loci. Saddle tan is found only in dogs that are also E/E or E/e at the E locus, k^y/k^y at the K locus, and a^t/a^t or a^t/a at the A locus. This dog will pass one copy of **A^S** to 100% of its offspring and can produce saddle tan dogs.


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 carries two copies of **e** which inhibits production of black pigment. The coat color of this dog will be yellow/red (including shades of white, cream, yellow, apricot or red). This dog will pass **e** on to 100% of its offspring.

This dog carries two copies of **IC** and will therefore have no furnishings (improper coat). This dog does not carry the mutation for weak furnishings. However, the overall coat type of this dog is dependent on the combination of this dog's genotypes at the L, Cu, and IC loci. This dog will pass **IC** (improper coat) to 100% of its offspring and can produce puppies with improper coat if bred with a dog that carries one or two copies of the mutation for improper coat.

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.

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.



Blake C Ballif, PhD
Laboratory & Scientific Director



Christina J Ramirez, PhD, DVM, DACVP
Medical Director

Normal results do not exclude inherited mutations not tested in these or other genes that may cause medical problems or may be passed on to offspring. These tests were developed and their performance determined by Paw Print Genetics®. This laboratory has established and verified the tests' accuracy and precision. Because all tests performed are DNA-based, rare genomic variations may interfere with the performance of some tests producing false results. If you think these results are in error, please contact the laboratory immediately for further evaluation. In the event of a valid dispute of results claim, Paw Print Genetics will do its best to resolve such a claim to the customer's satisfaction. If no resolution is possible after investigation by Paw Print Genetics with the cooperation of the customer, the extent of the customer's sole remedy is a refund of the fee paid. In no event shall Paw Print Genetics be liable for indirect, consequential or incidental damages of any kind. Any claim must be asserted within 60 days of the report of the test results.