CombiBreed®
Powered by VHLGenetics

# Analysis Certificate

H535 CombiBreed Cane Corso

## Animal Info

| | | |
|---|---|---|
| Name | : | Gigi X-Man |
| Animal ID | : | 992000005127069 |
| Breed | : | cane corso |
| Sex | : | Female |
| Date of Birth | : | 27.11.2025 |
| VHL ID | : | H709000 |

## Sample Info

| | | |
|---|---|---|
| Order number | : | EN95637 |
| Sample type | : | Swab |
| Certificate number | : | H152010 |
| Test date | : | 16.10.2026 |

## Powered by

VHLGenetics®
DNA is our core

## Health Conditions

An explanation of these results is accessible in our Online Results Portal, which can be found in your account on the Combibreed Webshop. Within this portal, you will also discover comprehensive details for each test, including the breed relevance associated with each DNA test.

## Breed Relevant Test Results

| Code | Test Name | Gene | Mode of Inheritance | Result |
|---|---|---|---|---|
| **H146** | **Robinow-like Syndrome (DVL2)** | **DVL2** | **Autosomal Recessive with Incomplete Penetrance** | **Carrier** |
| H871 | CMR1 (Canine Multifocal Retinopathy) | BEST1 | Autosomal Recessive | Normal |
| H673 | Degenerative Myelopathy Exon 2 (DM Exon 2) | SOD1 | Autosomal Recessive with Incomplete Penetrance | Normal |
| H974 | Dental-Skeletal-Retinal Anomaly (DSRA) | MIA3 | Autosomal Recessive | Normal |
| H811 | Hyperuricemia (HUU, SLC2A9-related) | SLC2A9 | Autosomal Recessive | Normal |
| H902 | Neuronal Ceroid Lipofuscinosis 1 (NCL1) – Cane Corso | PPT1 | Autosomal Recessive | Normal |

VHL exercises the utmost care in performing each of its engagements. No party other than the principal may derive any rights from the results of these engagements, and the principal expressly indemnifies VHL in respect of any third-party claims. VHL policy provides that any complaints must be received within eight days of the completion of an engagement and imposes restrictions on liability. In that respect, VHL refers to its General Terms and Conditions, which are applicable to all engagements VHL performs and which were accepted at the time of purchase. These General Conditions can also be reviewed at www.vhlgenetics.com. The work VHL performs is based on the material and/or data it receives from its principal. This report may only be copied in its entirety. The organization is ISO:9001 certified for all its work. This test is based on PCR technology.

## Trait Characteristics

Coat colour and patterns are caused by the interaction of several genetic traits. For in-depth insights into these genetic traits, you can visit the online portal with test results or access the knowledgebase via the CombiBreed webshop.

## Coat Colours

| Code | Test Name | Gene | Mode of Inheritance | Result | Phenotype |
|---|---|---|---|---|---|
| H733 | Coat Colour B-Locus | TYRP1 | Autosomal Recessive | B/B | No effect |
| H764 | Coat Colour B-Locus Be | TYRP1 | Autosomal Recessive | B/B | No effect |
| H767 | Coat Colour B-Locus Bh | TYRP1 | Autosomal Recessive | B/B | No effect |
| H453 | Coat Colour B-Locus – Australian Shepherd | TYRP1 | Autosomal Recessive | B/B | No effect |
| H847 | Coat Colour D-Locus 1 - Dog | MLPH | Autosomal Recessive | D/D | No effect |
| H734 | Coat Colour E-Locus - e1 (red/yellow) | MC1R | Autosomal Recessive | E/E | No effect |
| H632 | Coat Colour E-Locus - e2 (Australian Cattle Dog cream colour variant) | MC1R | Autosomal Recessive | E/E | No effect |
| H783 | Coat Colour E-Locus - e3 (Husky pale yellow/white variant) | MC1R | Autosomal Recessive | E/E | No effect |
| H129 | Coat Colour E-Locus – eH (Sable) | MC1R | Autosomal Recessive | E/E | No effect |
| H819 | Coat Colour K-Locus (Dominant Black) | CBD103 | Autosomal Dominant | KB/KB | Fully black coat likely |

## Coat Patterns

| Code | Test Name | Gene | Mode of Inheritance | Result | Phenotype |
|---|---|---|---|---|---|
| H820 | Coat Colour A-Locus (Agouti) - Dog | ASIP | Autosomal Recessive | Ay/a | Yellow, fawn or sable coat, carrier for recessive black |
| H784 | Coat Colour E-Locus - Eg (Grizzle) | MC1R | Autosomal Dominant | E/E | No effect |
| H818 | Coat Colour E-Locus - Em (Melanistic Mask) | MC1R | Autosomal Dominant | Em/Em | Melanistic mask possible |
| H630 | Coat Colour Merle | PMEL | Autosomal Incomplete Dominant | N/N | No effect |
| H326 | Coat Colour S-Locus (Piebald) | MITF | Multifactorial | N/N | No effect, only wild-type alleles present |

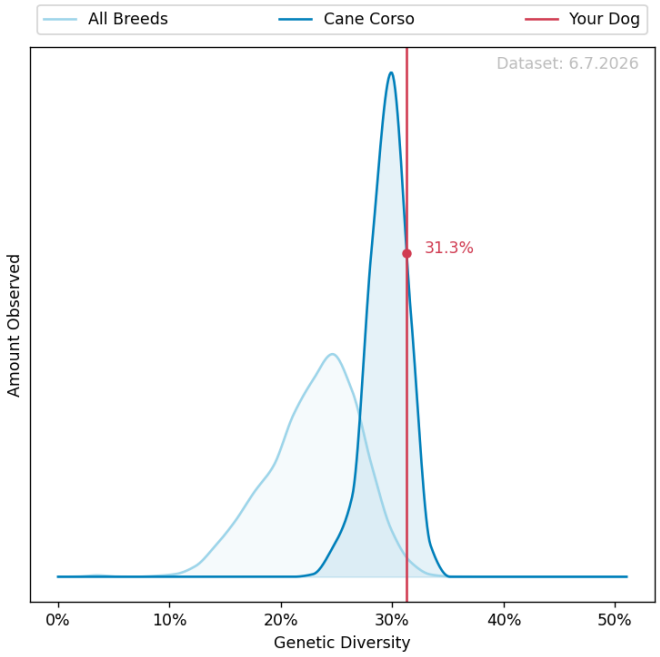
VHL exercises the utmost care in performing each of its engagements. No party other than the principal may derive any rights from the results of these engagements, and the principal expressly indemnifies VHL in respect of any third-party claims. VHL policy provides that any complaints must be received within eight days of the completion of an engagement and imposes restrictions on liability. In that respect, VHL refers to its General Terms and Conditions, which are applicable to all engagements VHL performs and which were accepted at the time of purchase. These General Conditions can also be reviewed at www.vhlgenetics.com. The work VHL performs is based on the material and/or data it receives from its principal. This report may only be copied in its entirety. The organization is ISO:9001 certified for all its work. This test is based on PCR technology.

On behalf of VHLGenetics B.V.,
A. de Lange MBA



VHL exercises the utmost care in performing each of its engagements. No party other than the principal may derive any rights from the results of these engagements, and the principal expressly indemnifies VHL in respect of any third-party claims. VHL policy provides that any complaints must be received within eight days of the completion of an engagement and imposes restrictions on liability. In that respect, VHL refers to its General Terms and Conditions, which are applicable to all engagements VHL performs and which were accepted at the time of purchase. These General Conditions can also be reviewed at www.vhlgenetics.com. The work VHL performs is based on the material and/or data it receives from its principal. This report may only be copied in its entirety. The organization is ISO:9001 certified for all its work. This test is based on PCR technology.

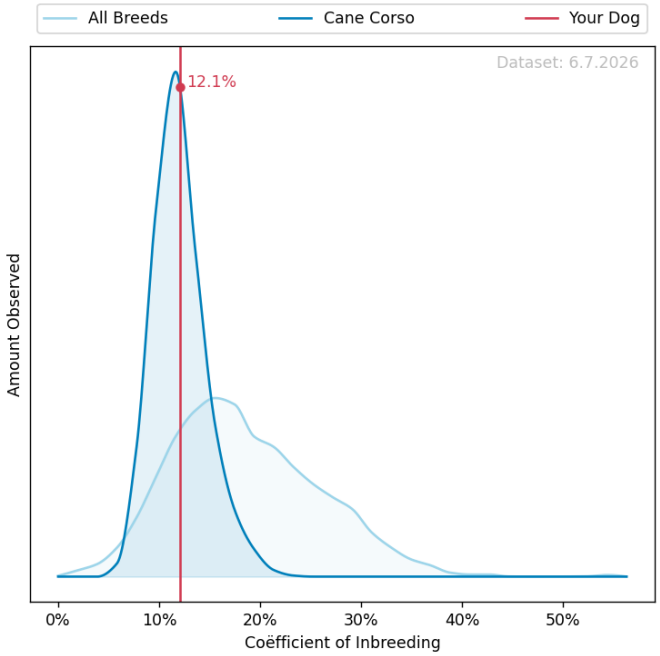
# Genetic Information




## H917 - Diversity/Heterozygosity

Heterozygosity in dogs refers to the genetic situation where a dog inherits two different alleles (gene variants) for a specific trait or gene locus from its parents. This genetic diversity contributes to the variation seen in physical traits, behaviors, and health among individual dogs and different breeds. Maintaining a certain level of heterozygosity is important in breeding programs to avoid an excessive accumulation of harmful recessive traits and promote overall genetic health within dog populations.

*In case there is an insufficient amount of animals for your specific breed, only a comparison with all breeds will be shown.




## H916 - Coefficient of Inbreeding

The Coefficient of Inbreeding (COI) in dogs is a numerical measure that quantifies the probability of two copies of the same gene being inherited from a common ancestor. In simpler terms, it reflects how closely related the parents of a dog are within their family tree. A higher COI indicates a higher likelihood of the dog inheriting identical genes from both parents, which can lead to an increased risk of passing on genetic disorders or health issues.

*In case there is an insufficient amount of animals for your specific breed, only a comparison with all breeds will be shown.

VHL exercises the utmost care in performing each of its engagements. No party other than the principal may derive any rights from the results of these engagements, and the principal expressly indemnifies VHL in respect of any third-party claims. VHL policy provides that any complaints must be received within eight days of the completion of an engagement and imposes restrictions on liability. In that respect, VHL refers to its General Terms and Conditions, which are applicable to all engagements VHL performs and which were accepted at the time of purchase. These General Conditions can also be reviewed at www.vhlgenetics.com. The work VHL performs is based on the material and/or data it receives from its principal. This report may only be copied in its entirety. The organization is ISO:9001 certified for all its work. This test is based on PCR technology.

# Modes of Inheritance

**Autosomal Co-Dominant:** A mode of inheritance where the affected and normal alleles are expressed equally, leading to an intermediate phenotype when both alleles are present in carriers.

**Autosomal Dominant:** A single copy of a dominant allele from one parent is sufficient to express the disease/trait. Individuals with at least one dominant allele will exhibit the trait.

**Autosomal Dominant with Incomplete Penetrance:** A genetic inheritance pattern that functions as normal Autosomal Dominant. However, carriers are not guaranteed to express the trait.

**Autosomal Incomplete Dominant:** A mode of inheritance where the phenotype is dependent on the number of copies present. Individuals with a single copy of the affected allele express a version of the trait specific to carriers. This is often an intermediate/blended version of the homozygous phenotypes. Individuals with two copies express the version specific to affected. This inheritance pattern is also known as semi-dominant or partial dominant.

**Autosomal Recessive:** Two copies of a recessive allele must be present for the trait to be expressed. If they have one recessive allele, they are a carrier who do not exhibit the trait, though can pass on the recessive allele.

**Autosomal Recessive Lethal:** A genetic inheritance pattern where an individual must inherit two copies of the recessive allele to express a lethal trait, typically resulting in spontaneous abortion, stillbirth or early death.

**Autosomal Recessive with Incomplete Penetrance:** A genetic inheritance pattern that functions as normal Autosomal Recessive. However, affected individuals are not guaranteed to express the disease/trait.

**Mitochondrial:** Genes located in the mitochondria, outside the cell nucleus, are inherited from the mother. Both sons and daughters can inherit these genes, but only daughters pass them on to their offspring.

**Multifactorial:** Disease/trait is influenced by multiple genetic and/or environmental factors, and may be difficult to predict.

**Resistance/Susceptibility:** The genetic predisposition of an individual or organism to either resist or be susceptible to a particular condition, disease, or treatment.

**Risk factor:** A risk factor in genetics refers to a specific genetic variation, trait, or condition that increases the likelihood of an individual developing a particular disease or health issue.

**Unknown:** Refers to cases where the mode of inheritance associated with the mutation is not yet (fully) identified or understood.

**X-Linked Dominant:** Dominant alleles located on the X chromosome result in the expression of the disease or trait. In females, a single copy of the allele is sufficient. In males, who have only one X chromosome, presence of the dominant allele leads to the trait's expression.

**X-Linked Incomplete Dominant:** A mode of inheritance where the phenotype is dependent on the number of copies present. Females with a single copy of the affected allele express a version of the trait specific to carriers. Females with two copies, and males carrying the allele, express the version specific to affected animals. This pattern of inheritance is also known as X-linked Semi-Dominant.

**X-Linked Recessive:** Recessive alleles located on the X chromosome result in the expression of the disease or trait. In females, who have two X-chromosomes, two copies of the allele are needed. In males, who have only one X chromosome, presence of the recessive allele already leads to the trait's expression.

**Y-Linked:** Males have one Y chromosome, females have none. This chromosome will always pass on to male offspring. Genes on the Y chromosome are passed on exclusively and always from father to son. Traits determined by Y-linked genes are therefore inherited down the paternal lineage.

VHL exercises the utmost care in performing each of its engagements. No party other than the principal may derive any rights from the results of these engagements, and the principal expressly indemnifies VHL in respect of any third-party claims. VHL policy provides that any complaints must be received within eight days of the completion of an engagement and imposes restrictions on liability. In that respect, VHL refers to its General Terms and Conditions, which are applicable to all engagements VHL performs and which were accepted at the time of purchase. These General Conditions can also be reviewed at www.vhlgenetics.com. The work VHL performs is based on the material and/or data it receives from its principal. This report may only be copied in its entirety. The organization is ISO:9001 certified for all its work. This test is based on PCR technology.