

## Dog Information

<b>Odin</b> NAME	<b>Male</b> SEX
<b>German Shepherd Dog</b> BREED ANCESTRY	<b>December 25th, 2016</b> DATE OF BIRTH
<b>American Kennel Club (AKC)</b> REGISTRATION	<b>n/a</b> MICROCHIP

**Astrid Hall**  
OWNER NAME

**Canine Genetic Health Screen**  
TEST

**February 17th, 2024**  
TEST DATE

## BREED HEALTH TESTS

DISEASE	GENE	GENOTYPE	RESULT	TESTING RECOMMENDED BY
Canine Leukocyte Adhesion Deficiency Type III, CLAD III	FERMT3	NN	Clear	
Degenerative Myelopathy, DM	SOD1A	GG	Clear	
Factor VIII Deficiency, Hemophilia A	F8 Exon 1	GY	Clear	
Factor VIII Deficiency, Hemophilia A	F8 Exon 11	GY	Clear	
Hyperuricosuria and Hyperuricemia or Urolithiasis, HUU	SLC2A9 (Exon 5)	GG	Clear	
MDR1 Drug Sensitivity	ABCB1	NN	Clear	
Mucopolysaccharidosis Type VII, Sly Syndrome, MPS VII	GUSB	GG	Clear	
Achromatopsia	CNGA3 (Exon 7 SNP)	CC	Clear	
Ichthyosis	ASPRV1 Exon 2	TT	Clear	
Platelet Factor X Receptor Deficiency, Scott Syndrome	TMEM16F	GG	Clear	
Renal Cystadenocarcinoma and Nodular Dermatofibrosis, RCND	FLCN	GG	Clear	
X-linked Ectodermal Dysplasia, Anhidrotic Ectodermal Dysplasia, XHED	EDA	GY	Clear	

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## INBREEDING AND DIVERSITY

Genetic Diversity	RESULT	GENETIC RESULT
Coefficient Of Inbreeding		27%
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>	Can have a melanistic mask	$E^mE^m$
<b>K Locus (CBD103)</b>	More likely to have a patterned haircoat	$k^yk^y$
<b>Intensity Loci LINKAGE</b>	No impact on coat pattern	Dilute Red Pigmentation
<b>A Locus (ASIP)</b>	Recessive Black/Brown	aa
<b>D Locus (MLPH)</b>	Dark areas of hair and skin are not lightened	DD
<b>Cocoa (HPS3)</b>	No co alleles, not expressed	NN
<b>B Locus (TYRP1)</b>	Black or gray hair and skin	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 (RSPO2) LINKAGE	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	CC
Coat Texture (KRT71)	Likely straight coat	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
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
Chondrodysplasia (Chr. 18 FGF4 Retrogene)	Not indicative of chondrodysplasia (normal leg length)	NN
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