# Sylvie

WISDOM PANEL™

**Kit type:** Banfield Puppy Plan

**ID kit:** 00BAN_0416MARS003LN
**Test date:** 2024-07-19

## Sylvie's Profile

### Pet information

**Registered name**
Sylvie

**Date of birth**
2024-03-30

**Sex**
F

**Spayed**
No

### Top breeds

100% Dachshund

### Predicted ideal adult weight

4-13 lbs

### Health summary

At Risk 0 conditions

Carrier 0 conditions

Clear 206 conditions

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## Breed ancestry

Sylvie appears to be 100% Dachshund.



**Terrier**

100 % Dachshund

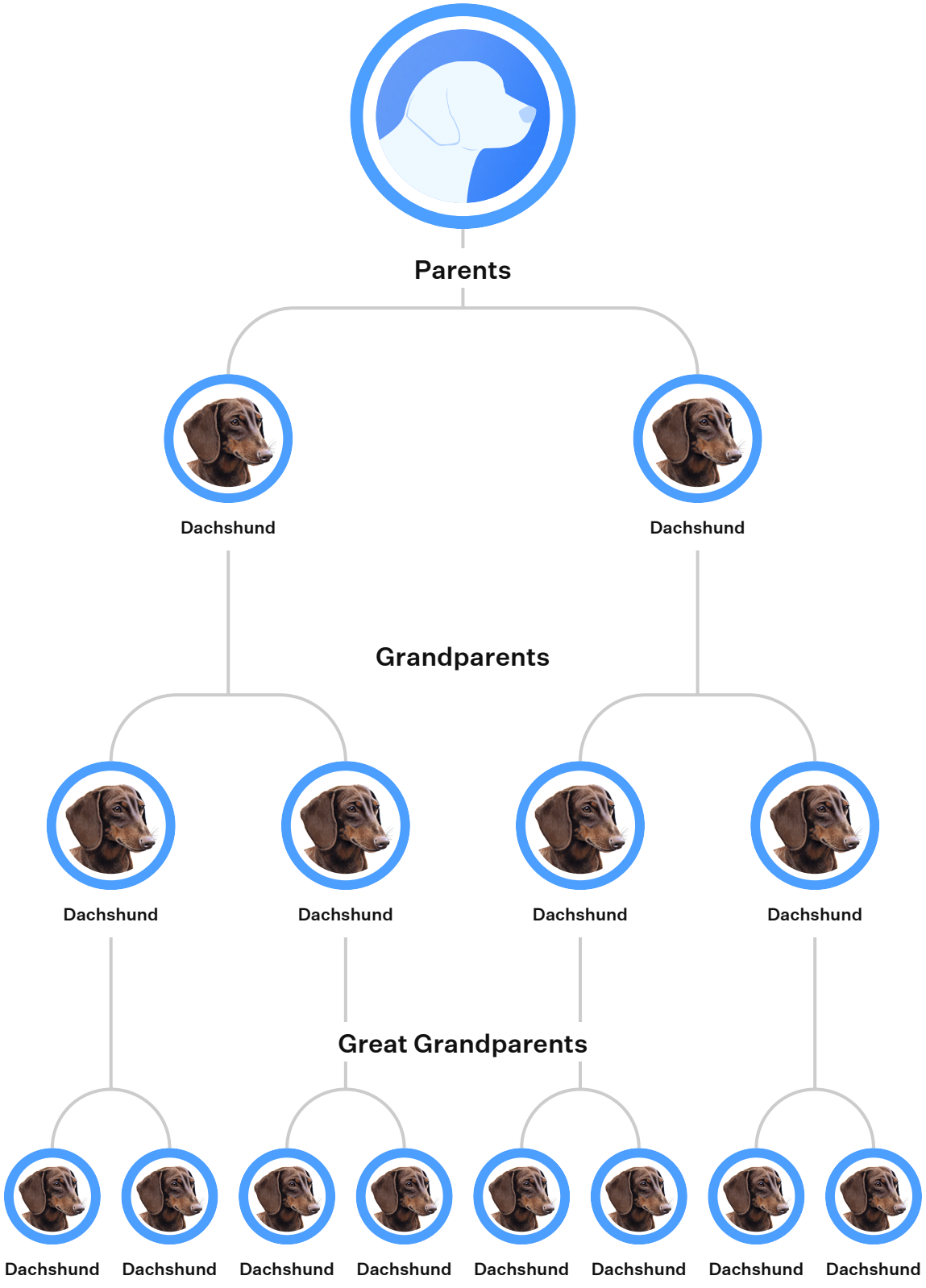
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## Family Tree



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## Genetic Diversity

### Heterozygosity

**Sylvie's Percentage of Heterozygosity**

40%

Sylvie's genome analysis shows an average level of genetic heterozygosity when compared with other purebred dogs.

**Typical Range for Purebred Dogs**

26% - 40%

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## Summary of health conditions

### Key Findings

We detected 0 genetic conditions in Sylvie's DNA.

| 0 | 0 | 206 |
|---|---|---|
| At Risk | Carrier | Clear |

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## Health conditions tested

| Genetic Condition | Gene | Risk Variant | Copies | Inheritance | Result |
|---|---|---|---|---|---|
| **Cystinuria Type I-A** | SLC3A1 | C>T | — | AR | Inconclusive |
| **Mucopolysaccharidosis Type VII (Discovered in the Brazilian Terrier)** | GUSB | C>T | — | AR | Inconclusive |
| **Myeloperoxidase Deficiency** | MOP | C>T | — | AR | Inconclusive |
| **Paroxysmal Dyskinesia** | PIGN | C>T | — | AR | Inconclusive |
| **2,8-dihydroxyadenine (DHA) Urolithiasis** | APRT | G>A | 0 | AR | Clear |
| **Acral Mutilation Syndrome** | GDNF | C>T | 0 | AR | Clear |
| **Acute Respiratory Distress Syndrome** | ANLN | C>T | 0 | AR | Clear |
| **Alaskan Husky Encephalopathy** | SLC19A3 | G>A | 0 | AR | Clear |
| **Alexander Disease** | GFAP | G>A | 0 | AR | Clear |
| **Amelogenesis Imperfecta (Discovered in the Italian Greyhound)** | ENAM | Deletion | 0 | AR | Clear |
| **Amelogenesis Imperfecta (Discovered in the Parson Russell Terrier)** | ENAM | C>T | 0 | AR | Clear |
| **Bandera's Neonatal Ataxia** | GRM1 | Insertion | 0 | AR | Clear |
| **Benign Familial Juvenile Epilepsy** | LGI2 | A>T | 0 | AR | Clear |
| **Canine Leukocyte Adhesion Deficiency (CLAD), type III** | FERMT3 | Insertion | 0 | AR | Clear |
| **Canine Multifocal Retinopathy 1** | BEST1 | C>T | 0 | AR | Clear |
| **Canine Multifocal Retinopathy 2** | BEST1 | G>A | 0 | AR | Clear |
| **Canine Multifocal Retinopathy 3** | BEST1 | Deletion | 0 | AR | Clear |
| **Canine Scott Syndrome** | ANO6 | G>A | 0 | AR | Clear |
| **Centronuclear Myopathy (Discovered in the Great Dane)** | BIN1 | A>G | 0 | AR | Clear |
| **Centronuclear Myopathy (Discovered in the Labrador Retriever)** | PTPLA | Insertion | 0 | AR | Clear |

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|---|---|---|---|---|---|
| **Cerebellar Ataxia** | RAB24 | A>C | 0 | AR | Clear |
| **Cerebellar Cortical Degeneration** | SNX14 | C>T | 0 | AR | Clear |
| **Cerebellar Hypoplasia** | VLDLR | Deletion | 0 | AR | Clear |
| **Cerebral Dysfunction** | SLC6A3 | G>A | 0 | AR | Clear |
| **Chondrodysplasia (Discovered in Norwegian Elkhound and Karelian Bear Dog)** | ITGA10 | C>T | 0 | AR | Clear |
| **Cleft Lip & Palate with Syndactyly** | ADAMTS20 | Deletion | 0 | AR | Clear |
| **Cleft Palate** | DLX6 | C>A | 0 | AR | Clear |
| **Complement 3 Deficiency** | C3 | Deletion | 0 | AR | Clear |
| **Cone Degeneration (Discovered in the Alaskan Malamute)** | CNGB3 | Deletion | 0 | AR | Clear |
| **Cone Degeneration (Discovered in the German Shepherd Dog)** | CNGA3 | C>T | 0 | AR | Clear |
| **Cone Degeneration (Discovered in the German Shorthaired Pointer)** | CNGB3 | G>A | 0 | AR | Clear |
| **Cone-Rod Dystrophy** | NPHP4 | Deletion | 0 | AR | Clear |
| **Cone-Rod Dystrophy 1** | PDE6B | Deletion | 0 | AR | Clear |
| **Cone-Rod Dystrophy 2** | IQCB1 | Insertion | 0 | AR | Clear |
| **Congenital Dyshormonogenic Hypothyroidism with Goiter (Discovered in the Shih Tzu)** | SLC5A5 | G>A | 0 | AR | Clear |
| **Congenital Hypothyroidism (Discovered in the Tenterfield Terrier)** | TPO | C>T | 0 | AR | Clear |
| **Congenital Hypothyroidism (Discovered in the Toy Fox and Rat Terrier)** | TPO | C>T | 0 | AR | Clear |
| **Congenital Myasthenic Syndrome (Discovered in the Golden Retriever)** | COLQ | G>A | 0 | AR | Clear |
| **Congenital Myasthenic Syndrome (Discovered in the Jack Russell Terrier)** | CHRNE | Insertion | 0 | AR | Clear |

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|---|---|---|---|---|---|
| **Congenital Myasthenic Syndrome (Discovered in the Labrador Retriever)** | COLQ | T>C | 0 | AR | Clear |
| **Congenital Myasthenic Syndrome (Discovered in the Old Danish Pointer)** | CHAT | G>A | 0 | AR | Clear |
| **Congenital Stationary Night Blindness (CSNB)** | RPE65 | A>T | 0 | AR | Clear |
| **Craniomandibular Osteopathy (Discovered in Scottish Terrier breeds)** | SLC37A2 | C>T | 0 | AD | Clear |
| **Cystic Renal Dysplasia and Hepatic Fibrosis** | INPP5E | G>A | 0 | AR | Clear |
| **Cystinuria Type II-A** | SLC3A1 | Deletion | 0 | AD | Clear |
| **Deafness and Vestibular Dysfunction (DINGS1), (Discovered in Doberman Pinscher)** | PTPRQ | Insertion | 0 | AR | Clear |
| **Degenerative Myelopathy** | SOD1 | G>A | 0 | AR | Clear |
| **Demyelinating Neuropathy** | SBF2 | G>T | 0 | AR | Clear |
| **Dental Hypomineralization** | FAM20C | C>T | 0 | AR | Clear |
| **Dilated Cardiomyopathy (Discovered in the Schnauzer)** | RBM20 | Deletion | 0 | AR | Clear |
| **Dominant Progressive Retinal Atrophy** | RHO | C>G | 0 | AD | Clear |
| **Dystrophic Epidermolysis Bullosa (Discovered in the Central Asian Ovcharka)** | COL7A1 | C>T | 0 | AR | Clear |
| **Dystrophic Epidermolysis Bullosa (Discovered in the Golden Retriever)** | COL7A1 | C>T | 0 | AR | Clear |
| **Early Retinal Degeneration (Discovered in the Norwegian Elkhound)** | STK38L | Insertion | 0 | AR | Clear |
| **Early-Onset Progressive Polyneuropathy (Discovered in the Alaskan Malamute)** | NDRG1 | G>T | 0 | AR | Clear |
| **Early-Onset Progressive Polyneuropathy (Discovered in the Greyhound)** | NDRG1 | Deletion | 0 | AR | Clear |
| **Early-Onset Progressive Retinal Atrophy (Discovered in the Portuguese Water Dog)** | CCDC66 | Insertion | 0 | AR | Clear |

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|---|---|---|---|---|---|
| **Epidermolytic Hyperkeratosis** | KRT10 | G>T | 0 | AR | Clear |
| **Episodic Falling Syndrome** | BCAN | Insertion | 0 | AR | Clear |
| **Exercise-Induced Collapse** | DNM1 | G>T | 0 | AR | Clear |
| **Factor VII Deficiency** | F7 | G>A | 0 | AR | Clear |
| **Factor XI Deficiency** | FXI | Insertion | 0 | AD | Clear |
| **Fanconi Syndrome** | FAN1 | Deletion | 0 | AR | Clear |
| **Fetal Onset Neuroaxonal Dystrophy** | MFN2 | G>C | 0 | AR | Clear |
| **Focal Non-Epidermolytic Palmoplantar Keratoderma** | KRT16 | G>C | 0 | AR | Clear |
| **Generalized Progressive Retinal Atrophy (Discovered in the Schapendoes)** | CCDC66 | Insertion | 0 | AR | Clear |
| **Glanzmann Thrombasthenia Type I (Discovered in Great Pyrenees)** | ITGA2B | C>G | 0 | AR | Clear |
| **Glanzmann Thrombasthenia Type I (Discovered in mixed breed dogs)** | ITGA2B | C>T | 0 | AR | Clear |
| **Globoid Cell Leukodystrophy (Discovered in Terriers)** | GALC | A>C | 0 | AR | Clear |
| **Globoid Cell Leukodystrophy (Discovered in the Irish Setter)** | GALC | A>T | 0 | AR | Clear |
| **Glycogen Storage Disease Type Ia (Discovered in the Maltese)** | G6PC | G>C | 0 | AR | Clear |
| **Glycogen Storage Disease Type IIIa, (GSD IIIa)** | AGL | Deletion | 0 | AR | Clear |
| **GM1 Gangliosidosis (Discovered in the Portuguese Water Dog)** | GLB1 | G>A | 0 | AR | Clear |
| **GM1 Gangliosidosis (Discovered in the Shiba)** | GLB1 | Deletion | 0 | AR | Clear |
| **GM2 Gangliosidosis (Discovered in the Japanese Chin)** | HEXA | G>A | 0 | AR | Clear |
| **GM2 Gangliosidosis (Discovered in the Toy Poodle)** | HEXB | Deletion | 0 | AR | Clear |

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|---|---|---|---|---|---|
| **Hemophilia A (Discovered in Old English Sheepdog)** | FVIII | C>T | 0 | XR | Clear |
| **Hemophilia A (Discovered in the Boxer)** | FVIII | C>G | 0 | XR | Clear |
| **Hemophilia A (Discovered in the German Shepherd Dog - Variant 1)** | FVIII | G>A | 0 | XR | Clear |
| **Hemophilia A (Discovered in the German Shepherd Dog - Variant 2)** | FVIII | G>A | 0 | XR | Clear |
| **Hemophilia A (Discovered in the Havanese)** | FVIII | Insertion | 0 | XR | Clear |
| **Hemophilia B** | FIX | G>A | 0 | XR | Clear |
| **Hemophilia B (Discovered in the Airedale Terrier)** | FIX | Insertion | 0 | XR | Clear |
| **Hemophilia B (Discovered in the Lhasa Apso)** | FIX | Deletion | 0 | XR | Clear |
| **Hereditary Ataxia (Discovered in the Norwegian Buhund)** | KCNIP4 | T>C | 0 | AR | Clear |
| **Hereditary Elliptocytosis** | SPTB | C>T | 0 | AD | Clear |
| **Hereditary Footpad Hyperkeratosis** | FAM83G | G>C | 0 | AR | Clear |
| **Hereditary Nasal Parakeratosis (Discovered in the Greyhound)** | SUV39H2 | Deletion | 0 | AR | Clear |
| **Hereditary Nasal Parakeratosis (Discovered in the Labrador Retriever)** | SUV39H2 | A>C | 0 | AR | Clear |
| **Hereditary Vitamin D-Resistant Rickets Type II** | VDR | Deletion | 0 | AR | Clear |
| **Hyperuricosuria** | SLC2A9 | G>T | 0 | AR | Clear |
| **Hypocatalasia** | CAT | G>A | 0 | AR | Clear |
| **Hypomyelination** | FNIP2 | Deletion | 0 | AR | Clear |
| **Hypophosphatasia** | Confidential | - | 0 | AR | Clear |
| **Ichthyosis (Discovered in the American Bulldog)** | NIPAL4 | Deletion | 0 | AR | Clear |
| **Ichthyosis (Discovered in the Great Dane)** | SLC27A4 | G>A | 0 | AR | Clear |

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|---|---|---|---|---|---|
| **Intestinal Cobalamin Malabsorption (Discovered in the Beagle)** | CUBN | Deletion | 0 | AR | Clear |
| **Intestinal Cobalamin Malabsorption (Discovered in the Border Collie)** | CUBN | Deletion | 0 | AR | Clear |
| **Intestinal Cobalamin Malabsorption (Discovered in the Komondor)** | CUBN | G>A | 0 | AR | Clear |
| **Juvenile Encephalopathy (Discovered in the Parson Russell Terrier)** | Confidential | - | 0 | AR | Clear |
| **Juvenile Laryngeal Paralysis and Polyneuropathy** | RAB3GAP1 | Deletion | 0 | AR | Clear |
| **Juvenile Myoclonic Epilepsy** | DIRAS1 | Deletion | 0 | AR | Clear |
| **L-2-Hydroxyglutaric aciduria (Discovered in the Staffordshire Bull Terrier)** | L2HGDH | T>C | 0 | AR | Clear |
| **L-2-Hydroxyglutaric Aciduria (Discovered in the West Highland White Terrier)** | Confidential | - | 0 | AR | Clear |
| **Lagotto Storage Disease** | ATG4D | G>A | 0 | AR | Clear |
| **Lamellar Ichthyosis** | TGM1 | Insertion | 0 | AR | Clear |
| **Lethal Acrodermatitis (Discovered in the Bull Terrier)** | MKLN1 | A>C | 0 | AR | Clear |
| **Ligneous Membranitis** | PLG | T>A | 0 | AR | Clear |
| **Lung Developmental Disease (Discovered in the Airedale Terrier)** | LAMP3 | C>T | 0 | AR | Clear |
| **Macrothrombocytopenia (Discovered in Norfolk and Cairn Terrier)** | TUBB1 | G>A | 0 | AR | Clear |
| **May-Hegglin Anomaly** | MYH9 | G>A | 0 | AD | Clear |
| **MDR1 Medication Sensitivity** | MDR1/ABCB1 | Deletion | 0 | AD | Clear |
| **Microphthalmia (Discovered in the Soft-Coated Wheaten Terrier)** | RBP4 | Deletion | 0 | AR | Clear |
| **Mucopolysaccharidosis Type IIIA (Discovered in the Dachshund)** | SGSH | C>A | 0 | AR | Clear |

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|---|---|---|---|---|---|
| **Mucopolysaccharidosis Type IIIA (Discovered in the New Zealand Huntaway)** | SGSH | Insertion | 0 | AR | Clear |
| **Mucopolysaccharidosis Type VII (Discovered in the German Shepherd Dog)** | GUSB | G>A | 0 | AR | Clear |
| **Muscular Dystrophy (Discovered in the Cavalier King Charles Spaniel)** | Dystrophin | G>T | 0 | XR | Clear |
| **Muscular Dystrophy (Discovered in the Golden Retriever)** | Dystrophin | A>G | 0 | XR | Clear |
| **Muscular Dystrophy (Discovered in the Landseer)** | COL6A1 | G>T | 0 | AR | Clear |
| **Muscular Dystrophy (Discovered in the Norfolk Terrier)** | Dystrophin | Deletion | 0 | XR | Clear |
| **Muscular Hypertrophy (Double Muscling)** | MSTN | T>A | 0 | AR | Clear |
| **Musladin-Lueke Syndrome** | ADAMTSL2 | C>T | 0 | AR | Clear |
| **Myotonia Congenita (Discovered in Australian Cattle Dog)** | CLCN1 | Insertion | 0 | AR | Clear |
| **Myotonia Congenita (Discovered in the Labrador Retriever)** | CLCN1 | T>A | 0 | AR | Clear |
| **Myotonia Congenita (Discovered in the Miniature Schnauzer)** | CLCN1 | C>T | 0 | AR | Clear |
| **Myotubular Myopathy** | MTM1 | A>C | 0 | XR | Clear |
| **Narcolepsy (Discovered in the Dachshund)** | HCRTR2 | G>A | 0 | AR | Clear |
| **Narcolepsy (Discovered in the Labrador Retriever)** | HCRTR2 | G>A | 0 | AR | Clear |
| **Nemaline Myopathy** | NEB | C>A | 0 | AR | Clear |
| **Neonatal Cerebellar Cortical Degeneration** | SPTBN2 | Deletion | 0 | AR | Clear |
| **Neonatal Encephalopathy with Seizures** | ATF2 | T>G | 0 | AR | Clear |
| **Neuroaxonal Dystrophy (Discovered in Spanish Water Dog)** | TECPR2 | C>T | 0 | AR | Clear |
| **Neuroaxonal Dystrophy (Discovered in the Papillon)** | PLA2G6 | G>A | 0 | AR | Clear |

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|---|---|---|---|---|---|
| **Neuroaxonal Dystrophy (Discovered in the Rottweiler)** | VPS11 | A>G | 0 | AR | Clear |
| **Neuronal Ceroid Lipofuscinosis 1** | PPT1 | Insertion | 0 | AR | Clear |
| **Neuronal Ceroid Lipofuscinosis 12 (Discovered in the Australian Cattle Dog)** | ATP13A2 | C>T | 0 | AR | Clear |
| **Neuronal Ceroid Lipofuscinosis 7** | MFSD8 | Deletion | 0 | AR | Clear |
| **Neuronal Ceroid Lipofuscinosis 8 (Discovered in the Alpine Dachsbracke)** | CLN8 | Deletion | 0 | AR | Clear |
| **Neuronal Ceroid Lipofuscinosis 8 (Discovered in the Australian Shepherd)** | CLN8 | G>A | 0 | AR | Clear |
| **Neuronal Ceroid Lipofuscinosis 8 (Discovered in the English Setter)** | CLN8 | T>C | 0 | AR | Clear |
| **Neuronal Ceroid Lipofuscinosis 8 (Discovered in the Saluki)** | CLN8 | Insertion | 0 | AR | Clear |
| **Obesity risk (POMC)** | POMC | Deletion | 0 | AD | Clear |
| **Osteochondrodysplasia** | SLC13A1 | Deletion | 0 | AR | Clear |
| **Osteochondromatosis (Discovered in the American Staffordshire Terrier)** | EXT2 | C>A | 0 | AR | Clear |
| **Osteogenesis Imperfecta (Discovered in the Beagle)** | COL1A2 | C>T | 0 | AD | Clear |
| **Osteogenesis Imperfecta (Discovered in the Dachshund)** | SERPINH1 | T>C | 0 | AR | Clear |
| **P2RY12-associated Bleeding Disorder** | P2RY12 | Deletion | 0 | AR | Clear |
| **Persistent Müllerian Duct Syndrome** | AMHR2 | C>T | 0 | AR | Clear |
| **Phosphofructokinase Deficiency** | PFKM | G>A | 0 | AR | Clear |
| **Polycystic Kidney Disease** | PKD1 | G>A | 0 | AD | Clear |
| **Prekallikrein Deficiency** | KLKB1 | T>A | 0 | AR | Clear |
| **Primary Ciliary Dyskinesia** | CCDC39 | C>T | 0 | AR | Clear |

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| **Primary Ciliary Dyskinesia (Discovered in the Alaskan Malamute)** | NME5 | Deletion | 0 | AR | Clear |
| **Primary Lens Luxation** | ADAMTS17 | G>A | 0 | AR | Clear |
| **Primary Open Angle Glaucoma (Discovered in Basset Fauve de Bretagne)** | ADAMTS17 | G>A | 0 | AR | Clear |
| **Primary Open Angle Glaucoma (Discovered in Petit Basset Griffon Vendeen)** | ADAMTS17 | Insertion | 0 | AR | Clear |
| **Primary Open Angle Glaucoma and Lens Luxation (Discovered in Chinese Shar-Pei)** | ADAMTS17 | Deletion | 0 | AR | Clear |
| **Progressive Early-Onset Cerebellar Ataxia** | SEL1L | T>C | 0 | AR | Clear |
| **Progressive Retinal Atrophy (Discovered in the Basenji)** | SAG | T>C | 0 | AR | Clear |
| **Progressive Retinal Atrophy (Discovered in the Golden Retriever - GR-PRA1 variant)** | SLC4A3 | Insertion | 0 | AR | Clear |
| **Progressive Retinal Atrophy (Discovered in the Lhasa Apso)** | IMPG2 | Insertion | 0 | AR | Clear |
| **Progressive Retinal Atrophy (Discovered in the Papillon and Phalène)** | CNGB1 | Deletion | 0 | AR | Clear |
| **Progressive Retinal Atrophy (Discovered in the Shetland Sheepdog - BBS2 variant)** | Confidential | - | 0 | AR | Clear |
| **Progressive Retinal Atrophy (Discovered in the Shetland Sheepdog - CNGA1 variant)** | CNGA1 | Deletion | 0 | AR | Clear |
| **Progressive Retinal Atrophy (Discovered in the Swedish Vallhund)** | MERTK | Insertion | 0 | AR | Clear |
| **Progressive Retinal Atrophy 1 (Discovered in the Italian Greyhound)** | Confidential | - | 0 | AR | Clear |
| **Progressive Retinal Atrophy Type III** | FAM161A | Insertion | 0 | AR | Clear |
| **Protein Losing Nephropathy** | NPHS1 | G>A | 0 | AR | Clear |
| **Pyruvate Dehydrogenase Phosphatase 1 Deficiency** | PDP1 | C>T | 0 | AR | Clear |
| **Pyruvate Kinase Deficiency (Discovered in the Basenji)** | PKLR | Deletion | 0 | AR | Clear |

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| **Pyruvate Kinase Deficiency (Discovered in the Beagle)** | PKLR | G>A | 0 | AR | Clear |
| **Pyruvate Kinase Deficiency (Discovered in the Pug)** | PKLR | T>C | 0 | AR | Clear |
| **Pyruvate Kinase Deficiency (Discovered in the West Highland White Terrier)** | PKLR | Insertion | 0 | AR | Clear |
| **QT Syndrome** | KCNQ1 | C>A | 0 | AD | Clear |
| **Renal Cystadenocarcinoma and Nodular Dermatofibrosis** | FLCN | A>G | 0 | AD | Clear |
| **Rod-Cone Dysplasia 1** | PDE6B | G>A | 0 | AR | Clear |
| **Rod-Cone Dysplasia 1a** | PDE6B | Insertion | 0 | AR | Clear |
| **Rod-Cone Dysplasia 3** | PDE6A | Deletion | 0 | AR | Clear |
| **Sensory Ataxic Neuropathy** | tRNATyr | Deletion | 0 | MT | Clear |
| **Sensory Neuropathy** | FAM134B | Insertion | 0 | AR | Clear |
| **Severe Combined Immunodeficiency (Discovered in Frisian Water Dogs)** | RAG1 | G>T | 0 | AR | Clear |
| **Severe Combined Immunodeficiency (Discovered in Russell Terriers)** | PRKDC | G>T | 0 | AR | Clear |
| **Shaking Puppy Syndrome (Discovered in the Border Terrier)** | Confidential | - | 0 | AR | Clear |
| **Skeletal Dysplasia 2** | COL11A2 | G>C | 0 | AR | Clear |
| **Spinocerebellar Ataxia (Late-Onset Ataxia)** | CAPN1 | G>A | 0 | AR | Clear |
| **Spinocerebellar Ataxia with Myokymia and/or Seizures** | KCNJ10 | C>G | 0 | AR | Clear |
| **Spondylocostal Dysostosis** | HES7 | Deletion | 0 | AR | Clear |
| **Spongy Degeneration with Cerebellar Ataxia (Discovered in Belgian Malinois - SDCA1)** | KCNJ10 | T>C | 0 | AR | Clear |
| **Spongy Degeneration with Cerebellar Ataxia (Discovered in Belgian Malinois - SDCA2)** | ATP1B2 | Insertion | 0 | AR | Clear |

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|---|---|---|---|---|---|
| **Stargardt Disease (Discovered in the Labrador Retriever)** | ABCA4 | Insertion | 0 | AR | Clear |
| **Startle Disease (Discovered in Irish Wolfhounds)** | SLC6A5 | G>T | 0 | AR | Clear |
| **Trapped Neutrophil Syndrome** | VPS13B | Deletion | 0 | AR | Clear |
| **Van den Ende-Gupta Syndrome** | SCARF2 | Deletion | 0 | AR | Clear |
| **von Willebrand's Disease, type 1** | VWF | G>A | 0 | AD | Clear |
| **von Willebrand's Disease, type 2** | VWF | T>G | 0 | AR | Clear |
| **von Willebrand's Disease, type 3 (Discovered in the Kooiker Hound)** | VWF | G>A | 0 | AR | Clear |
| **von Willebrand's Disease, type 3 (Discovered in the Scottish Terrier)** | VWF | Deletion | 0 | AR | Clear |
| **von Willebrand's Disease, type 3 (Discovered in the Shetland Sheepdog)** | VWF | Deletion | 0 | AR | Clear |
| **X-Linked Ectodermal Dysplasia** | EDA | G>A | 0 | XR | Clear |
| **X-Linked Hereditary Nephropathy (Discovered in the Navasota Dog)** | COL4A5 | Deletion | 0 | XR | Clear |
| **X-Linked Hereditary Nephropathy (Discovered in the Samoyed)** | COL4A5 | G>T | 0 | XR | Clear |
| **X-Linked Myotubular Myopathy** | MTM1 | C>A | 0 | XR | Clear |
| **X-Linked Progressive Retinal Atrophy 1** | RPGR | Deletion | 0 | XR | Clear |
| **X-Linked Progressive Retinal Atrophy 2** | RPGR | Deletion | 0 | XR | Clear |
| **X-Linked Severe Combined Immunodeficiency (Discovered in the Basset Hound)** | IL2RG | Deletion | 0 | XR | Clear |
| **X-Linked Severe Combined Immunodeficiency (Discovered in the Cardigan Welsh Corgi)** | IL2RG | Insertion | 0 | XR | Clear |
| **X-Linked Tremors** | PLP1 | A>C | 0 | XR | Clear |
| **Xanthinuria (Discovered in a mixed breed dog)** | Confidential | - | 0 | AR | Clear |

# Sylvie

WISDOM PANEL™

**Kit type:** Banfield Puppy Plan

**ID kit:** 00BAN_0416MARS003LN
**Test date:** 2024-07-19

## Health conditions tested

| Genetic Condition | Gene | Risk Variant | Copies | Inheritance | Result |
|---|---|---|---|---|---|
| **Xanthinuria (Discovered in the Cavalier King Charles Spaniel)** | Confidential | - | 0 | AR | Clear |
| **Xanthinuria (Discovered in the Toy Manchester Terrier)** | Confidential | - | 0 | AR | Clear |

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## Traits

### Coat Color

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Fawn**<br>Copies of this variant will cause dogs to show fawn if they do not have other variant that will mask this effect, such as a plain red, black or white coat. | ASIP | $a^y$ | 1 | Fawn possible |
| **Recessive Black** | ASIP | a | 0 | No effect |
| **Tan Points**<br>Two copies, or occasionally one copy, of this variant may result in a black and tan coat color pattern. | ASIP | $a^t$ | 1 | Tan points possible |
| **Dominant Black** | CBD103 | $K^B$ | 0 | No effect |
| **Mask** | MC1R | $E^m$ | 0 | No effect |
| **Recessive Red (e1)** | MC1R | $e^1$ | 0 | No effect |
| **Widow's Peak (Discovered in the Afghan Hound and Saluki)** | MC1R | $E^G$ | 0 | No effect |

### Color Modification

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Chocolate (bc)** | TYRP1 | $b^c$ | 0 | No effect |
| **Chocolate (bs)** | TYRP1 | $b^s$ | 0 | No effect |

### Coat Patterns

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Piebald**<br>Dog with copies of the Piebald variant are likely to show white spotting, patches and/or a white coat, with two copies having a greater effect than one, although the strength of this effect may be influenced by other genes. | MITF | $s^p$ | 2 | Particolor or white markings possible |
| **Merle** | PMEL | M | 0 | No effect |
| **Harlequin** | PSMB7 | H | 0 | No effect |

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## Coat Patterns

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Saddle Tan**<br>One or two copies of the Saddle Tan variant are needed for the "saddle" to be seen. However the Tan Points variant must also be present. The Saddle Tan variant is actually considered to be the wild type, or default, variant. | RALY | - | 1 | Saddle possible |

## Coat Length and Curl

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Long Hair (lh1)**<br>To show a long coat, a dog must inherit two copies of a Long Hair variant, one from each parent. This can either be two copies of a particular variant, such as this one (lh1) or two of any combination of long hair variants. However, there are other variants suspected to influence coat length. | FGF5 | $lh^{1}$ | 2 | Long coat |
| **Curly Coat** | KRT71 | C | 0 | No effect |

## Hairlessness

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Hairlessness (Discovered in the Chinese Crested Dog) Linkage test** | FOXI3 | $Hr^{cc}$ | 0 | No effect |
| **Hairlessness (Discovered in the American Hairless Terrier)** | SGK3 | $hr^{aht}$ | 0 | No effect |
| **Hairlessness (Discovered in the Scottish Deerhound)** | SKG3 | $hr^{sd}$ | 0 | No effect |

## Shedding

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Reduced Shedding**<br>One or two copies of the Reduced Shedding variant is likely to reduce a dog's tendency to shed. Copies of the Furnishings variant, particularly two, also reduce the tendency of a dog to shed. | MC5R | sd | 2 | Low shedder |

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## More Coat Traits

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Hair Ridge** | FGF3, FGF4, FGF19, ORAOV1 | R | 0 | No effect |
| **Furnishings** | RSPO2 | F | 0 | No effect |
| **Albino** | SLC45A2 | $c^{al}$ | 0 | No effect |

## Head Shape

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Short Snout (BMP3 variant)** | BMP3 | - | 0 | No effect |
| **Short Snout (SMOC2 variant)** | SMOC2 | - | 0 | No effect |

## Eye Color

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Blue Eyes (Discovered in the Siberian Husky)** | ALX4 | - | 0 | No effect |

## Ears

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Floppy Ears**<br>Dogs with zero copies of this variant are more likely to have permanently upright or prick ears, and fully folded ears are more likely with two copies inherited. Please note however that many genetic variants influence ear carriage. Dogs with some cartilage stiffness to their ears can sometimes raise their ears upright when 'at alert' but will flop down when relaxed. | MSRB3 | - | 1 | Partially floppy ears more likely |

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## Extra Toes

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Hind Dewclaws (Discovered in Asian breeds)** | LMBR1 | DC-1 | 0 | No effect |
| **Hind Dewclaws (Discovered in Western breeds)** | LMBR1 | DC-2 | 0 | No effect |

## More Body Features

| | Gene | Variant | Copies | Result |
|---|---|---|---|---|
| **Back Muscle and Bulk** | ACSL4 | - | 0 | No effect |
| **High Altitude Adaptation** | EPAS1 | - | 0 | No effect |
| **Short Legs (Chondrodysplasia, CDPA)** | FGF4 | - | — | Inconclusive |
| **Short Tail** | T-box | T | 0 | Full tail length likely |

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# Glossary of genetic terms

## Test result definitions

**At Risk:** Based on the disorder's mode of inheritance, the dog inherited a number of genetic variant(s) which increases the dog's risk of being diagnosed with the associated disorder.

**Carrier:** The dog inherited one copy of a genetic variant when two copies are usually necessary to increase the dog's risk of being diagnosed with the associated disorder. While carriers are usually not at risk of clinical expression of the disorder, carriers of some complex variants may be associated with a low risk of developing the disorder.

**Clear:** The dog did not inherit the genetic variant(s) associated with the disorder and will not be at elevated risk of being diagnosed with the disorder due to this genotype. However, similar clinical signs could develop from different genetic or clinical causes.

**Inconclusive:** An inconclusive result indicates a confident call could not be made based on the data for that genetic variant. Health testing is performed in replicates, and on occasion the outcomes do not agree. This may occur due to an unusual sequence of DNA in the region tested, multiple cell genotypes present due to chimerism or acquired mutations, or due to quality of the DNA sample.

## Inheritance mode definitions

**Autosomal Recessive (AR):** For autosomal recessive disorders, dogs with two copies of the genetic variant are at risk of developing the associated disorder. Dogs with one copy of the variant are considered carriers and are usually not at risk of developing the disorder. However, carriers of some complex variants grouped in this category may be associated with a low risk of developing the disorder. Dogs with one or two copies may pass the disorder-associated variant to their puppies if bred.

**Autosomal Dominant (AD):** For autosomal dominant disorders, dogs with one or two copies of the genetic variant are at risk of developing the associated disorder. Inheriting two copies of the variant may increase the risk of development of the disorder or cause the condition to be more severe. These dogs may pass the disorder-associated variant to their puppies if bred.

**X-linked Recessive (XR):** For X-linked recessive disorders, the genetic variant is found on the X chromosome. Female dogs must inherit two copies of the variant to be at risk of developing the condition, whereas male dogs only need one copy to be at risk. Males and females with any copies of the variant may pass the disorder-associated variant to their puppies if bred.

**X-linked Dominant (XD):** For X-linked dominant disorders, the genetic variant is found on the X chromosome. Both male and female dogs with one copy of the variant are at risk of developing the disorder. Females inheriting two copies of the variant may be at higher risk or show a more severe form of the disorder than with one copy. Males and females with any copies of the variant may pass the disorder-associated variant to their puppies if bred.

**Mitochondrial (MT):** Unlike the two copies of genomic DNA held in the nucleus, there are thousands of mitochondria in each cell of the body, and each holds its own mitochondrial DNA (mtDNA). Mitochondria are called the "powerhouses" of the cell. For a dog to be at risk for a mitochondrial disorder, it must inherit a certain ratio of mtDNA with the associated variant compared to normal mtDNA. mtDNA is inherited only from the mother.