

Dog Information

Papa's Reflection by FMA (Papa) NAME	Male SEX
Border Collie BREED ANCESTRY	August 20th, 2018 DATE OF BIRTH
American Kennel Club (AKC) DN57658101 REGISTRATION	n/a MICROCHIP

karen k marquardt

OWNER NAME

Canine Genetic Health Screen

TEST

January 11th, 2021

TEST DATE

BREED HEALTH TESTS

DISEASE	GENE	GENOTYPE	RESULT	TESTING RECOMMENDED BY
Collie Eye Anomaly, Choroidal Hypoplasia, CEA	NHEJ1 (Intron 4)	NN	Clear	
Degenerative Myelopathy, DM	SOD1(A)	GG	Clear	
Imerslund-Grasbeck Syndrome, Selective Cobalamin Malabsorption	CUBN (Exon 53)	NN	Clear	
MDR1 Drug Sensitivity	ABCB1	NN	Clear	
Myotonia Congenita	CLCN1 (Exon 23)	NN	Clear	
Neuronal Ceroid Lipofuscinosis 5, NCL 5	CLN5 (Exon 4)	CC	Clear	
Primary Lens Luxation	ADAMTS17	GG	Clear	
Trapped Neutrophil Syndrome, TNS	VPS13B Exon 19	NN	Clear	
Goniodysgenesis and Glaucoma, Pectinate Ligament Dysplasia, PLD	OLFML3	GG	Clear	
Raine Syndrome, Canine Dental Hypomineralization Syndrome	FAM20C	GA	1 Variant	
Sensory Neuropathy	FAM134B	NN	Clear	

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INBREEDING AND DIVERSITY

	RESULT	GENETIC RESULT
Genetic Diversity		
Coefficient Of Inbreeding		20%
MHC Class II - DLA DRB1		No 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 mostly solid black or brown coat	K ^B K ^B
Intensity Loci LINKAGE	No impact on coat pattern	Intermediate Red Pigmentation
A Locus (ASIP)	Not expressed	a ⁺ 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 expressed	ll
S Locus (MITF)	Likely to have little to no white in coat	SS
M Locus (PMEL)	No merle alleles	mm
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 (RSP02) LINKAGE	Likely unfurnished (no mustache, beard, and/or eyebrows)	II
Coat Length (FGF5)	Likely long coat	TT
Shedding (MC5R)	Likely heavy/seasonal shedding	CC
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)	Intermediate	GA
Body Size (GHR - P177L)	Larger	CC
Performance	RESULT	GENETIC RESULT
Altitude Adaptation (EPAS1)	Normal altitude tolerance	GG
Appetite (POMC) LINKAGE	Normal food motivation	NN