

# Genetic Summary Report

**Animal Name:** ZEUS

**Owner:**

Carolyn Neal

Membership Number : 4100170846

Member Body/Breed Club: DOGS QUEENSLAND

Approved Collection Method:  Yes





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## Genetic Summary Report

### Owner's details

Name:	Carolyn Neal
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### Animal's Details

Registered Name :	Kolorko Ragazzo Bianco E Nero
Pet Name :	ZEUS
Registration Number :	4100400136
Breed :	Border Collie
Microchip Number :	953010006710454
Sex :	Intact Male
Date of Birth :	26th Jun 2024
Colour :	Black & White

### Sample Collection Details

Case Number :	24E36088
Collected By :	Dr Jennifer Larsen
Approved Collection :	Yes
Sample Type :	SWAB

### Test Details

Test Requested :	Border Collie - Full Breed Profile
Pet Name :	ZEUS
Date of Test :	2nd Sep 2024

### Authorisation

Sample with Lab ID Number 24E36088 was received at Orivet Genetics, DNA was extracted and analysed with the following result reported:



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Orivet Genetic Analyst





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## Health Tests Reported

Breed Sense	Diseases	Result
✓	Cobalamin Malabsorption: Cubilin Deficiency (Border Collie Type)	NORMAL (N/N) - [NO VARIANT DETECTED]
✓	Collie Eye Anomaly/Choroidal Hypoplasia	NORMAL (N/N) - [NO VARIANT DETECTED]
✓	Cystinuria (SLC3A1) (Australian Cattle Dog Type)	NORMAL (N/N) - [NO VARIANT DETECTED]
✓	Degenerative Myelopathy	NORMAL (N/N) - [NO VARIANT DETECTED]
✓	Duchenne Muscular Dystrophy (Border Collie Type)	NORMAL (N/N) - [NO VARIANT DETECTED]
✓	Early Adult Onset Deafness Border Collie (Linkage Association Test)	NORMAL (N/N) FOR THE EAOD RISK VARIANT [RESEARCH ONLY]
✓	Goniodysgenesis and Glaucoma (Border Collie)	NORMAL (N/N) - [NO VARIANT DETECTED]
✓	Ivermectin Sensitivity MDR1 (Multi Drug Resistance)	NORMAL (N/N) - [NO VARIANT DETECTED]
✓	Myotonia Hereditaria (Cattle Dog Type)	NORMAL (N/N) - [NO VARIANT DETECTED]
✓	Neuronal Ceroid Lipofuscinosis 5 (Border Collie Type)	NORMAL (N/N) - [NO VARIANT DETECTED]
✓	Raine Syndrome Dental Hypomineralisation (Border Collie)	NORMAL (N/N) - [NO VARIANT DETECTED]
✓	Sensory Neuropathy (Border Collie Type)	NORMAL (N/N) - [NO VARIANT DETECTED]
✓	Trapped Neutrophil Syndrome (Border Collie Type)	NORMAL (N/N) - [NO VARIANT DETECTED]

Owner's Name : Carolyn Neal

Pet Name : ZEUS

Microchip Number 953010006710454

Approved Collection Method :  Yes





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## Health Tests Reported

Breed Sense	Traits	Result
✓	A Locus (Agouti)	$a^t/a^t$ - TAN POINTS/BLACK & TAN or TRICOLOUR MAY BE BRINDLED [SEEK LOCUS]
✓	Body Size IGSF1 "Bulky Gene"	NO COPY INSULIN LIKE GROWTH FACTOR (IGF1R) - ASSOCIATED WITH A REDUCTION of BODY (BULKY) SIZE
✓	Brown Deletion = B <sup>d</sup>	$B^d/B^d$ - DOES NOT CARRY BROWN/RED/LIVER or CHOCOLATE [DELETION]
✓	Brown Insertion = B <sup>c</sup>	$B^c/B^c$ - DOES NOT CARRY BROWN/RED/LIVER or CHOCOLATE [INSERTION]
✓	Brown Stop Codon = B <sup>s</sup>	$B^s/B^s$ - CARRIER OF BROWN/LIVER/RED/CHOCOLATE [STOP CODON]
✓	Curly Coat/Hair Variant 1	NEGATIVE FOR THE R151W (C1) VARIANT - NOT SHOWING THE CURLY COAT PHENOTYPE
✓	D (Dilute) Locus	D/D - NO COPY OF MLPH-D ALLELE (DILUTE) - PIGMENT IS NORMAL
✓	E Locus - (Cream/Red/Yellow)	E/e - BLACK CARRIES EXTENSION [YELLOW/WHITE/APRICOT/RUBY/RED]
✓	I Pheomelanin Locus Colour Intensity	I/I - NO COPY OF MFSD12 INTENSITY/CREAM ALLELE (NOT LIKELY TO SHOW EXTREME DILUTION)
✓	K Locus (Dominant Black)	K/K - DOMINANT BLACK - SOLID [WILL NOT BE BRINDLED or EXPRESS AGOUTI]
✓	Long Hair Gene - L1 (Canine C95F)	POSITIVE - SHOWING THE PHENOTYPE
✓	M Locus (Merle/Dapple)	m [171bp] / m [171bp] - NON MERLE SOLID COAT (NO CHANGE TO COAT or EYE COLOUR)
✓	Pied (BOTH SINE and REPEAT VARIANTS)	S/S - NO PIEBALD, WHITE SPOTTING, FLASH OR PARTI COAT COLOUR
	Brown TYRP1 [Australian Shepherd Type] = B <sup>a</sup>	$B^a/B^a$ - NO COPY OF THE BROWN/RED c.555T>G VARIANT [AUSTRALIAN SHEPHERD TYPE] DETECTED
	Coat Composition CFA28 Gene (Double/Single Coat)	udc/udc - TWO COPIES OF THE DOUBLE COAT (DENSE UNDERCOAT) PHENOTYPE DETECTED
	E Locus (Cattle Dog Cream Variant) e <sup>2</sup>	$E^2/E^2$ - DOMINANT BLACK DOES NOT CARRY "AUSTRALIAN CATTLE DOG" TYPE CREAM

Owner's Name : Carolyn Neal

Pet Name : ZEUS

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# Glossary of Genetic Terms (Results)



## 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.

