



# Orivet

# Genetic Summary Report

**Animal Name:** Naomi

**Owner:**

Sr. Mary Oda

Membership Number : Not assigned

Member Body/Breed Club: Not assigned

Approved Collection Method:  Yes



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Accredited and Compliant with



Members of



Harmonization of Genetic Testing for Dogs

## Genetic Summary Report



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### Owner's details

Name: Sr. Mary Oda

### Animal's Details

Registered Name : Naomi's Joy At Bethlehem

Pet Name : Naomi

Registration Number : SS27829408

Breed : Labrador Retriever

Microchip Number : 956000014091963

Sex : Female

Date of Birth : 9th Jul 2021

Colour : Yellow

### Sample Collection Details

Case Number : 22218828

Collected By : Allyson Hannan, DVM

Approved Collection : Yes

Sample Type : SWAB

### Test Details

Test Requested : Labrador Retriever - Full Breed Profile

Pet Name : Naomi

Date of Test : 12th Sep 2022

### Authorisation

Sample with Lab ID Number 22218828 was received at Orivet Genetics, DNA was extracted and analysed with the following result reported:



George Sofronidis BSc (Hons)



Dr Noam Pik BVSc, MAVS





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## Animal's Details

Registered Name :	Naomi's Joy At Bethlehem
Pet Name :	Naomi
Registration Number :	SS27829408
Breed :	Labrador Retriever
Microchip Number :	956000014091963
Sex :	Female
Date of Birth :	9th Jul 2021
Colour :	Yellow

## Tests Reported

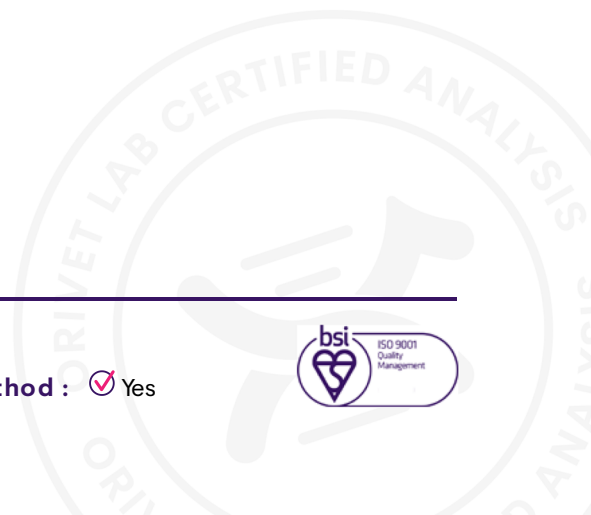
Diseases	Result
Achromatopsia (Labrador Type)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Centronuclear Myopathy (Labrador Retriever Type)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Congenital Macrothrombocytopenia	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Congenital Myasthenic Syndrome (Labrador Retriever Type)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Copper Toxicosis (ATP7B & ATP7A) (Labrador Retriever Type)	NEGATIVE FOR ATP7B / CARRIER OF THE ATP7A VARIANT
Cystinuria (SLC3A1) Labrador Retriever Type	NEGATIVE / CLEAR [NO VARIANT DETECTED]

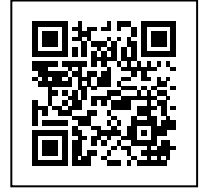
Owner's Name : Sr. Mary Oda

Pet Name : Naomi

Microchip Number 956000014091963

Approved Collection Method :  Yes





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## Tests Reported

Diseases	Result
Degenerative Myelopathy	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Ehlers-Danlos Syndrome (Labrador Type)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Elliptocytosis B-spectrin (Labrador Retriever/Poodle Type)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Exercise Induced Collapse (Retriever Type)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Hereditary Nasal Parakeratosis/Dry Nose (Labrador Retriever Type)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Hyperuricosuria	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Macular Corneal Dystrophy (Labrador Type)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Malignant Hyperthermia	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Myotubular Myopathy X-Linked (Labrador Retriever Type)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Narcolepsy (Labrador)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Progressive Rod Cone Degeneration (prcd) - PRA	NEGATIVE / CLEAR [NO VARIANT DETECTED]

**Owner's Name :** Sr. Mary Oda

**Pet Name :** Naomi

**Microchip Number** 956000014091963

**Approved Collection Method :**  Yes





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## Tests Reported

Diseases	Result
Pyruvate Kinase Deficiency (Labrador Type)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Skeletal Dysplasia 2 (Mild Disproportionate Dwarfism)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Stargardt Disease (Retinal Degeneration)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

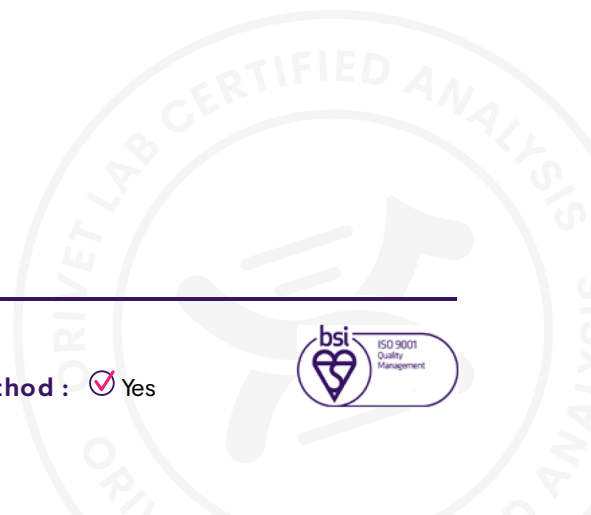
Traits	Result
E Locus - (Cream/Red/Yellow)	e/e - YELLOW [CAN RANGE FROM WHITE/WHITE to FOX RED]
I Locus Colour Intensity	I/i - ONE COPY OF THE MFSD12 INTENSITY ALLELE (NOT LIKELY TO SHOW EXTREME DILUTION)
Brown (345DELPRO) Deletion	B <sup>d</sup> /B <sup>d</sup> - DOES NOT CARRY BROWN/RED/LIVER or CHOCOLATE [DELETION]
Brown (GLNT331STOP) Stop Codon	B <sup>s</sup> /b <sup>s</sup> - CARRIER OF BROWN/LIVER/RED/CHOCOLATE [STOP CODON]
Brown (SER41CYS) Insertion Codon	B <sup>c</sup> /B <sup>c</sup> - DOES NOT CARRY BROWN/RED/LIVER or CHOCOLATE [INSERTION]
Liver [TYRP1] (Lancashire Heeler Type)	B <sup>e</sup> /B <sup>e</sup> - DOES NOT CARRY BROWN/LIVER [TYRP1]
D (Dilute) Locus	D/D - NO COPY OF MLPH-D ALLELE (DILUTE) - PIGMENT IS NORMAL
Dilute D2 Variant (Chow Chow Type)	D <sup>2</sup> /D <sup>2</sup> - NO COPY OF d2 ALLELE (DILUTE) - PIGMENT IS NORMAL

**Owner's Name :** Sr. Mary Oda

**Pet Name :** Naomi

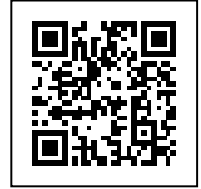
**Microchip Number** 956000014091963

**Approved Collection Method :**  Yes





# Genetic Summary Report



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## Tests Reported

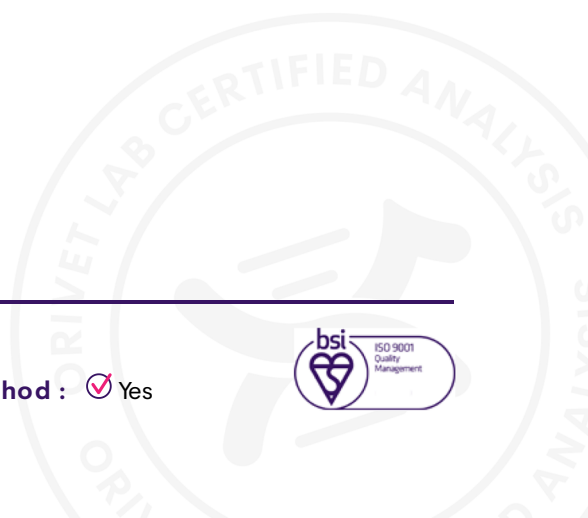
Traits	Result
K Locus (Dominant Black)	K/K - DOMINANT BLACK - SOLID [WILL NOT BE BRINDLED or EXPRESS AGOUTI]
A Locus (Fawn/Sable;Tri/Tan Points)	a <sup>t</sup> /a <sup>t</sup> - TAN POINTS/BLACK & TAN or TRICOLOUR MAY BE BRINDLED [SEE K LOCUS]
Long Hair Gene (Canine C95F)	NEGATIVE - NOT SHOWING THE PHENOTYPE

Owner's Name : Sr. Mary Oda

Pet Name : Naomi

Microchip Number 956000014091963

Approved Collection Method :  Yes



# Glossary of Genetic Terms (Results)



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## **NEGATIVE / CLEAR [NO VARIANT DETECTED]**

No presence of the variant (mutation) has been detected. The animal is clear of the disease and will not pass on any disease-causing mutation.

## **CARRIER [ONE COPY OF THE VARIANT DETECTED]**

This is also referred to as HETEROZYGOUS. One copy of the normal gene and copy of the affected (mutant) gene has been detected. The animal will not exhibit disease symptoms or develop the disease. Consideration needs to be taken if breeding this animal - if breeding with another carrier or affected or unknown then it may produce an affected offspring.

## **POSITIVE / AT RISK [TWO COPIES OF THE VARIANT DETECTED]**

Two copies of the disease gene variant (mutation) have been detected also referred to as HOMOZYGOUS for the variant. The animal may show symptoms (affected) associated with the disease. Appropriate treatment should be pursued by consulting a Veterinarian.

## **POSITIVE HETEROZYGOUS [ONE COPY OF THE DOMINANT VARIANT DETECTED]**

Also referred to as POSITIVE ONE COPY or POSITIVE HETEROZYGOUS. This result is associated with a disease that has a dominant mode of inheritance. One copy of the normal gene (wild type) and affected (mutant) gene is present. Appropriate treatment should be pursued by consulting a Veterinarian. This result can still be used to produce a clear offspring.

## **NORMAL BY PARENTAGE HISTORY**

The sample submitted has had its parentage verified by DNA. By interrogating the DNA profiles of the Dam, Sire and Offspring this information together with the history submitted for the parents excludes this animal from having this disease. The controls run confirm that the dog is NORMAL for the disease requested.

## **NORMAL BY PEDIGREE**

The sample submitted has had its parentage verified by Pedigree. The pedigree has been provided and details (genetic testing reports) of the parents have been included. Parentage could not be determined via DNA profile as no sample was submitted.

## **NO RESULTS AVAILABLE**

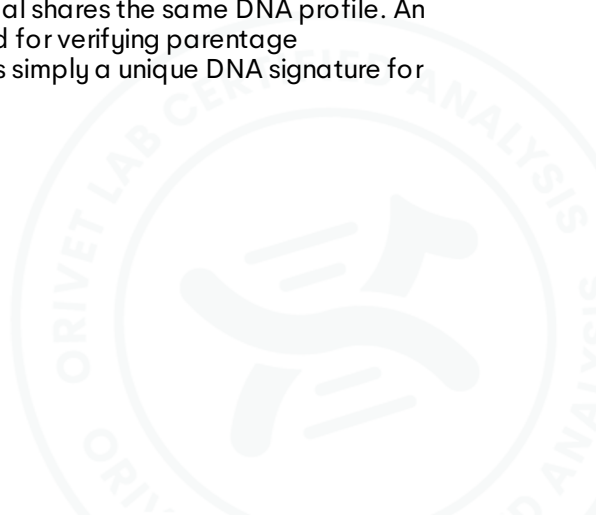
Insufficient information has been provided to provide a result for this test. Sire and Dam information and/or sample may be required. This result is mostly associated with tests that have a patent/license and therefore certain restrictions apply. Please contact the laboratory to discuss.

## **INDETERMINABLE**

The sample submitted has failed to give a conclusive result. This result is mainly due to the sample failing to "cluster" or result in the current grouping. A recollection is required at no charge.

## **DNA PROFILE**

Also known as a DNA fingerprint. This is unique for the animal. No animal shares the same DNA profile. An individual's DNA profile is inherited from both parents and can be used for verifying parentage (pedigrees). This profile contains no disease or trait information and is simply a unique DNA signature for that animal.



# Glossary of Genetic Terms (Results)



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## **PARENTAGE VERIFICATION/ QUALIFIES/CONFIRMED OR DOES NOT QUALIFY/EXCLUDED**

Parentage is determined by examining the markers on the DNA profile. A result is generated and stated for all DNA parentage requests. Parentage confirmation reports can only be generated if a DNA profile has been carried out for Dam, Offspring and possible Sire/s.

## **PENDING**

PENDING

## **TRAIT (PHENOTYPE)**

A feature that an animal is born with (a genetically determined characteristic). Traits are a visual phenotype that range from colour to hair length, and also includes certain features such as tail length. If an individual is **AFFECTED** for a trait then it will show that characteristic eg. **AFFECTED** for the B (Brown) Locus or bb will be brown/chocolate.

## **POSITIVE – SHOWING THE PHENOTYPE**

The animal is showing the trait or phenotype tested.

## **CLARIFICATION OF GENETIC TESTING**

The goal of genetic testing is to provide breeders with relevant information to improve breeding practices in the interest of animal health. However, genetic inheritance is not a simple process, and may be complicated by several factors. Below is some information to help clarify these factors.

The goal of genetic testing is to provide breeders with relevant information to improve breeding practices in the interest of animal health. However, genetic inheritance is not a simple process, and may be complicated by several factors. Below is some information to help clarify these factors.

- 1) Some diseases may demonstrate signs of what Geneticists call "genetic heterogeneity". This is a term to describe an apparently single condition that may be caused by more than one mutation and/or gene
- 2) It is possible that there exists more than one disease that presents in a similar fashion and segregates in a single breed. These conditions -although phenotypically similar - may be caused by separate mutations and/or genes.
- 3) It is possible that the disease affecting your breed may be what Geneticists call an "oligogenic disease". This is a term to describe the existence of additional genes that may modify the action of a dominant gene associated with a disease. These modifier genes may for example give rise to a variable age of onset for a particular condition, or affect the penetrance of a particular mutation such that some animals may never develop the condition.

The range of hereditary diseases continues to increase and we see some that are relatively benign and others that can cause severe and/or fatal disease. Diagnosis of any disease should be based on pedigree history, clinical signs, history (incidence) of the disease and the specific genetic test for the disease. Penetrance of a disease will always vary not only from breed to breed but within a breed, and will vary with different diseases. Factors that influence penetrance are genetics, nutrition and environment. Although genetic testing should be a priority for breeders, we strongly recommend that temperament and phenotype also be considered when breeding.

Orivet Genetic Pet Care aims to frequently update breeders with the latest research from the scientific literature. If breeders have any questions regarding a particular condition, please contact us on (03) 9534 1544 or [admin@orivet.com](mailto:admin@orivet.com) and we will be happy to work with you to answer any relevant questions.

