

## Dog Information

<b>Nova</b> NAME	<b>Female</b> SEX
<b>Golden Retriever</b> GENETIC BREED	<b>June 25th, 2019</b> DATE OF BIRTH
<b>Fédération Cynologique Internationale (FCI) JKC-RG -03210/19</b> REGISTRATION	<b>n/a</b> MICROCHIP

**Kayla Costa**  
OWNER NAME

**Canine Genetic Health Screen**  
TEST

**February 28th, 2023**  
TEST DATE

## BREED HEALTH TESTS

DISEASE	GENE	GENOTYPE	RESULT	TESTING RECOMMENDED BY
Degenerative Myelopathy, DM	SOD1(A)	GG	Clear	
Golden Retriever Progressive Retinal Atrophy 1, GR-PRA1	SLC4A3 Exon 16	NN	Clear	
Golden Retriever Progressive Retinal Atrophy 2, GR-PRA2	TTC8 Exon 8	NN	Clear	
Ichthyosis, ICH1	PNPLA1 (Exon 8)	ACC/TACTACTA	1 Variant	
Muscular Dystrophy	DMD	AA	Clear	
Progressive Retinal Atrophy, prcd	PRCD Exon 1	GG	Clear	
Congenital Myasthenic Syndrome, CMS	COLQ	GG	Clear	
Dystrophic Epidermolysis Bullosa	COL7A1 (Exon 68)	GG	Clear	
Neuronal Ceroid Lipofuscinosis 5, NCL 5	CLN5 (Exon 4 Deletion)	NN	Clear	
Osteogenesis Imperfecta, Brittle Bone Disease	COL1A1 (Exon 18)	GG	Clear	
Retina Dysplasia and/or Optic Nerve Hypoplasia	SIX6 Exon 1	CC	Clear	

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## INBREEDING AND DIVERSITY

Genetic Diversity	RESULT	GENETIC RESULT
Coefficient Of Inbreeding		20%
MHC Class II - DLA DRB1		High Diversity
MHC Class II - DLA DQA1 and DQB1		High Diversity

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## TRAIT TESTS (1/3)

Coat Color	RESULT	GENETIC RESULT
<b>E Locus (MC1R)</b>	No dark hairs anywhere	ee
<b>K Locus (CBD103)</b>	Not expressed	K <sup>B</sup> K <sup>B</sup>
<b>Intensity Loci LINKAGE</b>	Any pigmented hair likely yellow or tan	Intermediate Red Pigmentation
<b>A Locus (ASIP)</b>	Not expressed	aa
<b>D Locus (MLPH)</b>	Not expressed	DD
<b>Cocoa (HPS3)</b>	No co alleles, not expressed	NN
<b>B Locus (TYRP1)</b>	Likely black colored nose/feet	BB
<b>Saddle Tan (RALY)</b>	Not expressed	NN
<b>S Locus (MITF)</b>	Likely to have little to no white in coat	SS
<b>M Locus (PMEL)</b>	No merle alleles	mm
<b>R Locus (USH2A) LINKAGE</b>	Likely no impact on coat pattern	rr

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## TRAIT TESTS (2/3)

Coat Color	RESULT	GENETIC RESULT
H Locus (Harlequin)	No harlequin alleles	hh
Other Coat Traits	RESULT	GENETIC RESULT
Furnishings (RSP02) LINKAGE	Likely unfurnished (no mustache, beard, and/or eyebrows)	II
Coat Length (FGF5)	Likely long coat	TT
Shedding (MC5R)	Likely heavy/seasonal shedding	CT
Hairlessness (FOXI3) LINKAGE	Very unlikely to be hairless	NN
Hairlessness (SGK3)	Very unlikely to be hairless	NN
Oculocutaneous Albinism Type 2 (SLC45A2) LINKAGE	Likely not albino	NN
Coat Texture (KRT71)	Likely straight coat	CC
Other Body Features	RESULT	GENETIC RESULT
Muzzle Length (BMP3)	Likely medium or long muzzle	CC
Tail Length (T)	Likely normal-length tail	CC
Hind Dewclaws (LMBR1)	Unlikely to have hind dew claws	CC

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## TRAIT TESTS (3/3)

Other Body Features	RESULT	GENETIC RESULT
Blue Eye Color (ALX4) LINKAGE	Less likely to have blue eyes	NN
Back Muscling & Bulk, Large Breed (ACSL4)	Likely normal muscling	CC

  

Body Size	RESULT	GENETIC RESULT
Body Size (IGF1)	Larger	NN
Body Size (IGFR1)	Larger	GG
Body Size (STC2)	Larger	TT
Body Size (GHR - E191K)	Larger	GG
Body Size (GHR - P177L)	Larger	CC

  

Performance	RESULT	GENETIC RESULT
Altitude Adaptation (EPAS1)	Normal altitude tolerance	GG
Appetite (POMC) LINKAGE	Normal food motivation	NN