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

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Laboratory Report

Laboratory #:	326988	**Call Name:**	Stevie
Order #:	147036	**Registered Name:**	Regen's Little Black Dress
Ordered By:	Denise Misaras	**Breed:**	Labrador Retriever
Ordered:	Sept. 16, 2022	**Sex:**	Female
Received:	Oct. 3, 2022	**DOB:**	March 2022
Reported:	Oct. 11, 2022	**Registration #:**	SS33010601
		Microchip #:	956000010662444

Results:

Disease	Gene	Genotype	Interpretation
Centronuclear Myopathy	*PTPLA*	WT/WT	Normal (clear)
Cone Degeneration (Labrador Retriever Type)	*CNGA3*	WT/WT	Normal (clear)
Congenital Myasthenic Syndrome (Labrador Retriever Type)	*COLQ*	WT/WT	Normal (clear)
Copper Toxicosis (Labrador Retriever Type) ATP7A	*ATP7A*	WT/WT	Normal/Clear Female
Copper Toxicosis (Labrador Retriever Type) ATP7B	*ATP7B*	WT/WT	Normal (clear)
Cystinuria (Labrador Retriever Type)	*SLC3A1*	WT/WT	Normal (clear)
Degenerative Myelopathy	*SOD1*	WT/WT	Normal (clear)
Elliptocytosis	*SPTB*	WT/WT	Normal (clear)
Exercise-Induced Collapse	*DNM1*	WT/M	Carrier
Hereditary Nasal Parakeratosis (Labrador Retriever Type)	*SUV39H2*	WT/WT	Normal (clear)
Hyperuricosuria	*SLC2A9*	WT/WT	Normal (clear)
Ichthyosis (Golden Retriever Type 1)	*PNPLA1*	WT/WT	Normal (clear)
Macular Corneal Dystrophy (Labrador Retriever Type)	*CHST6*	WT/WT	Normal (clear)
Myotubular Myopathy 1	*MTM1*	WT/WT	Normal/Clear Female
Narcolepsy (Labrador Retriever Type)	*HCRTR2*	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Cone-Rod Dystrophy 4	*RPGRIP1*	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Golden Retriever 2	*TTC8*	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration	*PRCD*	WT/WT	Normal (clear)
Pyruvate Kinase Deficiency (Labrador Retriever Type)	*PKLR*	WT/WT	Normal (clear)
Retinal Dysplasia/Oculoskeletal Dysplasia 1	*COL9A3*	WT/WT	Normal (clear)
Skeletal Dysplasia 2	*COL11A2*	WT/WT	Normal (clear)
Stargardt Disease	*ABCA4*	WT/M	Carrier

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

Interpretation:

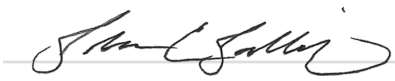
Molecular genetic analysis was performed for 22 specific mutations reported to be associated with disease in dogs (21 deleterious mutations and one protective mutation). We identified two normal copies of the DNA sequences in 20 of the deleterious mutations tested. Thus, this dog is not at an increased risk for the diseases associated with these 20 mutations. In addition, we identified two normal copies of the DNA sequences in the *ATP7A* gene tested. Thus, this dog does not carry the protective mutation for Copper Toxicosis (Labrador Retriever Type) ATP7A. However, we identified one normal copy and one mutant copy of the DNA sequences for *DNM1*. Thus, this dog is a carrier of Exercise-Induced Collapse. In addition, we identified one normal copy and one mutant copy of the DNA sequences for *ABCA4*. Thus, this dog is a carrier of Stargardt Disease.

Recommendations:

Exercise-Induced Collapse is inherited in an autosomal recessive fashion. Based on this, and the fact that this dog showed a mutation in one copy of the *DNM1* gene, this dog is a carrier of this disease. Although dogs that carry only one copy of this mutation will not be clinically affected, if bred with another carrier, the pairing could produce affected offspring. To avoid producing affected offspring, this dog should be bred with dogs that are normal (WT/WT) for this gene. Dogs related to this dog have an increased risk to be affected by or carry the mutated gene. Additional testing for this mutation is indicated for related dogs.

Stargardt Disease is inherited in an autosomal recessive fashion. Based on this, and the fact that this dog showed a mutation in one copy of the *ABCA4* gene, this dog is a carrier of this disease. Although dogs that carry only one copy of this mutation will not be clinically affected, if bred with another carrier, the pairing could produce affected offspring. To avoid producing affected offspring, this dog should be bred with dogs that are normal (WT/WT) for this gene. Dogs related to this dog have an increased risk to be affected by or carry the mutated gene. Additional testing for this mutation is indicated for related dogs.

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.



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