

GENETIC ANALYSIS SINGLE REPORT



OWNER'S DETAILS

GRAUFFEL Véronique
2 rues des Près GRIESBACH LE BASTBERG
BOUXWILLER
67330 France

ANIMAL'S DETAILS

Registered Name : Grauffel
Pet Name : O'Sam
Registration Number : 18030
Breed : Border Collie
Microchip Number : 250268600240331
Sex : Intact Male
Date of Birth : 21st Nov 2018
Colour : Chocolat tricolore

COLLECTION DETAILS

Case Number : 19220070
Date of Test : 20th Nov 2019
Collected By : DR ROZET VINCENT
Approved Collection : YES

Sample with Lab ID Number 19220070 was received at Orivet Genetics, DNA was extracted and analysed with the following result reported:

TEST REPORTED : K LOCUS (DOMINANT BLACK)
RESULT : k^y/k^y - RECESSIVE NON- BLACK [COLOUR PATTERN DETERMINED BY A LOCUS]¹
GENE : CBD103
VARIANT DETECTED : DELETION OF GGG

¹ Dog does not have the dominant black mutation. Dog's coat colour will be determined by the agouti gene – may be brindled or not brindled. Any phaeomelanin (red/tan) will be brindled. Can be sable/fawn, tricolour, tan points, black or brown. Will (may) have black pigment and black markings (unless the extension locus interferes).

RESULTS REVIEWED & CONFIRMED BY:

Dr. Noam Pik BVSc, BMVS, MBA, MACVS



George Sofronidis BSc(Hons)

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.

- 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.

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