

DOG COAT COLOR / NATURAL BOBTAIL TEST REPORT

Provided Information: Case: NCD245469

Name: DUMBLEDOOR - GREEN COLLAR Date Received: 08-Oct-2024
Report Issue Date: 14-Oct-2024

Registration: 1384-9766-7664-5117

Verify report at vgl.ucdavis.edu/verify

DOB: **09/05/2024** *Sex:* **Male** *Breed:* **Great Dane**

Sire: GCHS NORTHERNAIRE WHEN YOU BELIEVE Dam: CHROMA BLOOM WHERE YOU ARE PLANTED

Reg: AKC #WS59778901 Reg: AKC #WS68250504

Microchip: Microchip:

RESULT INTERPRETATION

| | DILUTE (D LOCUS) | D/D | No known dilution variants present. | |
|--------------------------------|-----------------------------|-----------------------------------------------------|-------------------------------------|--|
| | DOMINANT BLACK (K LOCUS) | K/K 2 copies of dominant black are present. | | |
| | LEGACY AGOUTI | $\mathbf{a}^{\mathbf{y}} / \mathbf{a}^{\mathbf{y}}$ | Homozygous for fawn/sable. | |
| AGOUTI (A LOCUS) ASIPSY/ASIPSY | | ASIP ^{SY} /ASIP ^{SY} | Two copies of shaded yellow. | |
| | PIEBALD (S LOCUS) | N/S | Dog has 1 copy of piebald. | |
| | HARLEQUIN (GREAT DANE) | N/H 1 1 | | |



DOG COAT COLOR / NATURAL BOBTAIL TEST REPORT

Client/Owner/Agent Information:

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Date Received: 08-Oct-2024
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Report ID: 1384-9766-7664-5117

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Name: DUMBLEDOOR - GREEN COLLAR

Additional Information

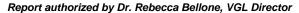
If testing for a disease or a disorder was performed and results indicate the animal is affected or at risk, we recommend contacting your veterinarian for further clinical evaluation and for additional information on disease and management.

For more detailed information on Dog Coat Color test results, please visit our website at: vgl.ucdavis.edu/resources/dog-coat-color

Agouti research is ongoing, and additional variation beyond the resolution of this test may exist.

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Results are determined using PCR-based methods. The results relate only to the sample tested as identified by the submitter (for example, identity and/or breed).







Agouti: the ASIP (A) locus

The Agouti gene, also referred to as the **A locus** or **ASIP locus**, is a gene that controls where and when eumelanin (i.e. black/brown pigment) or phaeomelanin (i.e. red/yellow/tan pigment) is produced in the coat of dogs and other mammals. The old Agouti test (now referred to as Legacy Agouti) identified four alleles at the Agouti locus, but these alleles did not fully explain the different coat color phenotypes controlled by this gene. Recent research by Dr. Bannasch and colleagues has uncovered more of the complexity of dog coat color as it relates to the ASIP locus, allowing our laboratory to offer a more complete test to our clients.

The new Agouti test allows for the identification of eight haplotype combinations, and their correspondence to the Legacy Agouti alleles is shown below.

Note: The illustrations below portray examples of adult coat patterns. Puppy coats typically exhibit more eumelanin (black/brown pigment). For example, in puppies, the Black Saddle coloration looks like Black Back and Shaded Yellow can look very similar to Agouti.

| | PHENOTYPE NAME | COMMON NAMES | ASIP HAPLOTYPE COMBINATION | OLD ALLELE Legacy Agouti | |
|----|-----------------|------------------------------------------------------------|----------------------------------|-----------------------------|--|
| | Dominant Yellow | fawn, sable, red, cream, tan | ASIP ^{DY} | a ^y | |
| 13 | Shaded Yellow | shaded sable, shaded fawn, fawn, sable, red, cream, tan | ASIP ^{sy} | | |
| | Agouti | wolf sable, sable, grey, agouti | ASIP ^{AG} | a ^w * | |
| 73 | Black Saddle | saddle back, saddle tan, black and tan, hound | ASIP ^{BS} | a ^t | |
| * | Black Back | black and tan, bicolor, tan points, pointed | ASIP BB1 ASIP BB2 ASIP BB3 | d | |
| 7 | Recessive Black | black | ASIP ª | а | |

Eumelanin (black/brown pigment)

and Dominant Black (K locus)

Appearance of pigment will depend on other genes, e.g. Brown (B locus), Dilute (D locus), MC1R (E locus),

For more detailed information about the new Agouti test, please visit our website at https://vgl.ucdavis.edu/test/agouti-dog

Phaeomelanin (yellow/red/tan pigment)
Appearance of pigment will depend on other genes,

e.g. Dilute (D locus), Intensity (In), and KITLG

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^{*}In some cases, the a* Legacy Agouti allele can correspond to the new **ASIP** BB3 haplotype combination.



DOG COAT COLOR / NATURAL BOBTAIL TEST REPORT

Provided Information: Case: NCD245470

Name: HARRY PAWTER - ORANGE COLLAR Date Received: 08-Oct-2024

Report Issue Date: 14-Oct-2024

Registration: 8490-5553-9025-5120

Verify report at vgl.ucdavis.edu/verify

DOB: 09/05/2024 Sex: Male Breed: Great Dane

Sire: GCHS NORTHERNAIRE WHEN YOU BELIEVE Dam: CHROMA BLOOM WHERE YOU ARE PLANTED

Reg: AKC #WS59778901 Reg: AKC #WS68250504

Microchip: Microchip:

RESULT INTERPRETATION

| | DILUTE (D LOCUS) | D/D | No known dilution variants present. | |
|-----|---------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| | DOMINANT BLACK (K LOCUS) | K/K | 2 copies of dominant black are present. | |
| | LEGACY AGOUTI | ACY AGOUTI a ^y /a ^y Homozygous for fawn/sable. | | |
| | AGOUTI (A LOCUS) ASIP ^{SY} /ASIP ^{SY} | | Two copies of shaded yellow. | |
| | PIEBALD (S LOCUS) | N/N | Dog has no copies of piebald. | |
| N/H | | N/H | 1 copy of the Harlequin mutation is present. If the dog has merle and is black pigmented, the Harlequin pattern is expressed. Breedings between N/H dogs are expected to result in 25% embryonic lethal offspring. | |



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Date Received: 08-Oct-2024
Report Issue Date: 14-Oct-2024

Report ID: 8490-5553-9025-5120

Verify report at vgl.ucdavis.edu/verify

Name: HARRY PAWTER - ORANGE COLLAR

Additional Information

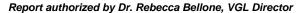
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Agouti: the ASIP (A) locus

The Agouti gene, also referred to as the **A locus** or **ASIP locus**, is a gene that controls where and when eumelanin (i.e. black/brown pigment) or phaeomelanin (i.e. red/yellow/tan pigment) is produced in the coat of dogs and other mammals. The old Agouti test (now referred to as Legacy Agouti) identified four alleles at the Agouti locus, but these alleles did not fully explain the different coat color phenotypes controlled by this gene. Recent research by Dr. Bannasch and colleagues has uncovered more of the complexity of dog coat color as it relates to the ASIP locus, allowing our laboratory to offer a more complete test to our clients.

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| 7 | Recessive Black | black | ASIP ª | а | |

Eumelanin (black/brown pigment)

and Dominant Black (K locus)

Appearance of pigment will depend on other genes, e.g. Brown (B locus), Dilute (D locus), MC1R (E locus),

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Phaeomelanin (yellow/red/tan pigment)
Appearance of pigment will depend on other genes,

e.g. Dilute (D locus), Intensity (In), and KITLG

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^{*}In some cases, the a* Legacy Agouti allele can correspond to the new **ASIP** BB3 haplotype combination.



DOG COAT COLOR / NATURAL BOBTAIL TEST REPORT

Provided Information: Case: NCD245471

Name: GINNY - RED COLLAR Date Received: 08-Oct-2024
Report Issue Date: 14-Oct-2024

Registration: 4712-3846-2835-9188

Verify report at vgl.ucdavis.edu/verify

DOB: 09/05/2024 Sex: Female Breed: Great Dane Color: Mantle

Sire: GCHS NORTHERNAIRE WHEN YOU BELIEVE Dam: CHROMA BLOOM WHERE YOU ARE PLANTED

Reg: AKC #WS59778901 Reg: AKC #WS68250504

Microchip: Microchip:

RESULT INTERPRETATION

| DILUTE (D LOCUS) | D/D | No known dilution variants present. | |
|---------------------------------------------------------|-----------------------------------------------------|-------------------------------------|--|
| DOMINANT BLACK (K LOCUS) | K/K 2 copies of dominant black are present. | | |
| LEGACY AGOUTI | $\mathbf{a}^{\mathbf{y}} / \mathbf{a}^{\mathbf{y}}$ | Homozygous for fawn/sable. | |
| AGOUTI (A LOCUS) ASIP ^{SY} /ASIP ^{SY} | | Two copies of shaded yellow. | |
| PIEBALD (S LOCUS) | N/N | Dog has no copies of piebald. | |
| HARLEQUIN (GREAT DANE) | N/H | | |



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Report ID: 4712-3846-2835-9188

Verify report at vgl.ucdavis.edu/verify

Name: GINNY - RED COLLAR

Additional Information

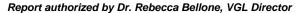
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Eumelanin (black/brown pigment)

dominant

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Phaeomelanin (yellow/red/tan pigment)
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