

FURRYDNA BY FURLICIOUS



Canine Analysis Report

Sample
Your Pet Photo



MAX'S TALE

Microchip ID
PlaceHolder

Test Report Code
DOGyymmdd

Owner Name
Anonymous

Date Printed
DD MM YY

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1.0 OVERVIEW

Say Hi To my Beloved Family



1.0 OVERVIEW

Overview

Puppy's samples were submitted for a full set of genetic testing for dogs, including breed identification, single-gene genetic disease detection, complex disease detection, hair trait and behaviour determination. The analysis of sample received for DOG20230401 was completed and reported on 01 April 2023.

Sample quality

DNA extraction was successful. The specific information is as follows:

Sample ID	Total Reads	Reads matched with primer	Effective average depth	Ontarget ratio	Q20
DOG20230401	1326164.0	1168966.0	737.518	0.8815	0.9705

Breed identification

In this test, the sample is a mixed breed of: **Australian Cattle Dog, Bull Terrier, Staffordshire Bull Terrier.**



Australian Cattle Dog



Bull Terrier



Staffordshire Bull Terrier

1.0 OVERVIEW

Disease detection

133 canine single-gene genetic diseases and 16 complex diseases were tested.

Single-gene Disease Detection

Single-gene Disease	Risk
Degenerative Myelopathy	Carrier

Complex Gene Disease Detection

Complex Gene Disease	Relative risk (%)
Hip dysplasia	91.2
Mast cell tumor (MCT)	72.55
Congenital megaesophagus	65.15
Hypothyroidism	56.13
Lymphoma	30.31
Portosystemic vascular anomaly (PSVA)	27.56
Obsessive-compulsive disorder	18.71
Osteosarcoma	13.67
Congenital sensorineural deafness	5.27

2.1 PEDIGREE ANALYSIS

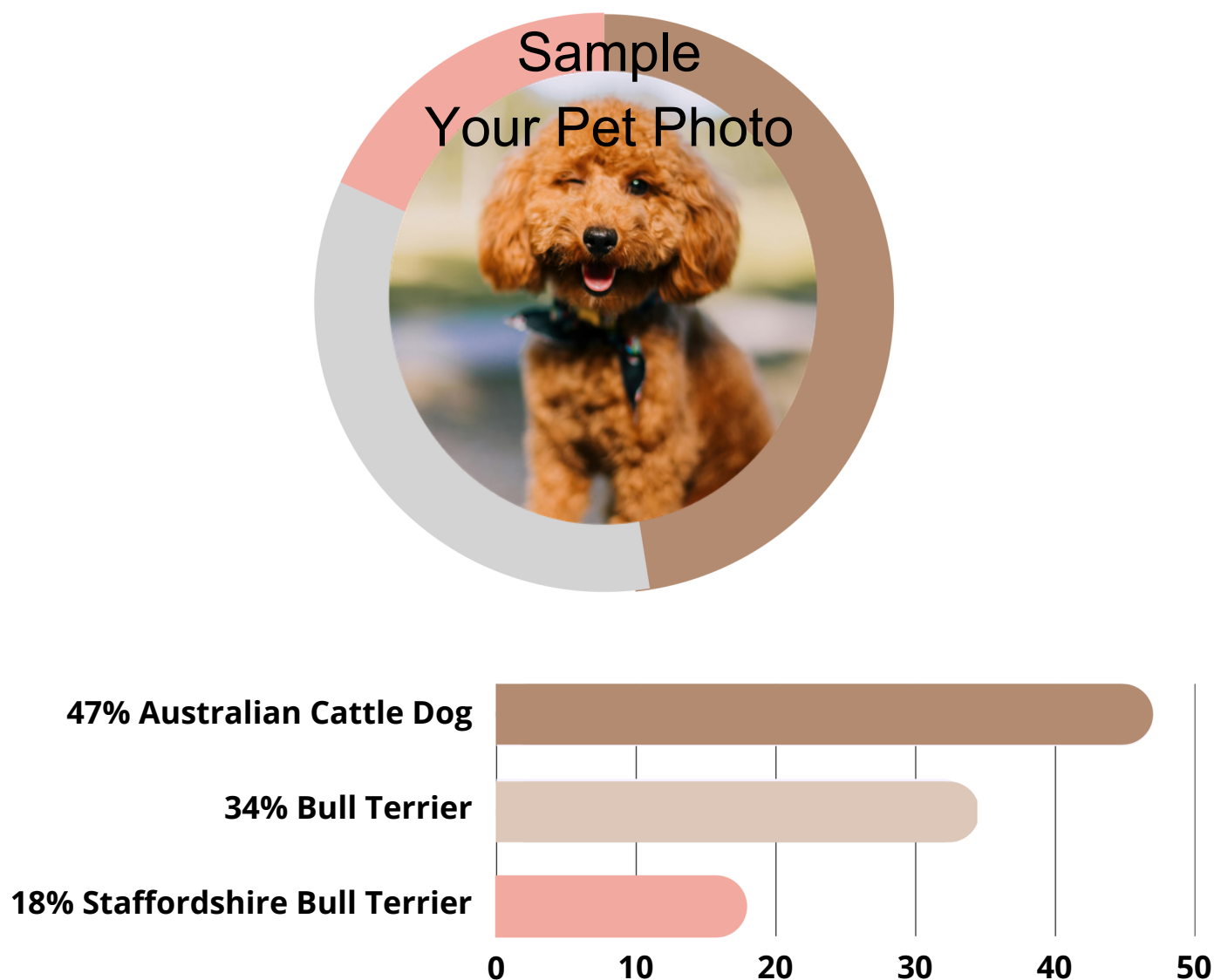
Family tree
Variety description



2.1 BREED

Breed Identification Report

Puppy is a mixed breed. The breed composition diagram is as follows:



Puppy (99%) =
Australian Cattle Dog (47%) + Bull Terrier (34%) + Staffordshire Bull Terrier (18%)

2.1 BREED

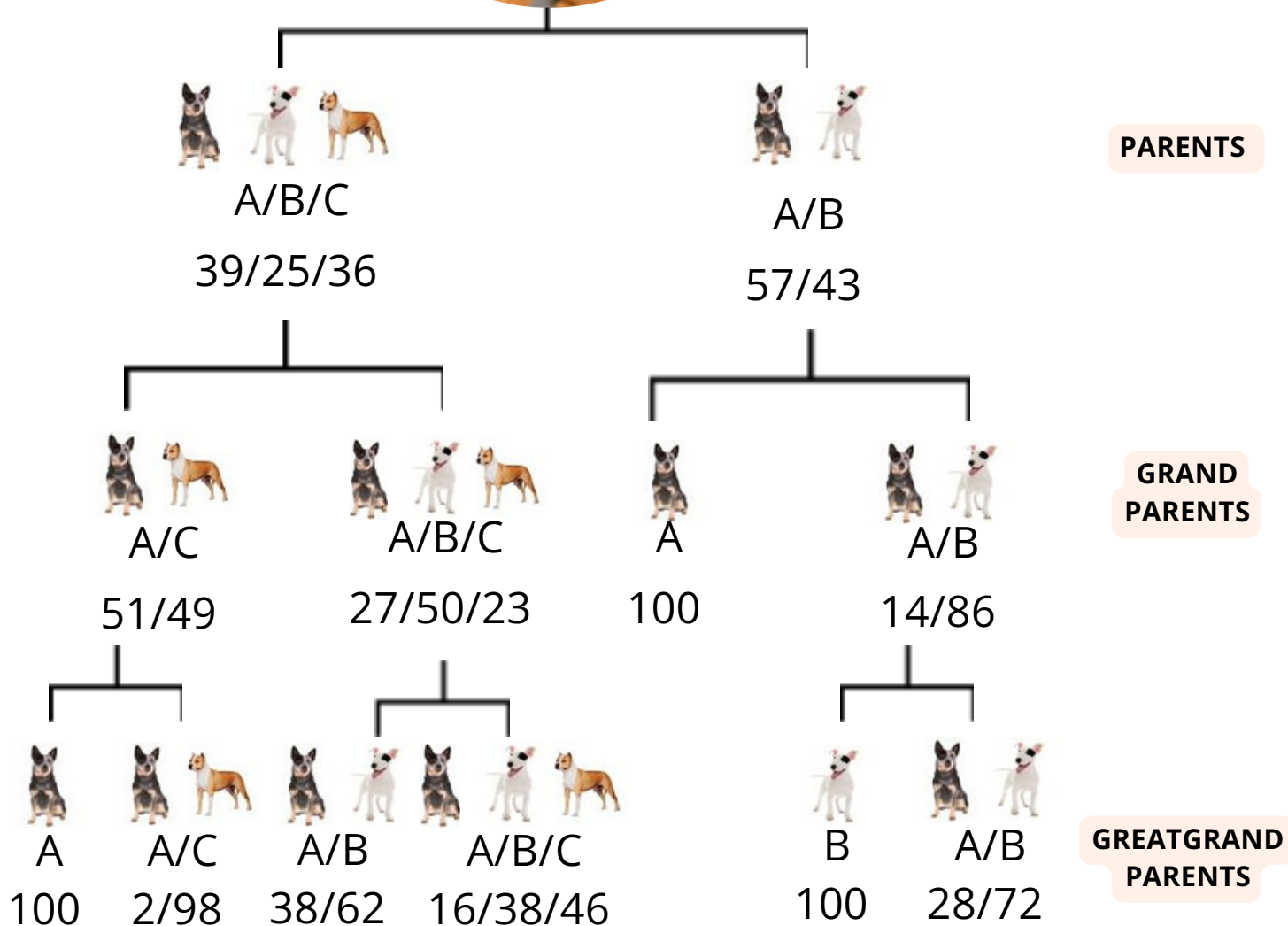
Family Tree

A: Australian Cattle Dog
B: Bull Terrier
C: Staffordshire Bull Terrier

Sample
Your Pet Photo



Max



2.1 BREED

Variety Description

Australian Cattle Dog

Historical Origin

Originated in Australia in 1840



Migrating Development

In the 19th century, Halls Heelers were subsequently developed into two modern breeds: the Australian Cattle Dog and the Australian Stumpy Tail Cattle Dog.

Characteristics

Cattle Dog is a type of shepherd dog used to graze long distances on rugged terrain. Like other working dogs, Australian Cattle Dogs are energetic and smarter. It has an independent personality. Because it can adapt to the wild living environment, it is a good helper for driving cattle to the market for long distances in the Australian mainland.

Anecdote

The Australian Cattle Dog needs a lot of physical activity. Like many other herding dogs, it has an active and creative mind. If it doesn't have a job, it will find activities on its own, such as observing walking around people.

Common Genetic Diseases

- Cystinuria Type II-A
- Congenital Myotonia
- Neuronal Ceroid Lipofuscinosis 5
- Neuronal Ceroid Lipofuscinosis 8
- Primary lens luxation
- Multi-Drug Sensitivity

Traits

- Average Life Expectancy: 13-15 years
- Average Height: 43-51 cm (16-20 in)
- Average Weight: 16-20 kg (35-44 lb)

2.1 BREED

Variety Description

Bull Terrier

Historical Origin

Originated in England in the 19th Century

Migrating Development

Migrating to the United States, Canada, and the United Kingdom in the 19th Century

Characteristics

Bull Terrier originated in England in the early 19th century. It is mainly used to control pests and dog fighting. It is the result of the breeding of bulldogs and Terrier dogs. This new breed has the speed and flexibility of hunting dogs. And tenacious toughness.

Anecdote

In the 1960s, bulldogs and pit bulls bred a pure white pit bull. Although there are coats of other colours, white is still the most popular. The first modern pit bull was it was recognized as the "King of Fighting" at that time.



Common Genetic Diseases

- Primary lens luxation
- Polycystic Kidney Disease
- Sensorineural deafness

Traits

- Average Life Expectancy: 11-14 years
- Average Height: 14-22 in
- Average Weight: 15-27 kg

2.1 BREED

Variety Description

Staffordshire Bull Terrier

Historical Origin

Originated in Britain hundreds of years ago

Characteristics

Stanfordshire Bulldog is a medium-sized short-haired dog, belonging to the type of bulldog. This modern breed is very suitable as a companion dog. It is known for its fearlessness and toughness, and likes to be big. Natural, low-key, quiet, stable and reliable, it is an important multi-purpose dog.

Anecdote

The early bulldogs and terriers were not bred like today's breeds, but were bred to fight against large animals such as bears or bulls. This required testing the strength and skills of dogs. As the UK began with the implementation of the Animal Welfare Law, these bloody sports were officially cancelled in 1835.



Common Genetic Diseases

- L2 hydroxyglutaric aciduria
- Hereditary cataract
- Encephalopathy
- Cerebellar Ataxia

Traits

- Average Life Expectancy:
Over 12 years
- Average Height:
 - Female: 33~38 cm,
 - Male: 36~41 cm
- Average Weight:
 - Female: 11~15 kg,
 - Male: 13~17 kg



2.2 GENETIC DISEASES

Single Gene Diseases
Complex Gene Diseases
Diagnosis and Medical Advice
Feeding and Nursing Guide

2.2 GENETIC DISEASES

Single-gene disease detection report

Degenerative Myelopathy

- Neurodegenerative disease of the spinal cord.
- Abnormalities in the gene coding.
- Most dogs develop clinical symptoms after the age of 8 years.

Items	Degenerative Myelopathy
Test results	+ /-
Genotype	GA
Genetic model	Recessive
Heredity	50.0% probability of passing at least one mutation gene to the next generation
Risk interpretation	Low risk

Diagnosis and Medical Advice:

- Diagnosis can only be observed by histopathology.

Feeding / Nursing Guide:

- Meticulous supportive care is the only treatment available.
- Moderate-intensity exercise and physical therapy to delay muscle degeneration.
- Stretch, swimming, underwater treadmill, and hydrotherapy.
- Provide comfortable bedding such as air mattresses, water beds, lounge chair cushions, or other soft items.
- Manage pet's diet to prevent weight gain.
- Sick dogs who often lie down need to be turned from time to time to prevent pressure sores and collapsed lungs (atelectasis).

2.2 GENETIC DISEASES

Complex disease detection report

The relative risk of Hip Dysplasia in this sample is higher than 91.2% of dogs

Hip Dysplasia

- Abnormality in the hip fossa.
- Hip joint present morphological structural changes over daily body activities.
- Most common cause of hip arthritis in many large dog breeds.

Items	Hip dysplasia
Test results	High risk
Relative risk	91.2
Gene	BICF2P772455; BICF2G630227898; BICF2S230609; BICF2S2452559; BICF2G630558239; BICF2P548082
Heredity	50.0% probability of passing at least one mutation gene to the next generation
Genotype	C,C;T,T;T,T;C,C;T,C;A,G

Diagnosis and Medical Advice:

- Diagnosis is based on clinical symptoms and X- ray examination.
- Other causing factors may include excess weight, overworked hip joints, torn ligaments, and repetitive joint movements.
- There is no way to completely cure the disease, but there are ways to reduce clinical symptoms.
- Non-surgical treatment options include three elements: weight control, exercise control and drug therapy.

Feeding / Nursing Guide:

- Control weight and calorie intake to control symptoms.
- Provide soft bed to avoid skin necrosis or bed sore formation, do not let the dog lay directly on hard floor.
- Keep the living environment at a suitable temperature, proper insulation can reduce joint pain.
- Avoid uneven roads, gravel ground or hard cement ground on walks.

2.2 GENETIC DISEASES

Complex disease detection report

The relative risk of Mast cell tumor (MCT) in this sample is higher than 72.55% of dogs

Mast Cell Tumor (MCT)

- Tumor formed by the accumulation of mast cells originating in the dermis and subcutaneous tissue.
- Most common skin tumor in dogs.

Items	Mast cell tumor (MCT)
Test results	High risk
Relative risk	72.55
Gene	CAF36.16889272; BICF2G630521678
Genotype	C,C;G,G

Diagnosis and Medical Advice:

- Send for imaging to check for metastasis and blood test to assess the animal's physical condition.
- Treatment by surgical removal of tumor tissue.

Feeding / Nursing Guide:

- Regularly check the skin of the pet's body, pay attention to whether there are uneven skin protrusions.
- For dogs suffering from mast cell tumors, regularly measure and record the size, number and location of body protrusions.
- Avoid excessive kneading of tumours as it causes tumor cells to degranulate and spreading it to surrounding tissues.
- Contact veterinary for abnormal findings.
- Follow up every six months after surgery.

2.2 GENETIC DISEASES

Complex disease detection report

The relative risk of Congenital Megaesophagus in this sample is higher than 65.15% of dogs

Congenital Megaesophagus

- Caused by the hypoplasia of esophageal nerve distribution.
- esophageal dilation and food intake disorders.

Items	Congenital megaesophagus
Test results	Medium risk
Relative risk	65.15
Gene	rs22197789
Genotype	G,G

Diagnosis and Medical Advice:

- Gently lift the hind limbs of the dog and palpate the neck area to assess for any swelling of the esophagus.
- Diagnosis by esophageal X-ray imaging.
- When foreign body pneumonia occurs, antibiotics can be used.

Feeding / Nursing Guide:

- Eat small and frequent meals.
- The number of feedings can be increased to four times a day to limit the expansion of the esophagus and prevent foreign bodies from being sucked into lungs.
- Recommended to use fluid food as daily feeding.
- Feed on a high platform, where the bowl is parallel to the head so that food moves down along with gravity.
- Keep dog's forelimbs on stairs or ladders for 15-30 minutes to avoid food stay in the esophagus.

2.2 GENETIC DISEASES

Complex disease detection report

The relative risk of Hypothyroidism in this sample is higher than 56.13% of dogs

Hypothyroidism

- Lack of thyroxine T4 and 3,5,3,-triiodothyronine T3, leading to clinical symptoms involving almost all organ systems.

Items	Hypothyroidism
Test results	Medium risk
Relative risk	56.13
Gene	rs9248640; rs8864220
Genotype	C,A;G,A

Diagnosis and Medical Advice:

- Confirmatory test: Thyroid function tests, CBC, serum biochemistry, thyroid biopsy, histopathology and ultrasound.
- Relevant complications include mild non-regenerative anemia, high cholesterol, high creatine, kinase, high alkaline phosphatase, low sodium, hypoglycemia, etc.
- Treatment method includes thyroid hormone therapy.

Feeding / Nursing Guide:

- Initiate thyroxine supplementation promptly and continue lifelong.
- Carry out regular physical examinations and thyroid hormone measurement after taking medication.
- It will take weeks to months for pets to improve their mobility, skin, and mental state after medication time.

2.2 GENETIC DISEASES

Complex disease detection report

The relative risk of Lymphoma in this sample is higher than 30.31% of dogs

Lymphoma

- Common tumor disease in dogs, accounting for 7% to 24% of canine tumor diseases.
- Risk factors include genetics factors, carcinogens, immune factors, or retroviral pathogen, which mainly affect lymph nodes and other organs such as liver or spleen.

Items	Lymphoma
Test results	Low risk
Relative risk	30.31
Gene	CAF4.35564350
Genotype	G,G

Diagnosis and Medical Advice:

- Systemic examination of all lymph nodes throughout the body.
- Hematological examination to determine the condition of platelets, lymphocytes, eosinophils, and anemia.
- Biochemical examination to access for hypercalcemia and nephropathy as potential causes.
- X-ray to detect possible sternum enlargement, lower lumbar lymph nodes, spleen and liver.

Feeding / Nursing Guide:

- Pay attention to the growth of the dog's lymph nodes. Observe the colour of the skin and mucous membranes carefully, and promptly identify any signs of anemia or jaundice.
- Avoid feeding high-calcium and high-protein foods. Include blood supplements and gastrointestinal protective agents if necessary.

2.2 GENETIC DISEASES

Complex disease detection report

The relative risk of Portosystemic vascular anomaly (PSVA) in this sample is higher than 27.56% of dogs

Portosystemic Vascular Anomaly (PSVA)

- Abnormality of blood vessels between the portal circulation and the systemic circulation.
- The presence of short-circuited blood vessels causes blood flow to bypass the liver's normal detoxification process

Items	Portosystemic Vascular Anomaly
Test results	Low risk
Relative risk	27.56
Gene	CAF32.14626183
Genotype	A,A

Diagnosis and Medical Advice:

- The condition is diagnosed through a combination of hematology, biochemistry, imaging, urinalysis, and liver biopsy.
- The diagnosis necessitates rectal imaging examination and laparotomy.
- Contrast B-ultrasound may reveal small, diminished, and irregular blood vessels in the liver. It is important to differentiate this condition from liver failure, congenital urea cycle enzyme deficiency, epilepsy, intrahepatic arteriovenous fistulas, and other related conditions.

Feeding / Nursing Guide:

- Pay attention to your pet's daily diet, consider feeding high biological value protein such as eggs and dairy products. Avoid visceral food, increase the consumption of fiber while limiting fat consumption.
- Ensure regular liver function tests for your pets, monitor their spirits and appetite, and promptly contact your veterinarian in case of any abnormalities.

2.2 GENETIC DISEASES

Complex disease detection report

The relative risk of Obsessive-compulsive disorder in this sample is higher than 18.71% of dogs

Obsessive-Compulsive Disorder

- Recurring behaviors that occur beyond the normal range or frequency required to achieve their apparent purpose, such as repetitive sports behaviours, grooming behaviours, feeding behaviours, and hallucinations.

Items	Obsessive-Compulsive Disorder
Test results	Low risk
Relative risk	18.71
Gene	rs24454844
Genotype	T,C

Diagnosis and Medical Advice:

- It is necessary to obtain a thorough medical history, carefully observe clinical symptoms, and diligently record behavioral symptoms along with their duration.
- Identifying triggering factors and avoiding them is crucial.
- Behavioural symptoms can be complex, and a comprehensive physical examination should be conducted concurrently to rule out and treat any underlying diseases that may contribute to the aberrant behaviors.

Feeding / Nursing Guide:

- Pets can be rewarded with praise, food, and gentle touches when exhibiting normal behaviours.
- Increase the time spent playing with and interacting positively with pets, and to interrupt their behaviors when symptoms appear.
- Careful records of pet's behaviours at home, including the frequency of behaviours and possible triggers, should be maintained, and timely communication with a veterinarian is essential.

2.2 GENETIC DISEASES

Complex disease detection report

The relative risk of Osteosarcoma in this sample is higher than 13.67% of dogs

Osteosarcoma

- Primary bone tumor in dogs. As it grows, it destroys the bones from the inside, causing severe pain.
- Development is primarily attributed to the accumulation or exposure to carcinogens, as well as genetic factors.

Items	Osteosarcoma
Test results	Low risk
Relative risk	13.67
Gene	BICF2P411325
Genotype	C,C

Diagnosis and Medical Advice:

- The disease is most commonly found in the leg bones of large dogs.
- Diagnosis is primarily based on clinical examination, X-ray, and histological examination.
- Blood tests and MRI examinations are also conducted to assess overall body function and tumor metastasis. Bone biopsy is necessary for pathological diagnosis to confirm the condition.
- Treatment options often involve amputation in combination with chemotherapy and immunotherapy.

Feeding / Nursing Guide:

- Osteosarcoma is an extremely aggressive form of cancer that tends to metastasize (spread to other parts of the body) rapidly.
- Osteosarcoma can cause severe pain, often leading to amputation as a treatment option.
- However, after amputation, dogs typically adapt quickly and can resume weight-bearing activities and small-scale activities soon after the surgery. Most dogs are able to resume normal activities within one to two months following the operation.

2.2 GENETIC DISEASES

Complex disease detection report

The relative risk of Congenital Sensorineural Deafness in this sample is higher than 5.27% of dogs

Congenital Sensorineural Deafness

- Due to the degeneration of cochlear cells or cochlear nerve cells. The function of the cells diminishes as receptors disappears, leading to loss of sensorineural hearing.

Items	Congenital Sensorineural Deafness
Test results	Low risk
Relative risk	5.27
Gene	BICF2P590845; BICF2G630212376; BICF2P28982
Genotype	A,A;A,A;C,C

Diagnosis and Medical Advice:

- Based on the pet's medical history and family history of the disease, a hearing test should be conducted. If the otoscope examination yields normal results, a brainstem auditory response test may be necessary.
- This disease is irreversible and there is currently no known effective treatment.

Feeding / Nursing Guide:

- Deaf pets need to give visual cues before approaching, otherwise they are easily frightened and may cause attack.
- Training is mainly based on gestures.



2.3 HAIR TRAIT

Hair Trait Report
Grooming Advice

2.3 HAIR TRAIT

Hair Trait Report

Puppy most likely carries:

- Coat Colour - **Pure Black**
- Hair Type - **Short Straight Hair**

Associated genes	Genotype	Mutation	Result	Interpretation
B (brown) locus	C,C	None		
B (brown) locus	-,-	Homozygous	bb	Brown, chocolate or liver
B (brown) locus	ACCAGC, ACCAGC	None		
E (extension) locus	G,G	None	EE	Normal extension
K (dominant black) locus	-,-	Homozygous	K ^B K ^B	Dominant black
A (agouti) locus	T,T	None		
A (agouti) locus	A,A	None	A ^y a ^w	Fawn or sable
A (agouti) locus	C,C	None		
D (dilute) locus	G,G	None	DD	Not diluted colour

Grooming Advice:

It is recommended to groom once a week. The coat can be styled almost without special combing, but there is no guarantee that there will be no dog hair on the carpet and sofa. Regular combing can minimize the dog's hair flying around due to shedding.

2.4 BREEDING GUIDE



2.4 BREEDING GUIDE

Single Gene Disease:

We have identified that your pet is a carrier for [Name of Disease], which is a [Description of Disease]. This means that your pet carries one copy of the disease-causing gene, but does not show any symptoms of the disease. If your pet were to be bred with another carrier of the same disease-causing gene, there is a risk that some of their offspring could inherit two copies of the gene and develop the disease. Therefore, we recommend that you avoid breeding your pet with any other carriers of [Name of Disease].

Complex Disease:

We have also analyzed your pet's DNA for several markers associated with complex diseases, such as [List of Diseases]. Based on the results, we do not detect any significant genetic risks for these conditions in your pet. However, it is important to remember that genetic testing cannot predict all health risks, and other factors, such as diet and environmental conditions, can also influence the development of these diseases.

Hair Traits:

Coat length: This pet carries two copies of the long hair variant of the FGF5 gene, which means it is likely to have a longer coat. When considering breeding, it may be wise to choose a mate that carries at least one copy of the short hair variant of this gene to reduce the likelihood of producing offspring with excessively long hair.

Curliness: This pet carries two copies of the straight hair variant of the KRT71 gene, which means it is likely to have a straight coat. When considering breeding, it may be wise to choose a mate that carries at least one copy of the curly hair variant of this gene to increase the likelihood of producing offspring with a curly coat, if desired.

2.4 BREEDING GUIDE

Shedding: This pet carries two copies of the shedding variant of the MC5R gene, which means it is likely to shed more than pets with two copies of the non-shedding variant. When considering breeding, it may be wise to choose a mate that carries at least one copy of the non-shedding variant of this gene to reduce the likelihood of producing offspring that shed excessively.

Colour: This pet carries one copy of the black variant and one copy of the red variant of the MC1R gene, which means it is likely to have a black or red coat. When considering breeding, it may be wise to choose a mate that carries at least one copy of a different coat colour variant to increase the likelihood of producing offspring with a different coat colour.

Furnishings: This pet carries two copies of the non-furnishing variant of the RSPO2 gene, which means it is likely to have a smooth face without a beard, eyebrows, or whiskers. When considering breeding, it may be wise to choose a mate that carries at least one copy of the furnishing variant of this gene to increase the likelihood of producing offspring with facial hair.

Pedigree Analysis:

Inbreeding: This pet has a pedigree that shows a high level of inbreeding, with multiple close relatives being used for breeding. While inbreeding can help to "fix" desirable traits, it can also increase the likelihood of inherited disorders and reduce genetic diversity. When considering breeding, it may be wise to choose a mate that is not closely related to this pet to reduce the likelihood of producing offspring with health issues.

Breed standards: This pet's pedigree shows that its ancestors have consistently met the breed standards for conformation and temperament. When considering breeding, it may be wise to choose a mate that also has a pedigree that meets the breed standards to increase the likelihood of producing healthy, well-tempered offspring.

2.4 BREEDING GUIDE

Genetic diversity: This pet's pedigree shows that its ancestors come from a limited number of bloodlines, which may indicate a reduced level of genetic diversity. When considering breeding, it may be wise to choose a mate that comes from different bloodlines to increase the genetic diversity of the offspring and reduce the likelihood of inherited disorders.

Health testing: This pet's pedigree shows that many of its ancestors have been tested for genetic disorders and are clear of the disorders they were tested for. When considering breeding, it may be wise to choose a mate that has also been tested for the same genetic disorders to reduce the likelihood of producing offspring with those disorders.

Overall, it is important to keep in mind that pedigree analysis, hair trait, and genetic diseases are just a few aspects of breeding decisions and that breeding decisions should be based on multiple factors, including breeding standards, temperament, resources, breeding goals, and legal conformations. The information provided in this report is intended to be used as a tool to make informed breeding decisions and should not be the sole basis for those decisions.



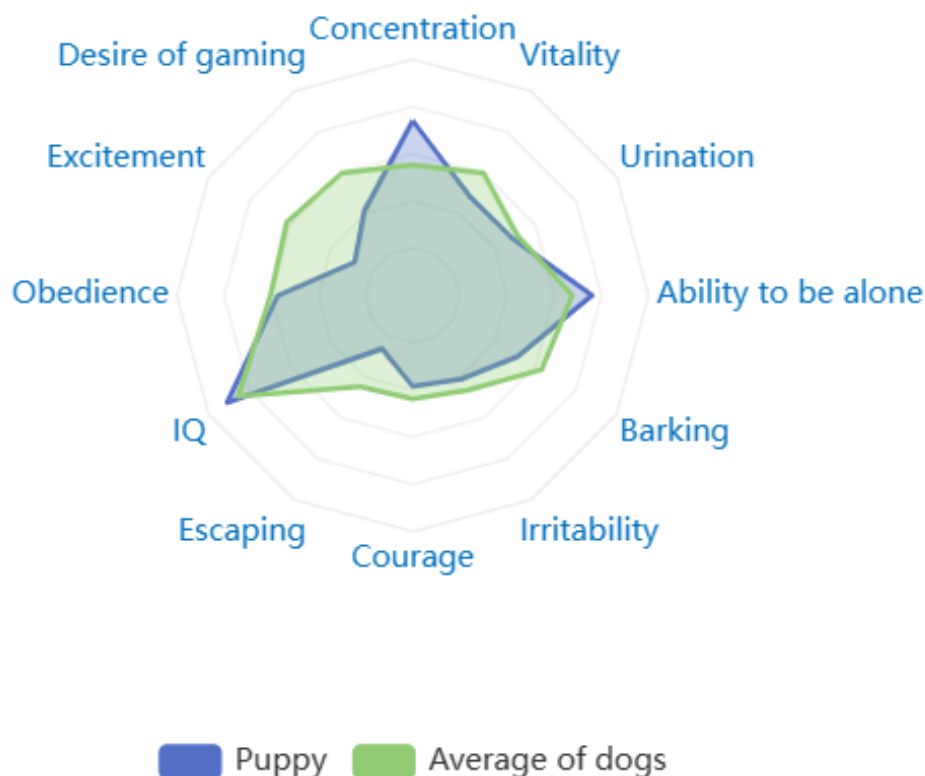
2.5 BEHAVIOURS

Behavioural Analysis
Intelligence Assessment

2.5 BEHAVIOURS

Behavioural Analysis

Puppy has a high abilities in: concentration, intelligence, and loneliness tolerance.



Concentration

Refers to the degree to which a dog's concentration is affected by external stimuli, such as being attracted by a leaf on the asphalt road or a plastic bag blown by the wind. The lower the score, the more the surface is affected by external stimuli, and the lower the concentration.

Puppy can concentrate, but is sometimes interrupted by other things. For training, it is recommended to start with no distractions.

Desire of gaming

Refers to the activity of the dog, the desire to play games, the higher the score, the more active, the more energetic, and the stronger the desire to play.

Max is a dog who likes to play games. The more time you play with it, the more lively it will be.

2.5 BEHAVIOURS

Behavioural Analysis

Excitement

Refers to the dog's response after being stimulated. The higher the score, the stronger the response to stimulation or excitement, such as walking, driving, doorbell ringing, guests visiting, the owner returning home after a period of time, and the dog's excitement.

Puppy is a Buddhist, and it seems that few things can interest it.

Obedience

Refers to dog's willingness to obey orders. Dogs with high scores show more concern for their owners, willingness to obey orders, positive reactions, quick learning, and high obedience.

Puppy holds a teachable type. As long as you do it properly and tell it well, it will still be willing to learn with you.

Courage

Refers to the dog's fear and anxiety about unfamiliar things. The higher the score, the easier it is to have fear or anxiety.

Puppy is a brave dog with a peaceful mind and a very stable child.

Barking

Refers to the degree of continuous barking of the dog. The higher the score, the more severe the continuous barking when the dog is excited or stimulated.

Puppy is not a talkative dog. This kind of non-noisy dog is the ideal type for many people.

Escaping

Refers to the probability that the dog will run away, or escape home or owner at the first opportunity. The higher the score, the greater the probability.

Puppy will not run away easily, but will often run away from you because of seeing things that are more interesting. In most cases, it can be recalled. It depends on the relationship between you. Remember to tie the rope when you go out.

2.5 BEHAVIOURS

Behavioural Analysis

Irritability

Refers to the dog's aggression. The higher the score, the easier it is to produce aggressive behavior, which has nothing to do with combat effectiveness.

Puppy is a typical dog that doesn't conduct active attacks. If you don't provoke it, it won't fry.

Ability to be alone

Refers to the dog's perception of loneliness and whether it is prone to separation anxiety. The higher the score, the stronger the perception of loneliness and the lower the ability to be alone.

Puppy is a sensible dog who can be alone for a while, but it also misses you, don't let it wait too long.

Urination

Refers to the disorder of urination when the dog is at home alone. The higher the score, the greater the possibility of disorderly urination.

Puppy usually won't pee at will unless it can't help it or it wants to tell you something by peeing.

Vitality

Refers to the activity of the dog, the higher the score, the more lively, energetic, and the more interesting and noisy personality, the greater the amount of exercise required.

Puppy is a dog that is suitable for both movement and stillness. It is as quiet as a virgin, and moving as a rabbit.

2.5 BEHAVIOURS

Intelligence Assessment

[Pet Name] was found to have a genetic profile that is associated with above-average intelligence. Specifically, the test identified several genetic markers that have been linked to enhanced cognitive abilities, including problem-solving skills, learning ability, and memory retention.

DRD4 gene: This gene is associated with dopamine activity in the brain, which has been linked to attention and learning ability in dogs. [Pet Name] was found to have a variant of this gene that is associated with increased cognitive function.

CTNNA2 gene: This gene is involved in the formation of neural connections in the brain, and has been linked to enhanced learning ability and memory retention in dogs. [Pet Name] was found to have a variant of this gene that is associated with increased cognitive function.

IGF-1 gene: This gene is involved in growth and development, and has been linked to brain size and cognitive function in dogs. [Pet Name] was found to have a variant of this gene that is associated with increased cognitive function.

Training Recommendations:

- Activities such as puzzle games, obedience training, and agility training can help to improve problem-solving skills and cognitive function.
- Mental stimulation through activities such as scent work, interactive toys, and training exercises that challenge [Pet Name]'s cognitive abilities.
- Regular socialization with other dogs and people can also help to enhance [Pet Name]'s cognitive development.

Conclusion:

Based on the results of the genetic test, [Pet Name] is likely to possess above-average intelligence. By providing appropriate training and enrichment opportunities, and selecting suitable breeding partners, we can help to maximize [Pet Name]'s cognitive potential and produce offspring with similar genetic profiles.



2.6 CONCLUSIONS

“All you need is love and a dog.” – Unknown

2.6 SUMMARY

The genetic test report for [Pet Name] covered a range of aspects including pedigree analysis, single gene disease, complex disease, medical advice, feeding guide, hair trait, grooming advice, breeding advice, behaviours, and intelligence assessment.

Pedigree Analysis

The pedigree analysis revealed the genetic lineage and ancestry of [Pet Name], which is a mixture of [breed A], [breed B] and [breed C]. It bears higher resemblance to the look of [breed A] due to highest breed composition.

Genetic diseases

[Pet Name] was found to be a carrier of [Specific Disease], which indicates that it can pass on the disease to its offspring. The test also revealed the presence of genetic variants associated with [Specific Disease]. [Pet Name] may develop [Specific Disease] in the future and appropriate medical advice and monitoring recommendations were provided. It was found that [Pet Name] is at increased risk for [Specific Disease], and appropriate measures such as regular check-ups, screenings, and preventive care were advised. Based on genetic testing, to optimize [Pet Name]'s health and prevent the development of [health conditions], low-protein foods, high biological value protein such as eggs, dairy products, fibre are recommended.

Hair Trait

The test provided insights into [Pet Name]'s coat colour and texture, having pure black coat with short straight hair. Grooming is recommended once every week and the coat can be styled without special combing.

Breeding guide

The test provided valuable information for breeding purposes, including carrier status for certain genetic disorders and insights into the genetic makeup of potential offspring. To avoid the risk of passing on the disease, avoid breeding with other carriers of the [specific disease]. The test also recommendations for breeding partners to increase or reduce likelihood based on the preference of offspring hair traits.

2.6 SUMMARY

Behaviours

The test provided information on genetic predispositions to certain behaviours, allowing for tailored training and management strategies. The test revealed [Pet Name]'s genetic potential for intelligence, allowing for tailored training and enrichment strategies to maximize cognitive development. Environmental management and behavior modification training can be effective in helping your pet feel more comfortable and confident in new situations. In some cases, medication may also be recommended to help manage anxiety.

Overall, the genetic test report provided valuable insights into [Pet Name]'s genetic makeup, allowing for tailored management strategies to optimize health, well-being, and potential.

Max's Traits

Sample
Your Pet Photo



Coat colour Pure Brown

Hair Type Short Straight Hair

Body Size Small, maximum size up to 5 kg, 30 cm



3.0 REFERENCE

"Dogs do speak, but only to those who know how to listen."

—Orhan Pamuk

3.0 REFERENCES

Single-gene genetic diseases:

Ocular & Vision (24 types) • Canine Multifocal Retinopathy - Type 1 • Canine Multifocal Retinopathy - Type 2 • Canine Multifocal Retinopathy - Type 3 • Collie eye anomaly • Cone Degeneration • Congenital Stationary Night Blindness • Early retinal degeneration • Hereditary cataract - Dominant • Hereditary cataract - Recessive • Primary Lens Luxation • Primary Open Angle Glaucoma • Progressive Retinal Atrophy • Progressive Retinal Atrophy - CORD2 • Progressive Retinal Atrophy - CORD1 • Progressive Retinal Atrophy - CRX • Progressive Retinal Atrophy - Dominant • Progressive Retinal Atrophy - PRA1 • Progressive Retinal Atrophy - PRCD • Progressive Retinal Atrophy - RCD1 • Progressive Retinal Atrophy - RCD1a • Progressive Retinal Atrophy - RCD3 • Progressive Retinal Atrophy - RCD4 • Progressive Retinal Atrophy Type A • Dry eye curly coat syndrome Urinary & Renal (13 types) • 2-8-DHA urolithiasis • Alport syndrome • Cystinuria • Cystinuria 1 • Cystinuria 2 • Cystinuria 4 • Cystinuria Type II-A • Cystinuria Type II-B • Familial Nephropathy • Hyperuricosuria • Primary hyperoxaluria type I • Protein Losing Nephropathy • Renal Cystadenocarcinoma and Nodular Dermatofibrosis	Neurological & Neuromuscular (25 types) • Alexander disease • Axonal Disease Hypomyelination and Tremor • Bandera's neonatal ataxia • Canine Multiple System Degeneration • Cerebellar Ataxia • Cerebellar hypoplasia • Congenital Myasthenic Syndrome • Degenerative Myelopathy • Encephalopathy • Episodic falling syndrome • Fetal-onset neuroaxonal dystrophy • Globoid cell leukodystrophy • Juvenile Epilepsy • L-2-HGA-L-2-hydroxyglutaric aciduria • Late Onset Ataxia • Narcolepsy • Neonatal cerebellar cortical degeneration • Neonatal Encephalopathy with Seizures • Neuroaxonal Dystrophy • Polyneuropathy • Progressive Early-Onset Cerebellar Ataxia • Sensory ataxic neuropathy • Spinocerebellar Ataxia • Spongiform leukoencephalopathy • X-linked Generalized Tremor Syndrome Skeletal, Muscular & Developmental (13 types) • Autosomal Recessive Amelogenesis Imperfecta • Centronuclear Myopathy • Cleft lip • Congenital Myotonia • Dwarfism • Muscular dystrophy • Musladin-Lueke Syndrome • Myostatin defect • Oculo-skeletal Dysplasia • Osteochondrodysplasia • Osteogenesis imperfecta • Spondylocostal Dysostosis • X-linked Myotubular Myopathy
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Carrier

3.0 REFERENCES

Single-gene genetic diseases:

Metabolic & Storage Diseases (21 types)

- Fucosin storage disease
- GM1 Gangliosidosis
- GM2 Gangliosidosis
- Glycogen Storage Disease Type Ia
- Glycogen Storage Disease Type II
- Glycogen Storage Disease Type IIIa
- Lysosomal Storage Disease
- Mucopolysaccharidosis Type IIIA
- Mucopolysaccharidosis Type VI
- Mucopolysaccharidosis Type VII
- Neuronal Ceroid Lipofuscinosis
- Neuronal Ceroid Lipofuscinosis 1
- Neuronal Ceroid Lipofuscinosis 10
- Neuronal ceroid lipofuscinosis 12
- Neuronal Ceroid Lipofuscinosis 2
- Neuronal Ceroid Lipofuscinosis 5
- Neuronal Ceroid Lipofuscinosis 6
- Neuronal Ceroid Lipofuscinosis 8
- Phosphofructokinase deficiency
- Pyruvate Dehydrogenase Phosphatase Deficiency
- Pyruvate kinase deficiency

Skin, Organ & Endocrine (9 types)

- Congenital hypothyroidism
- Dystrophic epidermolysis bullosa
- Gallbladder mucocele formation
- Hereditary Footpad Hyperkeratosis
- Hereditary Nasal Parakeratosis
- Ichthyosis
- Ligneous Membranitis
- Pachyonychia congenita
- Skin fragility syndrome

Blood, Immune & Cardiovascular (20 types)

- C3 deficiency
- Canine elliptocytosis
- Coagulopathy Factor IX Deficiency
- Coagulopathy Thrombopathia
- Congenital megacystopenia
- Cyclic neutropenia
- Dilated Cardiomyopathy
- Factor VII deficiency
- Glanzmanns thrombasthenia Type I
- Hemophilia A
- Long QT Syndrome
- May-Hegglin anomaly
- Platelet Adhesion Defect
- Prekallikrein Deficiency
- Severe Combined Immunodeficiency
- Trapped Neutrophil Syndrome
- Von Willebrand Disease Type I
- Von Willebrand Disease Type II
- Von Willebrand Disease Type III
- X-linked Severe Combined Immunodeficiency

Other Genetic Conditions (8 types)

- Catalase Deficiency
- Exercise Induced Collapse
- Hereditary Vitamin D-Resistant Rickets
- Malignant Hyperthermia
- Multi-Drug Sensitivity
- Persistent Mullerian Duct Syndrome
- Primary ciliary dyskinesia
- Selective cobalamin malabsorption

3.0 REFERENCES

Complex genetic diseases:

Musculoskeletal & Orthopedic (Bone & Joint) - Duchenne muscular dystrophy Hip dysplasia - Elbow dysplasia - Anterior Cruciate Ligament Rupture	Carrier
Oncology (Cancers & Tumors) Osteosarcoma - B cell lymphoma Mast cell tumor (MCT) Lymphoma - Hemangiosarcoma	Carrier Carrier Carrier
Sensory & Neurological - Adult dog deafness Obsessive-compulsive disorder Congenital sensorineural deafness	Carrier Carrier
Digestive & Metabolic Portosystemic vascular anomaly (PSVA) Congenital megaesophagus - Digestive amylase	Carrier Carrier
Endocrine Hypothyroidism	Carrier

3.0 REFERENCES

Breed lists:

Afghan Hound	Bouvier des Flandres	English Springer Spaniel
Airedale Terrier	Boxer	Eurasier
Akita	Briard	Field Spaniel
Alaskan Malamute	Brittany	Finnish Spitz
American bulldog	Brussels Griffon	Flat-coated Retriever
American Cocker Spaniel	Bull Terrier	Foxhound
American Eskimo Dog	Bulldog	French Bulldog
American Hairless Terrier	Bullmastiff	German Shepherd Dog
American Pit Bull Terrier	Cairn Terrier	German Shorthaired Pointer
American Staffordshire Terrier	Cane Corso	German Wirehaired Pointer
Anatolian Shepherd	Cane Paratore	Giant Schnauzer
Australian Cattle Dog	Cardigan Welsh Corgi	Glen of Imaal Terrier
Australian Shepherd	Carolina Dog	Golden Jackal
Australian Terrier	Catahoula Leopard Dog	Golden Retriever
Azawakh	Cavalier King Charles Spaniel	Gordon Setter
Basenji	Chesapeake Bay Retriever	Great Dane
Basset Hound	Chihuahua	Great Pyrenees
Beagle	Chinese Crested	Greater Swiss Mountain Dog
Bearded Collie	Chinese Shar-pei	Greenland Dog
Bedlington Terrier	Chinook	Greyhound
Belgian Malinois	Chow Chow	Havanese
Belgian Sheepdog	Cirneco dell'Etna	Ibizan Hound
Belgian Tervuren	Coton du Tulear	Icelandic Sheepdog
Berger Picard	Curly Coated Retriever	Irish Setter
Bernese Mountain Dog	Czechoslovakian Wolfdog	Irish Terrier
Bichon Frise	Dachshund	Irish Water Spaniel
Black Russian Terrier	Dalmatian	Irish Wolfhound
Bloodhound	Doberman Pinscher	Italian Greyhound
Boerboel	Dogue de Bordeaux	Jack Russell Terrier
Border Collie	English Bulldog	Japanese Chin
Border Terrier	English Cocker Spaniel	Keeshond
Borzoi	English Mastiff	Kelpie
Boston Terrier	English Setter	Kerry Blue Terrier

3.0 REFERENCES

Breed lists:

Komondor	Peruvian Hairless dog	Siberian Husky
Kuvasz	Petit Basset Griffon Vendeen	Silky Terrier
Labrador Retriever	Pharaoh Hound	Sloughi
Large Munsterlander	Pomeranian	Soft Coated Wheaten Terrier
Leonberger	Poodle - Miniature	Spinone Italiano
Levriero Meridionale	Poodle - Standard	Staffordshire Bull Terrier Carrier
Lhasa Apso	Poodle - Toy	Standard Schnauzer
Maltese	Portuguese Water Dog	Sussex Spaniel
Mastino Abruzzese	Pug Dog	Swedish Valhund
Miniature Bull Terrier	Puli	Tibetan Mastiff
Miniature Dachshund	Pumi	Tibetan Spaniel
Miniature Pinscher	Rat Terrier	Tibetan Terrier
Miniature Schnauzer	Redbone Coonhound	Toy Fox Terrier
Neapolitan Mastiff	Rhodesian Ridgeback	Toy Manchester Terrier
New Guinea singing dog	Rottweiler	Vizsla
Newfoundland	Saarloos Wolfdog	Volpino Italiano
Norfolk Terrier	Saint Bernard	Weimaraner
Norwegian Elkhound	Saluki	West Highland White Terrier
Norwich Terrier	Samoyed	Whippet
Nova Scotia Duck Tolling Retriever	Schipperke	Wire Fox Terrier
Old English Sheepdog	Scotch Collie	Wirehaired Pointing Griffon
Otter Hound	Scottish Deerhound	Wolf
Papillon	Scottish Terrier	Xigou
Parsons Russell Terrier	Shetland Sheepdog	Xoloitzcuintli
Pekingese	Shiba Inu	Xoloitzcuintli - Miniature
Pembroke Welsh Corgi	Shih Tzu	Yorkshire Terrier



Disclaimer

FurryDNA by Furlicious

Dear Pet Owner,

Please note that the pedigree analysis provided is for informational purposes only and cannot be used for any legal or official purposes. While we strive to provide accurate and reliable information, the results of genetic testing and pedigree analysis are subject to a degree of uncertainty and may not be fully predictive of the traits, characteristics, or health risks of your pet.

Genetic disease testing is designed to provide information about potential health risks based on the presence or absence of certain genetic markers. However, it is important to note that these tests are not a substitute for a medical diagnosis or professional medical advice. Any health-related decisions should be made in consultation with a qualified veterinarian or other medical professional.

Additionally, the coat colour of dogs is determined by the interaction of multiple genetic loci, and the expression of these traits can be influenced by a variety of factors, including environmental conditions. While genetic testing can provide valuable information about the potential coat colour of your pet, it is important to remember that completely opposite results may be obtained between different loci. Therefore, the results of the coat colour test should be used for reference only and should not be relied upon as a definitive indicator of your pet's actual appearance.

By using our genetic testing and pedigree analysis services, you acknowledge that the results provided are for informational purposes only and are not intended for legal, diagnostic, or other official purposes. Any decisions made based on this information are the responsibility of the user, and we recommend that you consult with a veterinarian or other qualified professional for further guidance on how to interpret and use the results.

Most Sincerely,

FurryDNA

www.furliciouspet.com

FurryDNA by Furlicious

CANINE BREED COMPOSITION CERTIFICATE



Certified breed analysis and genetic makeup for

Max

BREED BREAKDOWN

Staffordshire Bull Terrier – 63%

Labrador Retriever – 22%

Dachshund- 15%

MICROCHIP ID : 90000-123456-7
LAB SAMPLE ID : LHK211213010
CASE REF : PETGENC1111NZ
OWNER NAME : BRAD SPEED

1, April, 2023

DATE OF ANALYSIS





FurryDNA by Furlicious



Furlicious
Pet Wellness Begins with DNA



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FurryDNA by Furlicious
www.furliciousprt.com
info@furliciouspet.com
(+60) 12-286 5826
(+60) 11-3651 7921

