dr. van haeringen laboratorium b.v.

a VHLGenetics company

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CZECH REPUBLIC
Customer number 132942

Analysis Certificate

Animal data		Sample data	
Name:	SHAGGY HEARTS MAGICAL CHERRY		
Date of birth:	25.03.2023	VHL_ID:	H630645
Sexe:	Female	Test ID-nr:	629176 1
Chip number:	941 000 027 475 990	Material:	Swab
Breed:	Austr. labradoodle		

H317 - Macular Corneal Dystrophy - Date of test: 05.08.2024
Testresult: NORMAL

H364 - Hypocatalasia - Date of test: 15.07.2024
Testresult: NORMAL

H416 - Congenital Hypothyroidism w Goiter (CHG) -SpWatDog - Date of test: 22.07.2024
Testresult: NORMAL

H427 - X-linked Myotubular Myopathy (XLMTM) - Date of test: 15.07.2024
Testresult: NORMAL

H490 - Gangliosidosis (GM2 Type II) - Poodle Type - Date of test: 15.07.2024
Testresult: NORMAL

H510 - Skeletal Dysplasia 2 (SD2) - Labrador Retriever - Date of test: 15.07.2024
Testresult: NORMAL

H511 - Progressive Retinal Atrophy (rcd4-PRA) - Date of test: 12.07.2024
Testresult: NORMAL

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H643 - Cystinuria (Type I - A) - Labrador Retriever - Date of test: 15.07.2024
Testresult: NORMAL

H672 - Exercise Induced Collapse (EIC) - Date of test: 19.07.2024
Testresult: Normal

H673 - Degenerative Myelopathy Exon 2 (DM Exon 2) - Date of test: 19.07.2024
Testresult: Normal

H675 - HNPK (External lab) - Date of test: 23.07.2024
Testresult: Normal

H677 - Von-Willebrands Disease Type 1 - Date of test: 15.07.2024
Testresult: Normal

H698 - Narcolepsy - Labrador Retriever - Date of test: 15.07.2024
Testresult: NORMAL

H704 - Progressive Retinal Atrophy (prcd-PRA) - Date of test: 19.07.2024
Testresult: Normal

H741 - Piruvate Kinase Deficiency (PKDef) - LabradorRetr. - Date of test: 15.07.2024
Testresult: NORMAL

H746 - Malignant Hyperthermia (MH) - All breeds - Date of test: 15.07.2024
Testresult: NORMAL

H749 - Centronuclear Myopathy (CNM) - Labrador Retriever - Date of test: 12.07.2024
Testresult: NORMAL

H794 - Oculoskeletal Dysplasia 1 (OSD1) / Retinal Dyspl. - Date of test: 15.07.2024
Testresult: NORMAL

H811 - Hyperuricemia (HUU) - Date of test: 15.07.2024
Testresult: NORMAL

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H812 - Neonatal Encephalopathy (NEWS) - Date of test: 15.07.2024
Testresult: NORMAL

H847 - Coat Colour D-Locus 1 - Dog - Date of test: 15.07.2024
Testresult: D/D

H913 - Dry Eye Curly Coat - Date of test: 15.07.2024
Testresult: NORMAL

H631 - Microphtalmia - Date of test: 15.07.2024
Testresult: NORMAL

H824 - Modifier of copper toxicosis, ATP7A-related - Date of test: 15.07.2024
Testresult: Normal

H825 - Wilson disease, ATP7B-related - Date of test: 15.07.2024
Testresult: Normal

H630 - Coat Colour Merle - Date of test: 18.07.2024
Testresult: N/N

H299 - Coat Type SD-Locus (Shedding MCR5) - Date of test: 15.07.2024
Testresult: Affected

H848 - Improper Coat/Furnishings - Date of test: 12.07.2024
Testresult: N/N

H765 - Hair Length - 1 - Date of test: 15.07.2024
Testresult: L/L

H885 - Hair length - 2 - Date of test: 15.07.2024
Testresult: S/S

H664 - Hair Length - 3 - Date of test: 15.07.2024
Testresult: S/S

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H665 - Hair Length - 4 - Date of test: 15.07.2024
Testresult: S/S

H666 - Hair Length - 5 - Date of test: 15.07.2024
Testresult: S/S

H. Tolsma, DVM
Managing director

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H317 - Macular Corneal Dystrophy

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H364 - Hypocatalasia

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H416 - Congenital Hypothyroidism w Goiter (CHG) -SpWatDog

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H427 - X-linked Myotubular Myopathy (XLMTM)

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this variant. The animal will not present with the described clinical features. When used in breeding a healthy allele will be passed to all offspring.
CARRIER FEMALE OR AFFECTED MALE:
Female: The animal is a carrier; it has one normal and one affected allele. Due to the recessive properties of this specific variant, the presence of one affected allele will not cause the discribed clinical features. In breeding, there is a 50% chance for each offspring that it will receive an affected allele. For male offspring this means a 50% chance of being affected.
Male: The animal is affected; it has one affected allele. The animal will most likely develop the described clinical features. When used in breeding, all female offspring will receive the affected allele.
AFFECTED FEMALE: The animal is affected; it has two affected alleles. It will most likely develop the described clinical features. When used in breeding, all female offspring will receive an affected allele. All male offspring will therefore likewise be affected.

H490 - Gangliosidosis (GM2 Type II) - Poodle Type

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described

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clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H510 - Skeletal Dysplasia 2 (SD2) - Labrador Retriever

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H511 - Progressive Retinal Atrophy (rcd4-PRA)

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H643 - Cystinuria (Type I - A) - Labrador Retriever

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H672 - Exercise Induced Collapse (EIC)

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

This test is based on an association study.

H673 - Degenerative Myelopathy Exon 2 (DM Exon 2)

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.

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AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

This test is based on an association study.

H675 - HNPK (External lab)

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H677 - Von-Willebrands Disease Type 1

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will most likely develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that is will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the decribed clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H698 - Narcolepsy - Labrador Retriever

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H704 - Progressive Retinal Atrophy (prcd-PRA)

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

This test is based on an association study.

H741 - Piruvate Kinase Deficiency (PKDef) - LabradorRetr.

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.

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CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H746 - Malignant Hyperthermia (MH) - All breeds

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will most likely develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that is will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the decribed clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H749 - Centronuclear Myopathy (CNM) - Labrador Retriever

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H794 - Oculoskeletal Dysplasia 1 (OSD1) / Retinal Dyspl.

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

This test is based on an association study.

H811 - Hyperuricemia (HUU)

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H812 - Neonatal Encephalopathy (NEWS)

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.

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CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H847 - Coat Colour D-Locus 1 - Dog

Detailed information about Coat Colours and Coat Variation is available at www.combibreed.com.
Direct link: https://www.combibreed.com/blog/knowledgebase/about-dogs/

H913 - Dry Eye Curly Coat

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H631 - Microphtalmia

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this specific variant. The animal will not develop the described clinical features due to this variant. When used in breeding, a healthy allele will be passed to all offspring.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal will not develop the described clinical features due to this variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will most likely develop the described clinical features due to this variant. When used in breeding, all offspring will receive an affected allele.

H824 - Modifier of copper toxicosis, ATP7A-related

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this variant. The animal will not present with the described clinical features. When used in breeding a healthy allele will be passed to all offspring.
CARRIER FEMALE OR AFFECTED MALE:
Female: The animal is a carrier; it has one normal and one affected allele. Due to the recessive properties of this specific variant, the presence of one affected allele will not cause the discribed clinical features. In breeding, there is a 50% chance for each offspring that it will receive an affected allele. For male offspring this means a 50% chance of being affected.
Male: The animal is affected; it has one affected allele. The animal will most likely develop the described clinical features. When used in breeding, all female offspring will receive the affected allele.
AFFECTED FEMALE: The animal is affected; it has two affected alleles. It will most likely develop the described clinical features. When used in breeding, all female offspring will receive an affected allele. All male offspring will therefore likewise be affected.

This test is based on an association study.

H825 - Wilson disease, ATP7B-related

Information about the result:
Normal: The animal has two normal alleles and is therefore not affected by this variant. The animal is unlikely to develop the described clinical features. When used in breeding, a healthy allele will be passed to all offspring.

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Carrier: The animal is a carrier; it has one affected and one normal allele. The animal may develop the described clinical features. In breeding, all offspring have a 50% chance of receiving an affected allele.
Affected: The animal is affected; it has two affected alleles. The animal may develop the described clinical features. In breeding, all offspring will receive an affected allele.
Disclaimer: While scientific research has shown a connection between this variant mutation and the phenotype, the exact link and the manner in which the condition is inherited are still unknown.

H630 - Coat Colour Merle

Detailed information about Coat Colours and Coat Variation is available at www.combibreed.com.
Direct link: https://www.combibreed.com/blog/knowledgebase/about-dogs/

H299 - Coat Type SD-Locus (Shedding MCR5)

Explanation about the result:
NORMAL: The animal has two normal alleles and is therefore not affected by this variant. The animal will not be influenced by this specific variant.
CARRIER: The animal is a carrier; it has one normal and one affected allele. The animal may be influenced by the specific variant. In breeding, there is a 50% chance for each offspring that it will receive an affected allele.
AFFECTED: The animal is affected; it has two affected alleles. The animal will likely be affected by this specific variant. In breeding, an affected allele will be passed down to all offspring.
DISCLAIMER: This variant is of multifactorial origin, meaning that the clinical features are determined a combination of genetic factors as well as the environment.

H848 - Improper Coat/Furnishings

Detailed information about Coat Colours and Coat Variation is available at www.combibreed.com.
Direct link: https://www.combibreed.com/blog/knowledgebase/about-dogs/

H765 - Hair Length - 1

Information about the test for hair length:
- L/L: The test result shows that the animal is homozygous for the mutation which is suggested to cause long-haired coat.
- S/L: The test result shows that the animal is carrier of the mutation for long-haired coat.
- S/S: The test result shows that the animal does not carry the mutation which is suggested to cause long-haired coat.

The phenotype is subject to allelic heterogeneity, i.e. several different mutations on this gene can cause the same trait. Therefore, a dog that tests as Shorthaired (S/S) or Carrier (S/L) for this specific mutation can still turn out to have the Long-Haired phenotype.
Detailed information about Coat Colours and Coat Variation is available at www.combibreed.com.
Direct link: https://www.combibreed.com/blog/knowledgebase/about-dogs/

H885 - Hair length - 2

Information about the test for hair length:
- L/L: The test result shows that the animal is homozygous for the mutation which is suggested to cause long-haired coat.
- S/L: The test result shows that the animal is carrier of the mutation for long-haired coat.
- S/S: The test result shows that the animal does not carry the mutation which is suggested to cause long-haired coat.

The phenotype is subject to allelic heterogeneity, i.e. several different mutations on this gene can cause the same trait. Therefore, a dog that tests as Shorthaired (S/S) or Carrier (S/L) for this specific mutation can still turn out to have the Long-Haired phenotype.
Detailed information about Coat Colours and Coat Variation is available at www.combibreed.com.
Direct link: https://www.combibreed.com/blog/knowledgebase/about-dogs/

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H664 - Hair Length - 3

Information about the test for hair length:
- L/L: The test result shows that the animal is homozygous for the mutation which is suggested to cause long-haired coat.
- S/L: The test result shows that the animal is carrier of the mutation for long-haired coat.
- S/S: The test result shows that the animal does not carry the mutation which is suggested to cause long-haired coat.

The phenotype is subject to allelic heterogeneity, i.e. several different mutations on this gene can cause the same trait. Therefore, a dog that tests as Shorthaired (S/S) or Carrier (S/L) for this specific mutation can still turn out to have the Long-Haired phenotype.
Detailed information about Coat Colours and Coat Variation is available at www.combibreed.com.
Direct link: https://www.combibreed.com/blog/knowledgebase/about-dogs/

H665 - Hair Length - 4

Information about the test for hair length:
- L/L: The test result shows that the animal is homozygous for the mutation which is suggested to cause long-haired coat.
- S/L: The test result shows that the animal is carrier of the mutation for long-haired coat.
- S/S: The test result shows that the animal does not carry the mutation which is suggested to cause long-haired coat.

The phenotype is subject to allelic heterogeneity, i.e. several different mutations on this gene can cause the same trait. Therefore, a dog that tests as Shorthaired (S/S) or Carrier (S/L) for this specific mutation can still turn out to have the Long-Haired phenotype.
Detailed information about Coat Colours and Coat Variation is available at www.combibreed.com.
Direct link: https://www.combibreed.com/blog/knowledgebase/about-dogs/

H666 - Hair Length - 5

Information about the test for hair length:
- L/L: The test result shows that the animal is homozygous for the mutation which is suggested to cause long-haired coat.
- S/L: The test result shows that the animal is carrier of the mutation for long-haired coat.
- S/S: The test result shows that the animal does not carry the mutation which is suggested to cause long-haired coat.

The phenotype is subject to allelic heterogeneity, i.e. several different mutations on this gene can cause the same trait. Therefore, a dog that tests as Shorthaired (S/S) or Carrier (S/L) for this specific mutation can still turn out to have the Long-Haired phenotype.
Detailed information about Coat Colours and Coat Variation is available at www.combibreed.com.
Direct link: https://www.combibreed.com/blog/knowledgebase/about-dogs/

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