#### Dog Information

Horse Creek's Pistol Annie NAME Australian Shepherd Group Breed with variety: 100% Australian Shepherd BREED ANCESTRY American Kennel Club (AKC) DN61645905 REGISTRATION

Female SEX April 13th, 2020 DATE OF BIRTH n/a MICROCHIP **DNA Test Report** 

Katie Brown OWNER NAME

Canine Genetic Health Screen TEST

January 5th, 2023 TEST DATE

#### **BREED HEALTH TESTS**

To ensure completeness, this report includes all carrier and at risk results for this dog.

DISEASE	GENE	GENOTYPE	RESULT	TESTING RECOMMENDED BY
Canine Multifocal Retinopathy, cmr1	BEST1/VMD2 (Exon 2)	CC	Clear	0
Collie Eye Anomaly, Choroidal Hypoplasia, CEA	NHEJ1 (Intron 4)	NN	Clear	۲
Craniomandibular Osteopathy, CMO	SLC37A2 (Exon 15)	CC	Clear	0
Day Blindness, Cone Degeneration, Achromatopsia	CNGB3	NN	Clear	۷
Degenerative Myelopathy, DM	SOD1(A)	GG	Clear	۲
Hereditary Cataracts, Early-Onset Cataracts, Juvenile Cataracts	HSF4	NN	Clear	۲
Hyperuricosuria and Hyperuricemia or Urolithiasis, HUU	SLC2A9 (Exon 5)	GT	1 Variant	۲
MDR1 Drug Sensitivity	ABCB1	ND	1 Variant	۲
Progressive Retinal Atrophy, prcd	PRCD Exon 1	GG	Clear	۲
Junctional Epidermolysis Bullosa	LAMB3 Exon 11	тт	Clear	×
Neuronal Ceroid Lipofuscinosis 6, NCL 6	CLN6 (Exon 7)	тт	Clear	×
Neuronal Ceroid Lipofuscinosis 8, NCL 8	CLN8	GG	Clear	*
Dilated Cardiomyopathy, DCM1	PDK4	ND	1 Variant	

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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	к <sup>у</sup> к <sup>у</sup>
Intensity Loci LINKAGE	Any light hair likely yellow or tan	Intermediate Red Pigmentation
A Locus (ASIP)	Black/Brown and tan coat color pattern	a <sup>t</sup> a <sup>t</sup>
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	н
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) LINKAGE	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 (RSPO2) LINKAGE	Likely unfurnished (no mustache, beard, and/or eyebrows)	Ш
Coat Length (FGF5)	Likely long coat	тт
Shedding (MC5R)	Likely heavy/seasonal shedding	сс
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	сс
Other Body Features	RESULT	GENETIC RESULT
Muzzle Length (BMP3)	Likely medium or long muzzle	сс
Tail Length (T)	Likely normal-length tail	сс
Hind Dewclaws (LMBR1)	Unlikely to have hind dew claws	сс

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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	СС
Body Size	RESULT	GENETIC RESULT
Body Size (IGF1)	Larger	NN
Body Size (IGFR1)	Larger	GG
Body Size (STC2)	Smaller	AA
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