

Coat Color and Trait Certificate

Call Name:	Oliver Twist	Laboratory #:	129870
Registered Name:	Moonlit Acres Oliver Twist	Registration #:	WALA00014403
Breed:	Australian Labradoodle	Microchip #:	956000010794118
Sex:	Male	Certificate Date:	April 26, 2023
DOB:	Feb. 2019		

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
Cu Locus (Curly Hair)	<i>KRT71</i>	Cu/Cu	Straight coat
E Locus - e (Apricot/Cream/Red/Yellow, Common Variant Found in Many Breeds)	<i>MC1R</i>	e/e	Yellow/red
IC Locus (Improper Coat/Furnishings)	<i>RSP02</i>	F/F	Furnishings
K Locus (Dominant Black)	<i>CBD103</i>	K ^B /K ^B	No agouti expression allowed
S Locus (White Spotting, Parti, or Piebald)	<i>MITF</i>	S/s ^P	Limited white spotting, flash, parti, or piebald (carrier)

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 **Cu** which results in a straight coat. 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 **Cu** on to 100% of its offspring.

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 does not carry the mutation for improper coat and will therefore have furnishings (proper coat). 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 **F** (furnishings, proper coat) on 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 one copy of **S** and one copy of **s^P** which results in limited white spotting, flash, parti, or piebald coat color due to the co-dominance of **S** and **s^P**. This dog will pass on one copy of **S** to 50% of its offspring and one copy of **s^P** to 50% 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

Paw Print Genetics® performed the testing on the dog listed on this certificate. The genes/traits reported here were selected by the client. Normal results do not exclude inherited mutations not tested in these or other genes that may cause variation in traits, medical problems or may be passed on to offspring. The results included in this report relate only to the items tested using the sample provided. These tests were developed and their performance determined by Paw Print Genetics. This laboratory has established and verified the test(s)' accuracy and precision with >99.9% sensitivity and specificity. The presence of mosaicism may not be detected by this test. Non-paternity may lead to unexpected results. This is not a breed identification test. Because all tests performed are DNA-based, rare genomic variations may interfere with the performance of some tests producing false results. If you think any 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.