

Lionheart
Registration: SBV 033123 009
Breed: Cashmere (Bengal Longhair)
Microchip Number: N/A

Sample ID: FHFPXSN
Test Date: 8/3/2023
Optimal Selection - Feline

DNA Test Report

Owner Info

First Name

Tabitha

Last Name

Gitthens

Pet Info

Registered Name

Lionheart

Date of Birth

3/31/2023

Nickname (Call Name)

Lionheart

Sample ID

FHFPXSN

Sex

Male

Registration

SBV 033123 009

Country of Origin

US

Microchip ID

N/A

Owner Reported Breed

Cashmere (Bengal Longhair)

Tattoo ID

N/A

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Genetic Diversity (Heterozygosity)

Lionheart's Percentage of Heterozygosity

31%

Lionheart's genome analysis shows an average level of genetic heterozygosity when compared with other single-breed cats.

Typical Range for Single-Breed Cats

26 - 38%

DNA Test Report

Health Conditions Tested

| Genetic Condition | Gene | Risk Variant | Copies | Result |
|---|---------|--------------|--------|---------|
| Factor XII Deficiency (Variant 2) | F12 | Deletion | 1 | Notable |
| 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 |
| 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 |

DNA Test Report

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 | O>O | 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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|---|---------|--------------|--------|--------|
| 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 |
| Spinal Muscular Atrophy (Discovered in the Maine Coon) | LIX1 | Deletion | 0 | Clear |
| Vitamin D-Dependent Rickets | CYP27B1 | G>T | 0 | Clear |

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Blood Type

Blood Type

A
(Most common)

Genotype

A/A

Transfusion Risk

Moderate

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

Breeding Risk

Low

If breeding, Lionheart 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 | 0 | Banded hairs, tabby patterns likely |
| Gloving (Discovered in the Birman) | KIT | w ^g | 0 | No effect |
| Partial and Full White | KIT | W or w ^s | 0 | No effect |
| 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 | 0 | No effect |
| Albinism (Discovered in Oriental breeds) | TYR | c ^a | 0 | No effect |
| Colorpoint (Discovered in the Burmese) | TYR | c ^b | 1 | Colorpoints possible |
| Colorpoint (Discovered in the Siamese) | TYR | c ^s | 1 | Colorpoints possible |
| 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 | — | 2 | Glitter coat likely |
| Long Hair (Discovered in many breeds) | FGF5 | M4 | 2 | Long 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 | 0 | No effect |
| Lykoi Coat (Variant 1) | HR | hr ^{Ca} | 0 | No effect |

DNA Test Report

Coat Type (continued)

| Genetic Trait | Gene | Variant | Copies | Result |
|---|-------|------------------|--------|-----------|
| Lykoi Coat (Variant 2) | HR | hr ^{VA} | 0 | No effect |
| 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 |