

Dog Information

| | |
|--|--------------------------------------|
| Mist (Mist) NAME | Female SEX |
| Labrador Retriever BREED ANCESTRY | December 26th, 2021 DATE OF BIRTH |
| American Kennel Club (AKC) REGISTRATION | n/a MICROCHIP |

Laurel McComas
OWNER NAME

Canine Genetic Health Screen
TEST

March 18th, 2022
TEST DATE

BREED HEALTH TESTS

| DISEASE | GENE | GENOTYPE | RESULT | TESTING RECOMMENDED BY |
|---|---------------------------|----------|-----------|------------------------|
| Centronuclear Myopathy, CNM | PTPLA | NN | Clear | |
| Degenerative Myelopathy, DM | SOD1(A) | GG | Clear | |
| Exercise-Induced Collapse, EIC | DNM1 | GG | Clear | |
| Hereditary Nasal Parakeratosis, HNPk | SUV39H2 | GG | Clear | |
| Hyperuricosuria and Hyperuricemia or Urolithiasis, HUU | SLC2A9 (Exon 5) | GG | Clear | |
| Macular Corneal Dystrophy, MCD | CHST6 | CC | Clear | |
| Narcolepsy | HCRTR2 | AA | Clear | |
| Progressive Retinal Atrophy, prcd | PRCD Exon 1 | GA | 1 Variant | |
| Pyruvate Kinase Deficiency | PKLR Exon 7 SNP Variant 1 | CC | Clear | |
| Skeletal Dysplasia 2, SD2 | COL11A2 | GG | Clear | |
| Achromatopsia | CNGA3 (Exon 7 Deletion) | NN | Clear | |
| Alexander Disease | GFAP (Exon 4) | GG | Clear | |
| Canine Elliptocytosis | SPTB Exon 30 | CC | Clear | |
| Congenital Myasthenic Syndrome, CMS | COLQ (Exon 14) | TT | Clear | |
| Golden Retriever Progressive Retinal Atrophy 2, GR-PRA2 | TTC8 Exon 8 | NN | Clear | |

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|--|-------------------------|-----------|--------------|--|
| Myotubular Myopathy 1, X-linked Myotubular Myopathy, XL-MTM | MTM1 (Exon 7) | CC | Clear |  |
| Progressive Retinal Atrophy, crd4/cord1 | RPGRIP1 (Exon 2) | NN | Clear |  |
| Ullrich-like Congenital Muscular Dystrophy | COL6A3 | GG | Clear |  |

Dog Information

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INBREEDING AND DIVERSITY

| Genetic Diversity | RESULT | GENETIC RESULT |
|----------------------------------|--------|----------------|
| Coefficient Of Inbreeding | | 14% |
| MHC Class II - DLA DRB1 | | Low Diversity |
| MHC Class II - DLA DQA1 and DQB1 | | No Diversity |

Dog Information

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TRAIT TESTS (1/3)

| Coat Color | RESULT | GENETIC RESULT |
|-------------------------|--|-------------------------------|
| E Locus (MC1R) | Can have a melanistic mask | E ^m e |
| K Locus (CBD103) | More likely to have a mostly solid black or brown coat | K ^B k ^γ |
| Intensity Loci LINKAGE | No impact on coat pattern | Intermediate Red Pigmentation |
| A Locus (ASIP) | Not expressed | aa |
| D Locus (MLPH) | Dark areas of hair and skin are lightened | dd |
| Cocoa (HPS3) | No co alleles, not expressed | NN |
| B Locus (TYRP1) | Brown hair and skin | bb |
| Saddle Tan (RALY) | Not expressed | NN |
| S Locus (MITF) | Likely to have little to no white in coat | SS |
| M Locus (PMEL) | No merle alleles | mm |
| R Locus (USH2A) LINKAGE | Likely no impact on coat pattern | rr |

Dog Information

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TRAIT TESTS (2/3)

| Coat Color | RESULT | GENETIC RESULT |
|--|--|----------------|
| H Locus (Harlequin) | No harlequin alleles | hh |
| Other Coat Traits | RESULT | GENETIC RESULT |
| Furnishings (RSP02) LINKAGE | Likely unfurnished (no mustache, beard, and/or eyebrows) | II |
| Coat Length (FGF5) | Likely short or mid-length coat | GG |
| Shedding (MC5R) | Likely heavy/seasonal shedding | CC |
| Hairlessness (FOXI3) LINKAGE | Very unlikely to be hairless | NN |
| Hairlessness (SGK3) | Very unlikely to be hairless | NN |
| Oculocutaneous Albinism Type 2 (SLC45A2) LINKAGE | Likely not albino | NN |
| Coat Texture (KRT71) | Likely straight coat | CC |
| Other Body Features | RESULT | GENETIC RESULT |
| Muzzle Length (BMP3) | Likely medium or long muzzle | CC |
| Tail Length (T) | Likely normal-length tail | CC |
| Hind Dewclaws (LMBR1) | Unlikely to have hind dew claws | CC |

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TRAIT TESTS (3/3)

| Other Body Features | RESULT | GENETIC RESULT |
|---|-------------------------------|----------------|
| Blue Eye Color (ALX4) LINKAGE | Less likely to have blue eyes | NN |
| Back Muscling & Bulk, Large Breed (ACSL4) | Likely normal muscling | CC |

| Body Size | RESULT | GENETIC RESULT |
|-------------------------|--------------|----------------|
| Body Size (IGF1) | Larger | NN |
| Body Size (IGFR1) | Larger | GG |
| Body Size (STC2) | Intermediate | TA |
| Body Size (GHR - E191K) | Intermediate | GA |
| Body Size (GHR - P177L) | Larger | CC |

| Performance | RESULT | GENETIC RESULT |
|-----------------------------|---------------------------|----------------|
| Altitude Adaptation (EPAS1) | Normal altitude tolerance | GG |
| Appetite (POMC) LINKAGE | Normal food motivation | NN |