Paw Print Genetics
A division of Genetic Veterinary Sciences, Inc.

Coat Color and Trait Certificate

Call Name:	Pukka	**Laboratory #:**	8878
Registered Name:	Pukka After Merle	**Registration #:**	SR55897605
Breed:	Labrador Retriever	**Certificate Date:**	April 2, 2015
Sex:	Male		
DOB:	March 2009		

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

Coat Color/Trait Test	Gene	Genotype	Interpretation
K locus (Dominant black)	*CBD103*	K^B/K^B	No agouti expression allowed
b^c locus (Brown)	*TYRP1*	B/B	
b^d locus (Brown)	*TYRP1*	B/B	B/B - Black coat, nose and foot pads
b^s locus (Brown)	*TYRP1*	B/B	

Interpretation:

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.

The overall B locus genotype for a dog is determined by the combination of the genotypes present at the b^c, b^d, and b^s loci. The b^c, b^d, and b^s variants confer brown when at least one of these DNA changes is present on both genes of the dog at the B locus. This dog carries two copies of **B** at the b^c, b^d, and b^s loci which combines to make the overall B locus genotype of this dog **B/B**. However, this dog's coat color is also dependent on the E and K genes. This dog will pass on one copy of **B** from the b^c, b^d, and b^s loci to 100% of its offspring. Thus, this dog can produce offspring with a black coat, nose and foot pads.

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.

Christina J Ramirez, PhD, DVM, DACVP
Medical Director

Casey R Carl, DVM
Associate 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.