embark

DNA Test Report

Dog Information

C'est Bon's Harley "Margot" Quinn (Harley)
NAME

Female
SEX

Australian Shepherd
Breed with variety:
100% Australian Shepherd
GENETIC BREED

December 8th, 2024
DATE OF BIRTH

n/a
MICROCHIP

American Kennel Club (AKC)
REGISTRATION

Amber VanWinkle
OWNER NAME

Canine Genetic Health Screen
TEST

October 9th, 2025
TEST DATE

BREED HEALTH TESTS

DISEASE	GENE	GENOTYPE	RESULT	TESTING RECOMMENDED BY
Canine Multifocal Retinopathy, cmr1	BEST1/VMD2 Exon 2	CC	Clear	
Collie Eye Anomaly, Choroidal Hypoplasia, CEA	NHEJ1 (Intron 4)	NN	Clear	
Craniomandibular Osteopathy, CMO	SLC37A2 (Exon 15)	CC	Clear	
Day Blindness, Cone Degeneration, Achromatopsia	CNGB3	NN	Clear	
Degenerative Myelopathy, DM	SOD1A	GA	1 Variant	
Hereditary Cataracts, Early-Onset Cataracts, Juvenile Cataracts	HSF4	NN	Clear	
Hyperuricosuria and Hyperuricemia or Urolithiasis, HUU	SLC2A9 (Exon 5)	GG	Clear	
MDR1 Drug Sensitivity	ABCB1	NN	Clear	
Progressive Retinal Atrophy, prcd	PRCD Exon 1	GG	Clear	
Hereditary Ataxia	PNPLA8 Exon 3	NN	Clear	
Junctional Epidermolysis Bullosa	LAMB3 Exon 11	TT	Clear	
Neuronal Ceroid Lipofuscinosis 6, NCL 6	CLN6 (Exon 7)	TT	Clear	
Neuronal Ceroid Lipofuscinosis 8, NCL 8	CLN8	GG	Clear	
Primary Ciliary Dyskinesia, PCD	STK36 Intron 19	GG	Clear	

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INBREEDING AND DIVERSITY

Genetic Diversity	RESULT	GENETIC RESULT
Coefficient Of Inbreeding		**15%**
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
E Locus (MC1R)	No dark mask or grizzle	EE
K Locus (CBD103)	More likely to have a patterned haircoat	$k^y k^y$
Intensity Loci	Any light hair likely yellow or tan	Intermediate Red Pigmentation
A Locus (ASIP)	Black/Brown and tan coat color pattern	$a^t a^t$
D Locus (MLPH)	Dark areas of hair and skin are not lightened	DD
Cocoa (HPS3)	No co alleles, not expressed	NN
B Locus (TYRP1)	Black or gray hair and skin	Bb
Saddle Tan (RALY)	Not saddle tan patterned	II
S Locus (MITF)	Likely to have little to no white in coat	SS
M Locus (PMEL)	One merle allele; may express merle	M*m
R Locus (USH2A)	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
Panda White Spotting	Not expected to display Panda pattern	NN

Other Coat Traits	RESULT	GENETIC RESULT
Furnishings (RSPO2)	Likely unfurnished (no mustache, beard, and/or eyebrows)	II
Coat Length (FGF5)	Likely long coat	LhLh
Shedding (MC5R)	Likely heavy/seasonal shedding	CC
Coat Texture (KRT71)	Likely straight coat	CC
Hairlessness (FOXI3)	Very unlikely to be hairless	NN
Hairlessness (SGK3)	Very unlikely to be hairless	NN
Oculocutaneous Albinism Type 2 (SLC45A2)	Likely not albino	NN

Other Body Features	RESULT	GENETIC RESULT
Muzzle Length (BMP3)	Likely medium or long muzzle	CC
Tail Length (T)	Likely normal-length tail	CC

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TRAIT TESTS (3/3)

Other Body Features	RESULT	GENETIC RESULT
Hind Dewclaws (LMBR1)	Unlikely to have hind dew claws	CC
Chondrodysplasia (Chr. 18 FGF4 Retrogene)	Not indicative of chondrodysplasia (normal leg length)	NN
Blue Eye Color (ALX4)	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)	Intermediate	NI
Body Size (IGFR1)	Larger	GG
Body Size (STC2)	Smaller	AA
Body Size (GHR - E191K)	Intermediate	GA
Body Size (GHR - P177L)	Larger	CC

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