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

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Laboratory Report

Laboratory #:	293118	**Call Name:**	Taffy
Order #:	133054	**Registered Name:**	Van-M Taffy Apple
Ordered By:	Julia Jensen	**Breed:**	Collie
Ordered:	Feb. 23, 2022	**Sex:**	Female
Received:	April 1, 2022	**DOB:**	Oct. 2016
Reported:	April 8, 2022	**Registration #:**	DN475734/04 11-19

Results:

Disease	Gene	Genotype	Interpretation
Cyclic Neutropenia	*AP3B1*	WT/WT	Normal (clear)
Dermatomyositis	*PAN2*, *MAP3K7CL*, *DRB1*	aabbCC	Low Risk

WT, wild type (normal); M, mutant; Y, Y chromosome (male)

Interpretation:

Molecular genetic analysis was performed for four specific mutations reported to be associated with disease in dogs. We identified two normal copies of the DNA sequences in the *AP3B1* gene tested. Thus, this dog is not at an increased risk for Cyclic Neutropenia.

Molecular genetic analysis was performed for two specific mutations in the *PAN2 (Locus A)* and *MAP3K7CL (Locus B)* genes and one high-risk haplotype of the *DLA-DRB1 (Locus C* 002:01/002:01*)* region reported to be associated with Dermatomyositis in dogs. Based on the specific genotypes found at these three loci, this dog is at low risk for Dermatomyositis.

Recommendations:

Dermatomyositis is inherited in a complex manner in dogs. Dogs that inherit specific combinations of the three dermatomyositis risk alleles are at low (0-5%), moderate (33-50%), or high (90-100%) risk of developing dermatomyositis. For some genotype combinations there is not enough information available and the dermatomyositis risk is unknown. For Locus A and Locus B, the normal, wild type alleles are represented by lower case letters whereas the mutant, risk alleles are represented by capital letters. For Locus C, the high-risk *DLA-DRB1 002:01* allele is represented by a capital letter, and all other alleles are represented by lower case letters. Low risk genotypes are: aabbCc, aabbCC, AabbCc, AabbCC, aaBbcc, aaBbCc, aaBbCC, AaBbCc, AaBbCC, and aaBBCc. Moderate risk genotypes are: AAbbCc, AAbbCC, aaBBCC, AaBBCc, and AABbCc. High risk genotypes are: AaBBCC, AABbCC, AABBCc, and AABBCC. Unknown risk genotypes are: aabbcc, Aabbcc, AaBbcc, AAbbcc, aaBBcc, AaBBcc, AABbcc, and AABBcc. Based on this, and the specific genotypes found, this dog is at low risk for Dermatomyositis. In general, it is recommended to avoid breeding dogs that will produce puppies with high-risk genotypes.

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.

Helen F Smith, PhD
Associate Laboratory Director

Christina J Ramirez, PhD, DVM, DACVP
Medical Director

Paw Print Genetics® performed the tests listed on this dog. The genes/diseases reported here were selected by the client. 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. 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.