

## Canine Genetic Health Certificate™

**Call Name:** Lizzie

**Registered Name:** MLJ Straighten Your Crown

**Breed:** Australian Shepherd

Sex: Female DOB: Nov. 2020 Laboratory #: 241544

Registration #: ASDS-MN-2108890 Microchip #: 985 113 004 955 534

**Certificate Date:** June 21, 2021

## This canine's DNA showed the following genotype(s):

| DiseaseGeneGenotypeInterpretationCollie Eye AnomalyNHEJ1WT/WTNormal (clear)Degenerative MyelopathySOD1WT/WTNormal (clear)Hereditary Cataracts (Australian Shepherd Type)HSF4WT/WTNormal (clear)HyperuricosuriaSLC2A9WT/WTNormal (clear)Intestinal Cobalamin Malabsorption (Australian Shepherd Type)AMNWT/WTNormal (clear)Intestinal Cobalamin Malabsorption (Border Collie Type)CUBNWT/WTNormal (clear)Multidrug Resistance 1ABCB1WT/WTNormal (clear)Multifocal Retinopathy 1BEST1WT/WTNormal (clear)Progressive Retinal Atrophy, Progressive Rod-Cone DegenerationPRCDWT/WTNormal (clear)  |   |        |          |                |
|--|---|--------|----------|----------------|
| Degenerative MyelopathySOD1WT/WTNormal (clear)Hereditary Cataracts (Australian Shepherd Type)HSF4WT/WTNormal (clear)HyperuricosuriaSLC2A9WT/WTNormal (clear)Intestinal Cobalamin Malabsorption (Australian Shepherd Type)AMNWT/WTNormal (clear)Intestinal Cobalamin Malabsorption (Border Collie Type)CUBNWT/WTNormal (clear)Multidrug Resistance 1ABCB1WT/WTNormal (clear)Multifocal Retinopathy 1BEST1WT/WTNormal (clear)Progressive Retinal Atrophy, Progressive Rod-ConePRCDWT/WTNormal (clear)  | Disease   | Gene   | Genotype | Interpretation |
| Hereditary Cataracts (Australian Shepherd Type)  Hyperuricosuria  SLC2A9  WT/WT  Normal (clear)  Intestinal Cobalamin Malabsorption (Australian Shepherd Type)  Intestinal Cobalamin Malabsorption (Border Collie CUBN  Type)  Multidrug Resistance 1  ABCB1  WT/WT  Normal (clear)  Multifocal Retinopathy 1  BEST1  WT/WT  Normal (clear)  Normal (clear)  Normal (clear)  Normal (clear)  | Collie Eye Anomaly                              | NHEJ1  | WT/WT    | Normal (clear) |
| Hyperuricosuria  SLC2A9  WT/WT  Normal (clear)  Intestinal Cobalamin Malabsorption (Australian Shepherd Type)  Intestinal Cobalamin Malabsorption (Border Collie CUBN  Type)  Multidrug Resistance 1  ABCB1  WT/WT  Normal (clear)  Multifocal Retinopathy 1  BEST1  WT/WT  Normal (clear)  Normal (clear)  Normal (clear)   | Degenerative Myelopathy                         | SOD1   | WT/WT    | Normal (clear) |
| Intestinal Cobalamin Malabsorption (Australian Shepherd Type)  Intestinal Cobalamin Malabsorption (Border Collie CUBN WT/WT Normal (clear) Type)  Multidrug Resistance 1 ABCB1 WT/WT Normal (clear)  Multifocal Retinopathy 1 BEST1 WT/WT Normal (clear)  Progressive Retinal Atrophy, Progressive Rod-Cone PRCD WT/WT Normal (clear)  | Hereditary Cataracts (Australian Shepherd Type) | HSF4   | WT/WT    | Normal (clear) |
| Shepherd Type)  Intestinal Cobalamin Malabsorption (Border Collie Type)  Multidrug Resistance 1  Multifocal Retinopathy 1  Progressive Retinal Atrophy, Progressive Rod-Cone  Multifocal Retinopathy 1  Multifocal Retinopathy 2  Multifocal Retinopathy 3  Multifocal Retinopathy 1  Multifocal Retinopathy 1  Multifocal Retinopathy 1  Multifocal Retinopathy 3  Multifocal Retinopathy 1  Multifocal Retinopathy 3  Multifocal Retinopathy 3  Multifocal Retinopathy 4  Multifocal Retinopathy 1  Multifocal Retinopathy 3  Multifocal Retinopathy 4  Multifocal Retinopathy 5  Multifocal Retinopathy 6  Multifocal Retinopathy 7  Multifocal Retinopathy 7  Multifocal Retinopathy 8  Multifocal Retinopathy 9  Multifocal Retinopathy 9 | Hyperuricosuria                                 | SLC2A9 | WT/WT    | Normal (clear) |
| Type)  Multidrug Resistance 1  ABCB1  WT/WT  Normal (clear)  Multifocal Retinopathy 1  BEST1  WT/WT  Normal (clear)  Progressive Retinal Atrophy, Progressive Rod-Cone  PRCD  WT/WT  Normal (clear)  | , ,   | AMN    | WT/WT    | Normal (clear) |
| Multifocal Retinopathy 1 BEST1 WT/WT Normal (clear)  Progressive Retinal Atrophy, Progressive Rod-Cone PRCD WT/WT Normal (clear)   |   | CUBN   | WT/WT    | Normal (clear) |
| Progressive Retinal Atrophy, Progressive Rod-Cone PRCD WT/WT Normal (clear)  | Multidrug Resistance 1                          | ABCB1  | WT/WT    | Normal (clear) |
|  | Multifocal Retinopathy 1                        | BEST1  | WT/WT    | Normal (clear) |
|  | 1 3. 0  | PRCD   | WT/WT    | Normal (clear) |

WT, wild type (normal); M, mutant; Y, Y chromosome (male)

Blake C Ballif, PhD

Laboratory & Scientific Director

Ilm Cally

Christina J Ramirez, PhD, DVM, DACVP

Medical Director

Paw Print Genetics® performed the tests listed on this dog. See the Laboratory Report for interpretation and recommendations based on these findings. The genes/diseases reported here were selected by the client. Normal results do not exclude inherited mutations not tested in these or other genes that may cause medical problems or may be passed on to offspring. These tests were developed and their performance determined by Paw Print Genetics. This laboratory has established and verified the tests' accuracy and precision. Because all tests performed are DNA-based, rare genomic variations may interfere with the performance of some tests producing false results. If you think these results are in error, please contact the laboratory immediately for further evaluation. In the event of a valid dispute of results claim, Paw Print Genetics will do its best to resolve such a claim to the customer's satisfaction. If no resolution is possible after investigation by Paw Print Genetics with the cooperation of the customer, the extent of the customer's sole remedy is a refund of the fee paid. In no event shall Paw Print Genetics be liable for indirect, consequential or incidental damages of any kind. Any claim must be asserted within 60 days of the report of the test results. Genetic counseling is available at Paw Print Genetics.