WISDOM PANEL™

# DNA Test Report



## Owner Info

**First Name**
Dorothy Elizabeth

**Last Name**
Boatwright

## Pet Info

**Registered Name**
LOVE SONG

**Nickname (Call Name)**
LOVE SONG

**Sex**
Male

**Date of Birth**
5/17/2023

**Sample ID**
CHSDWNK

**Registration**
N/A

**Microchip ID**
N/A

**Tattoo ID**
N/A

# DNA Test Report

## Ancestry Results

**Western**

84% Ragdoll

**Asian**

3% Birman

**Persian**

13% Persian

# DNA Test Report

## Genetic Diversity (Heterozygosity)

**LOVE SONG's Percentage of Heterozygosity**

33%

LOVE SONG's genome analysis shows an average level of genetic heterozygosity when compared with other random-bred cats.

**Typical Range for Domestic Cats**

29 - 41%

# DNA Test Report

## Health Conditions Tested

| Genetic Condition | Gene | Risk Variant | Copies | Result |
|---|---|---|---|---|
| Acute Intermittent Porphyria (Variant 1) | HMBS | Deletion | 0 | Clear |
| Acute Intermittent Porphyria (Variant 2) | HMBS | G>A | 0 | Clear |
| Acute Intermittent Porphyria (Variant 3) | HMBS | Insertion | 0 | Clear |
| Acute Intermittent Porphyria (Variant 4) | HMBS | Deletion | 0 | Clear |
| Acute Intermittent Porphyria (Variant 5) | HMBS | G>A | 0 | Clear |
| Autoimmune Lymphoproliferative Syndrome | FASL | Insertion | 0 | Clear |
| Burmese Head Defect (Discovered in the Burmese) | ALX1 | Deletion | 0 | Clear |
| Chediak-Higashi Syndrome (Discovered in the Persian) | LYST | Insertion | 0 | Clear |
| Congenital Adrenal Hyperplasia | CYP11B1 | G>A | 0 | Clear |
| Congenital Erythropoietic Porphyria | UROS | G>A | 0 | Clear |
| Congenital Myasthenic Syndrome (Discovered in the Devon Rex and Sphynx) | COLQ | G>A | 0 | Clear |
| Cystinuria Type 1A | SCL3A1 | C>T | 0 | Clear |
| Cystinuria Type B (Variant 1) | SCL7A9 | C>T | 0 | Clear |
| Cystinuria Type B (Variant 2) | SCL7A9 | G>A | 0 | Clear |
| Cystinuria Type B (Variant 3) | SCL7A9 | T>A | 0 | Clear |
| Dihydropyrimidinase Deficiency | DPYS | G>A | 0 | Clear |
| Earfold and Osteochondrodysplasia (Discovered in the Scottish Fold) | TRPV4 | G>T | 0 | Clear |
| Factor XII Deficiency (Variant 1) | F12 | Deletion | 0 | Clear |
| Factor XII Deficiency (Variant 2) | F12 | Deletion | 0 | Clear |
| Familial Episodic Hypokalemic Polymyopathy (Discovered in the Burmese) | WNK4 | C>T | 0 | Clear |
| Glutaric Aciduria Type II | ETFDH | T>G | 0 | Clear |
| Glycogen Storage Disease (Discovered in the Norwegian Forest Cat) | GBE1 | Insertion | 0 | Clear |

## Health Conditions Tested (continued)

| Genetic Condition | Gene | Risk Variant | Copies | Result |
|---|---|---|---|---|
| GM1 Gangliosidosis | GLB1 | G>C | 0 | Clear |
| GM2 Gangliosidosis | GM2A | Deletion | 0 | Clear |
| GM2 Gangliosidosis Type II (Discovered in Domestic Shorthair cats) | HEXB | Insertion | 0 | Clear |
| GM2 Gangliosidosis Type II (Discovered in Japanese domestic cats) | HEXB | C>T | 0 | Clear |
| GM2 Gangliosidosis Type II (Discovered in the Burmese) | HEXB | 0>0 | 0 | Clear |
| Hemophilia B (Variant 1) | F9 | C>T | 0 | Clear |
| Hemophilia B (Variant 2) | F9 | G>A | 0 | Clear |
| Hyperoxaluria Type II | GRHPR | G>A | 0 | Clear |
| Hypertrophic Cardiomyopathy (Discovered in the Maine Coon) | MYBPC | G>C | 0 | Clear |
| Hypertrophic Cardiomyopathy (Discovered in the Ragdoll) | MYBPC | C>T | 0 | Clear |
| Hypotrichosis (Discovered in the Birman) | FOXN1 | Deletion | 0 | Clear |
| Lipoprotein Lipase Deficiency | LPL | G>A | 0 | Clear |
| MDR1 Medication Sensitivity | ABCB1 | Deletion | 0 | Clear |
| Mucopolysaccharidosis Type I | IDUA | Deletion | 0 | Clear |
| Mucopolysaccharidosis Type VI | ARSB | T>C | 0 | Clear |
| Mucopolysaccharidosis Type VI Modifier | ARSB | G>A | 0 | Clear |
| Mucopolysaccharidosis Type VII (Variant 1) | GUSB | G>A | 0 | Clear |
| Mucopolysaccharidosis Type VII (Variant 2) | USB | C>T | 0 | Clear |
| Myotonia Congenita | CLCN1 | G>T | 0 | Clear |
| Polycystic Kidney Disease (PKD) | PKD1 | C>A | 0 | Clear |
| Progressive Retinal Atrophy (Discovered in the Abyssinian) | CEP290 | T>G | 0 | Clear |
| Progressive Retinal Atrophy (Discovered in the Bengal) | KIF3B | G>A | 0 | Clear |

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## Health Conditions Tested (continued)

| Genetic Condition | Gene | Risk Variant | Copies | Result |
|---|---|---|---|---|
| Progressive Retinal Atrophy (Discovered in the Persian) | AIPL1 | C>T | 0 | Clear |
| Pyruvate Kinase Deficiency | PKLR | G>A | 0 | Clear |
| Sphingomyelinosis (Variant 1) | NPC1 | G>C | 0 | Clear |
| Sphingomyelinosis (Variant 2) | NPC2 | G>A | 0 | Clear |
| Vitamin D-Dependent Rickets | CYP27B1 | G>T | 0 | Clear |

# DNA Test Report

## Blood Type

**Blood Type**

A

(Most common)

**Genotype**

A/A

**Transfusion Risk**

Moderate

LOVE SONG has the most common blood type. He can be transfused with Type A blood.

**Breeding Risk**

Low

If breeding, LOVE SONG has a low risk of blood type incompatibility with nursing kittens.

| Variant Tested | Description | Copies |
|---|---|---|
| b variant 1 | (Common b variant) | 0 |
| b variant 2 | (Discovered in Turkish breeds) | 0 |
| b variant 3 | (Discovered in Ragdolls) | 0 |
| c variant - Causes AB Blood Type | (Discovered in Ragdolls) | 0 |

# DNA Test Report

## Coat Color

| Genetic Trait | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| Charcoal (Discovered in the Bengal) | ASIP | $A^{Pb}$ | 0 | No effect |
| Solid Color | ASIP | **a** | **1** | **Banded hairs, tabby patterns likely** |
| Partial and Full White | KIT | **W or $w^{s}$** | **2** | **Partly or fully white coat likely** |
| Amber (Discovered in the Norwegian Forest Cat) | MC1R | e | 0 | No effect |
| Russet (Discovered in the Burmese) | MC1R | $e^{r}$ | 0 | No effect |
| Dilution | MLPH | **d** | **1** | **No effect** |
| Albinism (Discovered in Oriental breeds) | TYR | $c^{a}$ | 0 | No effect |
| Colorpoint (Discovered in the Burmese) | TYR | $c^{b}$ | 0 | No effect |
| Colorpoint (Discovered in the Siamese) | TYR | **$c^{s}$** | **2** | **Siamese colorpoint pattern likely** |
| Mocha (Discovered in the Burmese) | TYR | $c^{m}$ | 0 | No effect |
| Chocolate | TYRP | b | 0 | No effect |
| Cinnamon | TYRP | $b^{l}$ | 0 | No effect |

## Coat Type

| Genetic Trait | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| Glitter | Confidential | — | 0 | No effect |
| Long Hair (Discovered in many breeds) | FGF5 | **M4** | **1** | **Long coat possible, short coat likely** |
| Long Hair (Discovered in the Norwegian Forest Cat) | FGF5 | M2 | 0 | No effect |
| Long Hair (Discovered in the Ragdoll and Maine Coon) | FGF5 | M3 | 0 | No effect |
| Long Hair (Discovered in the Ragdoll) | FGF5 | **M1** | **1** | **Long coat possible, short coat likely** |
| Lykoi Coat (Variant 1) | HR | $hr^{Ca}$ | 0 | No effect |
| Lykoi Coat (Variant 2) | HR | $hr^{VA}$ | 0 | No effect |

## Coat Type (continued)

| Genetic Trait | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| Hairlessness (Discovered in the Sphynx) | KRT71 | $re^{hr}$ | 0 | No effect |
| Rexing (Discovered in the Devon Rex) | KRT71 | $re^{dr}$ | 0 | No effect |
| Rexing (Discovered in the Cornish Rex and German Rex) | LPAR6 | r | 0 | No effect |

## Tail Length

| Genetic Trait | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| Short Tail (Variant 3) | HES7 | jb | 0 | No effect |
| Short Tail (Variant 1) | T | C1199del | 0 | No effect |
| Short Tail (Variant 2) | T | T988del | 0 | No effect |

## Extra Toes

| Genetic Trait | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| Polydactyly (Variant 1) | LIMBR1 | HW | 0 | No effect |
| Polydactyly (Variant 2) | LIMBR1 | UK1 | 0 | No effect |
| Polydactyly (Variant 3) | LIMBR1 | UK2 | 0 | No effect |