

Dog Information

C2R Let Freedom Ring (Bell) NAME	Female SEX
Beagle BREED ANCESTRY	July 3rd, 2022 DATE OF BIRTH
American Kennel Club (AKC) tbd REGISTRATION	n/a MICROCHIP

Rachel Lucas
OWNER NAME

Canine Genetic Health Screen
TEST

August 21st, 2022
TEST DATE

BREED HEALTH TESTS

DISEASE	GENE	GENOTYPE	RESULT	TESTING RECOMMENDED BY
Cerebellar Abiotrophy, Neonatal Cerebellar Cortical Degeneration, NCCD	SPTBN2	NN	Clear	
Degenerative Myelopathy, DM	SOD1A	GG	Clear	
Factor VII Deficiency	F7 Exon 5	GG	Clear	
Imerslund-Grasbeck Syndrome, Selective Cobalamin Malabsorption	CUBN (Exon 8)	NN	Clear	
Musladin-Lueke Syndrome, MLS	ADAMTSL2 (Exon 7)	CC	Clear	
Primary Open Angle Glaucoma	ADAMTS10	GG	Clear	
Pyruvate Kinase Deficiency	PKLR Exon 7 SNP Variant 3	GG	Clear	
Chondrodystrophy and Intervertebral Disc Disease, CDDY/IVDD, Type I IVDD	FGF4 - chr12	I/I	2 Variants	
Congenital Stationary Night Blindness	LRIT3	NN	Clear	
Hypocatalasia, Acatlasemia	CAT	GG	Clear	
Osteogenesis Imperfecta, Brittle Bone Disease	COL1A2	NN	Clear	
Progressive Retinal Atrophy, crd4/cord1	RPGRIP1 (Exon 2)	NI	1 Variant	

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INBREEDING AND DIVERSITY

Genetic Diversity	RESULT	GENETIC RESULT
Coefficient Of Inbreeding		27%
MHC Class II - DLA DRB1		No Diversity
MHC Class II - DLA DQA1 and DQB1		No 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	$a^+ a^+$
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)	Likely saddle tan patterned	NN
S Locus (MITF)	Likely solid colored, but may have small amounts of white	Ssp
M Locus (PMEL)	No merle alleles	mm
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

Other Coat Traits	RESULT	GENETIC RESULT
Furnishings (RSP02)	Likely unfurnished (no mustache, beard, and/or eyebrows)	II
Coat Length (FGF5)	Likely short or mid-length coat	ShSh
Shedding (MC5R)	Likely heavy/seasonal shedding	CT
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
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)	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)	Smaller	II
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)	Normal food motivation	NN