CombiBreed®
Powered by VHLGenetics

# Analysis Certificate

K870 CombiBreed Ragdoll

## Customer Info

| | | |
|---|---|---|
| Name | : | Cattery The EyeCatCher |
| Adress | : | Berkenlaan 43 |
| Zip Code / City | : | 3940 Hechtel-Eksel |
| Customer no. | : | 131465 |

## Animal Info

| | | |
|---|---|---|
| Name | : | The EyeCatCher Moon |
| Animal ID | : | 967000010588900 |
| Breed | : | Ragdoll |
| Gender | : | Female |
| Date of Birth | : | 20.7.2023 |
| VHL ID | : | K31383 |

## Sample Info

| | | |
|---|---|---|
| Order number | : | BE36404 |
| Sample type | : | Swab |
| Certificate number | : | K102979 |
| Test date | : | 8.12.2023 |

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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 |
|---|---|---|---|---|
| K799 | Hypertrophic Cardiomyopathy 3 (HCM3) | MYBPC3 | Autosomal Dominant | Normal |
| K711 | Polycystic Kidney Disease type 1 (PKD) – Cat | PKD1 | Autosomal Dominant | Normal |

## Other Tests

| Code | Test Name | Gene | Mode of Inheritance | Result |
|---|---|---|---|---|
| K300 | Bloodtyping AB DNA test - Ragdoll Cats | CMAH | Autosomal Recessive | Genotype N/N |

## 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 |
|---|---|---|---|---|---|
| K756 | Coat Colour B-Locus (Chocolate) | TYRP1 | Autosomal Recessive | N/b | No effect, carrier for chocolate |
| K755 | Coat Colour B-Locus (Cinnamon) | TYRP1 | Autosomal Recessive | N/N | No effect |
| K759 | Coat Colour C-Locus (Burmese) | TYR | Autosomal Recessive | N/cb | No effect, carrier for Burmese point colouration |
| K758 | Coat Colour C-Locus (Siamese) | TYR | Autosomal Recessive | N/cs | No effect, carrier for Siamese point colouration |
| K760 | Coat Colour D-Locus (Dilution) – Cat | MLPH | Autosomal Recessive | d/d | Dilute coat colour |

## Coat Patterns

| Code | Test Name | Gene | Mode of Inheritance | Result | Phenotype |
|---|---|---|---|---|---|
| K757 | Coat Colour A-Locus (Agouti) – Cat | ASIP | Autosomal Recessive | A/A | Striped coat likely |

## Other Coat Features

| Code | Test Name | Gene | Mode of Inheritance | Result | Phenotype |
|---|---|---|---|---|---|
| K466 | Hair Length Cat - All Breeds | FGF5 | Autosomal Recessive | N/M4 | Short coat, carrier for long coat |
| K462 | Hair Length Cat - Norwegian Forest | FGF5 | Autosomal Recessive | N/N | Short coat |
| K461 | Hair Length Cat - Ragdoll | FGF5 | Autosomal Recessive | N/N | Short coat |
| K463 | Hair Length Cat - Ragdoll / Maine Coon | FGF5 | Autosomal Recessive | N/M3 | Short coat, carrier for long coat |

On behalf of VHLGenetics B.V.,
Hendrik Tolsma, CEO

# 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 Inheritance:** 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 Incompletely Dominant:** A genetic inheritance pattern that functions as normal Autosomal Dominant. However, carriers are not guaranteed to express the trait.

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

**Autosomal Recessive Inheritance:** Two copies of a recessive allele must be present for the trait to be expressed. If an individual has two recessive alleles, the disease/trait will be expressed. If they have one recessive allele, they are a carrier but do not exhibit the trait.

**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 Semi-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. Individuals with two copies express the version specific to affected.

**Mitochondrial Inheritance:** 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 Inheritance:** 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 Inheritance:** 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, the presence of the dominant allele leads to the trait's expression.

**X-Linked Recessive Inheritance:** Recessive alleles on the X chromosome cause the disease/trait to be expressed in males, who have only one X chromosome with the allele. Females need two copies of the recessive allele to exhibit the disease/trait.

**X-Linked Semi-domiant:** 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.

**Y-Linked Inheritance:** Genes on the Y chromosome are passed exclusively from father to son. Traits determined by Y-linked genes are inherited in a straightforward manner down the paternal lineage.