

## TYROSINASE RELATED PROTEIN (TYRP1) LOCUS B

REPORT NO.: SA2019/67349/0114/03

Client Name: NICOLE GERSTENBERG  
 Kennel Name:  
 Client Address: 27 BARRY STREET  
 HOUT BAY  
 7806  
 Client Tel No.: 082 218 6664



Canine Name: GLENAHOLM SHAKILA OF TAUTONGA  
 Breed: RHODESIAN RIDGEBACK  
 Microchip No.: 985111001210090 Registration No.:  
 Genetic Test: TYROSINASE RELATED PROTEIN (TYRP1) LOCUS B  
 Result: BCBC

### THE B LOCUS

#### TYROSINASE RELATED PROTEIN (TYRP1)




The B locus or Tyrosinase Related Protein TYRP1 gene is associated with eumelanin production. The B-locus described contains three mutations designated B<sup>S</sup> for SNP site c.991C>T, B<sup>C</sup> for SNP site c.121 T>A and B<sup>D</sup> for indel site c.1033\_1036delCCT of the TYRP1 gene. b<sup>s</sup>, b<sup>c</sup> and b<sup>d</sup> represent the recessive alleles, and b<sup>s</sup>b<sup>s</sup>, b<sup>c</sup>b<sup>c</sup> and/or b<sup>d</sup>b<sup>d</sup> genotypes are required to confer the liver/chocolate colour.

Schmutz et al 2002. TYRP1 and MC1R genotypes and their effects on coat color in dogs. Mammalian Genome 7, pp380-387.

Schmutz and Berryere, 2007. Genes affecting coat colour and pattern in domestic dogs: a review. Animal Genetics 38, pp539-549.

SAMPLE TYPE: EDTA BLOOD AMPULE  
 EXTRACTION METHOD: DNA EXTRACTION  
 TEST TYPE: SANGER SEQUENCE DETECTION

#### COLOUR IMPLICATIONS

	E LOCUS	B LOCUS
	EE/Ee	B <sup>S</sup> B <sup>S</sup> B <sup>C</sup> B <sup>D</sup> B <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> B <sup>C</sup> B <sup>D</sup> B <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> b <sup>C</sup> B <sup>D</sup> B <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> b <sup>c</sup> B <sup>D</sup> B <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> b <sup>c</sup> b <sup>D</sup> B <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> b <sup>c</sup> b <sup>d</sup> B <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> b <sup>c</sup> b <sup>d</sup> b <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> b <sup>c</sup> b <sup>d</sup> b <sup>d</sup>
	Ee/Ee	b <sup>S</sup> b <sup>S</sup> B <sup>C</sup> B <sup>D</sup> B <sup>D</sup> / b <sup>S</sup> b <sup>S</sup> b <sup>C</sup> B <sup>D</sup> B <sup>D</sup> / b <sup>S</sup> b <sup>S</sup> b <sup>c</sup> B <sup>D</sup> B <sup>D</sup> / b <sup>S</sup> b <sup>S</sup> b <sup>c</sup> b <sup>D</sup> B <sup>D</sup> / b <sup>S</sup> b <sup>S</sup> b <sup>c</sup> b <sup>d</sup> B <sup>D</sup> / b <sup>S</sup> b <sup>S</sup> b <sup>c</sup> b <sup>d</sup> b <sup>D</sup> / b <sup>S</sup> b <sup>S</sup> b <sup>c</sup> b <sup>d</sup> b <sup>d</sup>
	ee	B <sup>S</sup> b <sup>S</sup> B <sup>C</sup> B <sup>D</sup> B <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> b <sup>C</sup> B <sup>D</sup> B <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> b <sup>c</sup> B <sup>D</sup> B <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> b <sup>c</sup> b <sup>D</sup> B <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> b <sup>c</sup> b <sup>d</sup> B <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> b <sup>c</sup> b <sup>d</sup> b <sup>D</sup> / B <sup>S</sup> b <sup>S</sup> b <sup>c</sup> b <sup>d</sup> b <sup>d</sup>

Disclaimer: This report does not disregard the existence of any unknown or rare variant of TYRP1 gene that may cause a liver/chocolate coat or nose. The final coat colour in many breeds is also influenced by other loci that are known/unknown.



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