



28/5/2014

MyDogDNA PASS

8700 2321 5014 159

Lola do BR Terra de Vera Cruz, Terrier Brasileiro

**Registered name:** Lola do BR Terra de Vera Cruz **Owner:** Mauro Sérgio Carvalho  
**Nickname:** Lola **Prizibela**  
**Registration ID:** RG/PRG/11/05762 **Country:** Brazil  
**Microchip:** XXX **Testing date:** 30/4/2014  
**Breed:** Terrier Brasileiro  
**Gender:** Female



**DNA identification profile:**  
Identified with standard ISAG markers

### Test results - Known disorders in the breed

| Disorder                                                                                | Type                | Mode of inheritance | Result  |
|-----------------------------------------------------------------------------------------|---------------------|---------------------|---------|
| Mucopolysaccharidosis Type VII (MPSVII); mutation originally found in Brazilian Terrier | Metabolic disorders | Autosomal Recessive | Carrier |
| Malignant Hyperthermia (MH)                                                             | Pharmacogenetics    | Autosomal Dominant  | Clear   |

### Test results - New potential disorders in the breed

| Disorder                                                                | Type          | Mode of inheritance | Result |
|-------------------------------------------------------------------------|---------------|---------------------|--------|
| Canine Multifocal Retinopathy 1 (cmr1), Mastiff-related breeds mutation | Eye disorders | Autosomal Recessive | Clear  |

*When obtaining a carrier or affected test result, we recommend that you contact your veterinarian for more detailed information on the condition and possible treatment.*

*On behalf of Genoscooper Laboratories,*

  
SIGNATURE

Jonas Donner, PhD, Head of Research and Development  
at Genoscooper Laboratories



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## Test results - Traits

| Trait                                                                                                       | Genotype | Description                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Colour Locus A                                                                                              | at/at    | The dog is homozygous for at-allele.                                                                                                                                                                                             |
| Colour Locus B                                                                                              | bc/bc    | The dog is homozygous for bc allele.                                                                                                                                                                                             |
| Colour Locus E                                                                                              | e/E      | The dog is heterozygous for e allele and E allele.                                                                                                                                                                               |
| Colour Locus H                                                                                              | h/h      | The dog is homozygous for h allele.                                                                                                                                                                                              |
| Colour Locus K                                                                                              | ky/ky    | The dog is homozygous for ky allele.                                                                                                                                                                                             |
| Furnishings / Improper Coat in Portuguese Water Dogs (marker test)                                          | GG/CC    | The dog is not genetically likely to express furnishings.                                                                                                                                                                        |
| Body mass, insulin-like growth factor 1 (IGF1) gene variant                                                 | A/A      | The dog is homozygous for the genetic variant typically associated with small body mass. This genotype is common e.g. in Yorkshire Terrier, Chihuahua and Chinese Crested Dogs.                                                  |
| Coat length / "Fluffy" in Welsh Corgi                                                                       | G/G      | The dog carries two copies of the genetic variant typically associated with a short-haired coat.                                                                                                                                 |
| Curly coat                                                                                                  | C/C      | The dog is genetically non-curly.                                                                                                                                                                                                |
| Ear erectness (pricked ears versus floppy ears), variant chr10:11072007                                     | T/T      | The dog is homozygous and carries two copies of a genetic variant typically associated with pricked ears. This genotype is common in breeds like Finnish Spitz, German Shepherd, Samoyed, Terriers and in Collie-related breeds. |
| Natural Bobtail (T-box mutation)                                                                            | C/C      | The dog does not carry any copy of the bobtail mutation. It therefore likely has a long-tailed phenotype.                                                                                                                        |
| Snout/skull length (shortened head versus elongated head), bone morphogenetic protein 3 (BMP3) gene variant | A/C      | Your dog is heterozygous for this variant. This means that your dog carries one copy of a genetic variant typically associated with an elongated head, and one copy typically associated with a shortened head.                  |
| Tiny size, insulin-like growth factor 1 receptor (IGF1R) gene variant                                       | G/G      | Your dog is homozygous for a genetic variant typically found in larger-sized breeds (height at the withers > 25.4 cm (10 inches)).                                                                                               |

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## Test results - Additional disorders found in other breeds - page 1/6



### Blood disorders

| Disorder                                                                                            | Mode of inheritance | Result |
|-----------------------------------------------------------------------------------------------------|---------------------|--------|
| Bleeding disorder due to P2RY12 defect                                                              | Autosomal Recessive | Clear  |
| Canine Cyclic Neutropenia (Gray Collie Syndrome)                                                    | Autosomal Recessive | Clear  |
| Factor IX Deficiency or Haemophilia B, Gly379Glu mutation                                           | X-linked Recessive  | Clear  |
| Factor IX Deficiency or Haemophilia B; mutation originally found in Lhasa Apso                      | X-linked Recessive  | Clear  |
| Factor VII Deficiency                                                                               | Autosomal Recessive | Clear  |
| Factor VIII deficiency or Haemophilia A; mutation originally found in German Shepherd Dog           | X-linked Recessive  | Clear  |
| Glanzmann Thrombasthenia (GT), Type I; mutation originally found in Pyrenean Mountain Dog           | Autosomal Recessive | Clear  |
| Glycogen Storage Disease VII or Hereditary Phosphofructokinase (PFK) Deficiency                     | Autosomal Recessive | Clear  |
| May-Hegglin Anomaly (MHA)                                                                           | Autosomal Dominant  | Clear  |
| Pyruvate Kinase Deficiency of Erythrocyte; mutation originally found in Beagle                      | Autosomal Recessive | Clear  |
| Pyruvate Kinase Deficiency of Erythrocyte; mutation originally found in Labrador Retriever          | Autosomal Recessive | Clear  |
| Pyruvate Kinase Deficiency of Erythrocyte; mutation originally found in Pug                         | Autosomal Recessive | Clear  |
| Pyruvate Kinase Deficiency of Erythrocyte; mutation originally found in West Highland White Terrier | Autosomal Recessive | Clear  |
| Trapped Neutrophil Syndrome (TNS)                                                                   | Autosomal Recessive | Clear  |

### Cardiological disorders

| Disorder                                                                     | Mode of inheritance | Result |
|------------------------------------------------------------------------------|---------------------|--------|
| Dilated Cardiomyopathy; mutation originally found in Doberman Pinscher (USA) | Autosomal Dominant  | Clear  |



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## Test results - Additional disorders found in other breeds - page 2/6



### Endocrine disorders

| Disorder                                                              | Mode of inheritance | Result |
|-----------------------------------------------------------------------|---------------------|--------|
| Hypothyroidism; mutation originally found in Tenterfield Terrier      | Autosomal Recessive | Clear  |
| Hypothyroidism; mutation originally found in Toy Fox- and Rat Terrier | Autosomal Recessive | Clear  |

### Eye disorders

| Disorder                                                                                         | Mode of inheritance                        | Result |
|--------------------------------------------------------------------------------------------------|--------------------------------------------|--------|
| Achromatopsia or Cone Degeneration (CD); mutation originally found in German Shorthaired Pointer | Autosomal Recessive                        | Clear  |
| Autosomal Dominant Progressive Retinal Atrophy (ADPRA)                                           | Autosomal Dominant                         | Clear  |
| Canine Multifocal Retinopathy 2 (cmr2); mutation originally found in Coton de Tulear             | Autosomal Recessive                        | Clear  |
| Canine Multifocal Retinopathy 3 (cmr3); mutation originally found in Lapponian Herder            | Autosomal Recessive                        | Clear  |
| Cone-rod Dystrophy 1 (cord1-PRA)                                                                 | Autosomal Recessive                        | Clear  |
| Cone-rod dystrophy (crd SWD); mutation originally found in Standard Wire-haired Dachshund        | Autosomal Recessive                        | Clear  |
| Generalized Progressive Retinal Atrophy; mutation originally found in Schapendoes                | Autosomal Recessive                        | Clear  |
| Golden Retriever Progressive Retinal Atrophy 1 (GR_PRA 1)                                        | Autosomal Recessive                        | Clear  |
| Primary Hereditary Cataract (PHC); mutation originally found in Australian Shepherd              | Autosomal Dominant (Incomplete Penetrance) | Clear  |
| Primary Lens Luxation (PLL)                                                                      | Autosomal Recessive                        | Clear  |
| Primary Open Angle Glaucoma; mutation originally found in Beagle                                 | Autosomal Recessive                        | Clear  |
| Rod-Cone Dysplasia 1 (rcd1); mutation originally found in Irish Setter                           | Autosomal Recessive                        | Clear  |
| Rod-Cone Dysplasia 1a (rcd1a); mutation originally found in Sloughi                              | Autosomal Recessive                        | Clear  |
| Rod-Cone Dysplasia 3 (rcd3)                                                                      | Autosomal Recessive                        | Clear  |
| X-Linked Progressive Retinal Atrophy 1 (XLPR1)                                                   | X-linked Recessive                         | Clear  |



### Test results - Additional disorders found in other breeds - page 3/6



#### Immunological disorders

| Disorder                                                                                             | Mode of inheritance | Result |
|------------------------------------------------------------------------------------------------------|---------------------|--------|
| ARSCID (Autosomal Recessive Severe Combined Immunodeficiency)                                        | Autosomal Recessive | Clear  |
| C3 deficiency                                                                                        | Autosomal Recessive | Clear  |
| X-linked Severe Combined Immunodeficiency (XSCID); mutation originally found in Basset Hound         | X-linked Recessive  | Clear  |
| X-linked Severe Combined Immunodeficiency (XSCID); mutation originally found in Cardigan Welsh Corgi | X-linked Recessive  | Clear  |

#### Kidney disorders

| Disorder                                                                 | Mode of inheritance | Result |
|--------------------------------------------------------------------------|---------------------|--------|
| Hyperuricosuria and Hyperuricemia (HUU) or Urolithiasis                  | Autosomal Recessive | Clear  |
| Polycystic Kidney Disease (PKD)                                          | Autosomal Dominant  | Clear  |
| Primary hyperoxaluria (PH); mutation originally found in Coton de Tulear | Autosomal Recessive | Clear  |
| X-linked Hereditary Nephropathy (XLHN)                                   | X-linked Recessive  | Clear  |

#### Metabolic disorders

| Disorder                                                                          | Mode of inheritance | Result |
|-----------------------------------------------------------------------------------|---------------------|--------|
| Glycogen Storage Disease, Type Ia (GSDIa)                                         | Autosomal Recessive | Clear  |
| Glycogen Storage Disease, type II or Pompe's disease                              | Autosomal Recessive | Clear  |
| Glycogen Storage Disease, type IIIa (GSDIIIa)                                     | Autosomal Recessive | Clear  |
| Hypocatalasia or Acatlasemia                                                      | Autosomal Recessive | Clear  |
| Mucopolysaccharidosis Type IIIA (MPSIIIA); mutation originally found in Dachshund | Autosomal Recessive | Clear  |
| Mucopolysaccharidosis Type VI (MPSVI); mutation originally found in Poodle        | Autosomal Recessive | Clear  |
| Pyruvate Dehydrogenase Deficiency                                                 | Autosomal Recessive | Clear  |



### Test results - Additional disorders found in other breeds - page 4/6



#### Muscular disorders

| Disorder                                                                        | Mode of inheritance | Result |
|---------------------------------------------------------------------------------|---------------------|--------|
| Cavalier King Charles Spaniel Muscular Dystrophy (CKCS-MD)                      | X-linked Recessive  | Clear  |
| Duchenne-like Muscular Dystrophy, Pembroke Welsh Corgi-type                     | X-linked Recessive  | Clear  |
| Muscular Dystrophy, Duchenne type or Golden Retriever Muscular Dystrophy (GRMD) | X-linked Recessive  | Clear  |
| Myotonia; mutation originally found in Miniature Schnauzer                      | Autosomal Recessive | Clear  |
| Myotubular Myopathy 1 or X-linked Myotubular Myopathy                           | X-linked Recessive  | Clear  |

#### Neurological disorders

| Disorder                                                                                        | Mode of inheritance | Result |
|-------------------------------------------------------------------------------------------------|---------------------|--------|
| Benign Familial Juvenile Epilepsy or Remitting Focal Epilepsy                                   | Autosomal Recessive | Clear  |
| Cerebellar abiotrophy or neonatal cerebellar cortical degeneration (NCCD)                       | Autosomal Recessive | Clear  |
| Fetal-onset Neuroaxonal Dystrophy (FNAD)                                                        | Autosomal Recessive | Clear  |
| L-2-Hydroxyglutaric aciduria (L2HGA); mutation 1 originally found in Staffordshire Bull Terrier | Autosomal Recessive | Clear  |
| L-2-Hydroxyglutaric aciduria (L2HGA); mutation 2 originally found in Staffordshire Bull Terrier | Autosomal Recessive | Clear  |
| Neonatal Encephalopathy with Seizures (NEWS)                                                    | Autosomal Recessive | Clear  |
| Neuronal Ceroid Lipofuscinosis 1 (NCL1)                                                         | Autosomal Recessive | Clear  |
| Neuronal Ceroid Lipofuscinosis 10 (NCL10)                                                       | Autosomal Recessive | Clear  |
| Neuronal Ceroid Lipofuscinosis 2 (NCL2)                                                         | Autosomal Recessive | Clear  |
| Neuronal Ceroid Lipofuscinosis 6 (NCL6)                                                         | Autosomal Recessive | Clear  |
| Neuronal Ceroid Lipofuscinosis, type 12, mutation originally found in Tibetan terrier           | Autosomal Recessive | Clear  |
| Polyneuropathy; mutation originally found in Alaskan Malamute                                   | Autosomal Recessive | Clear  |
| Polyneuropathy; mutation originally found in Greyhound                                          | Autosomal Recessive | Clear  |
| Progressive early-onset cerebellar ataxia; mutation originally found in Finnish Hound           | Autosomal Recessive | Clear  |



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## Test results - Additional disorders found in other breeds - page 5/6



### Neuromuscular disorders

#### Disorder

Alpha Fucosidosis  
Episodic falling (EF)  
GM1 Gangliosidosis; mutation originally found in Alaskan Husky  
GM1 Gangliosidosis; mutation originally found in Portuguese Water Dog  
GM1 Gangliosidosis; mutation originally found in Shiba Dog  
GM2 Gangliosidosis; mutation originally found in Toy Poodle  
Globoid Cell Leukodystrophy (GLD) or Krabbe's disease, Terrier mutation  
Hyperkplexia or Startle Disease

#### Mode of inheritance

Autosomal Recessive  
Autosomal Recessive  
Autosomal Recessive  
Autosomal Recessive  
Autosomal Recessive  
Autosomal Recessive  
Autosomal Recessive  
Autosomal Recessive

#### Result

Clear  
Clear  
Clear  
Clear  
Clear  
Clear  
Clear  
Clear

### Skeletal disorders

#### Disorder

Chondrodysplasia (dwarfism); mutation originally found in Norwegian Elkhound and Karelian Bear Dog  
Craniomandibular Osteopathy (CMO)  
Osteogenesis imperfecta (OI) or Brittle Bone Disease; mutation originally found in Dachshund  
Skeletal Dysplasia 2 (SD2)

#### Mode of inheritance

Autosomal Recessive  
Autosomal Dominant  
Autosomal Recessive  
Autosomal Recessive

#### Result

Clear  
Clear  
Clear  
Clear



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### Test results - Additional disorders found in other breeds - page 6/6



#### Skin disorders

**Disorder**

**Mode of inheritance**

**Result**

Ectodermal dysplasia or Skin Fragility Syndrome (ED-SFS)  
Epidermolysis bullosa, dystrophic  
Epidermolytic Hyperkeratosis or Ichthyosis in Norfolk Terrier  
Musladin-Lueke syndrome (MLS)

Autosomal Recessive  
Autosomal Recessive  
Autosomal Recessive  
Autosomal Recessive

Clear  
Clear  
Clear  
Clear

#### Other disorders

**Disorder**

**Mode of inheritance**

**Result**

Congenital Keratoconjunctivitis Sicca and Ichthyosiform Dermatitis (CKCSID) or Dry Eye Curly Coat Syndrome  
Gallbladder Mucocele Formation  
Narcolepsy; mutation originally found in Dobermann  
Persistant Mullerian Duct Syndrome (PMDS), mutation originally found in Miniature Schnauzer  
Primary Ciliary Dyskinesia (PCD)

Autosomal Recessive  
Autosomal Dominant  
Autosomal Recessive  
Autosomal Recessive  
Autosomal Recessive

Clear  
Clear  
Clear  
Clear  
Clear

On behalf of Genoscooper Laboratories,

  
SIGNATURE

Jonas Donner, PhD, Head of Research and Development at Genoscooper Laboratories





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## APPENDIX Explanation of the results of the tested disorders

### Autosomal recessive inheritance (ARI)

*Clear* - A dog carries no copies of the tested mutation and has no or reduced likelihood of developing and passing on the disease/condition.

*Carrier* - A dog carries one copy of the tested mutation. Carriers typically have a normal, healthy appearance but pass on the mutation to approximately 50% of their offspring.

*Affected* - A dog carries two copies of the tested mutation and is at high or increased risk of developing the disease/condition.

### Autosomal dominant inheritance (ADI)

*Clear* - A dog carries no copies of the tested mutation and has no or reduced likelihood of developing and passing on the disease/condition.

*Affected* - A dog carries one or two copies of the tested mutation and is at high or increased risk of developing the disease/condition.

### X-linked recessive inheritance (X-linked)

*Clear* - A dog carries no copies of the tested mutation and has no or reduced likelihood of developing and passing on the disease/condition.

*Carrier* - Female carriers typically have a normal, healthy appearance but carry one copy of the tested mutation on one of their X chromosomes. As males only have one X chromosome, there are no male carriers.

*Affected* - Affected female dogs carry two mutated copies of the tested mutation. Affected males carry one copy of the tested mutation on their single X chromosome. Affected dogs are at high or increased risk of developing the disease/condition.

Please note that the descriptions above are generalized based on typically observed inheritance patterns. When obtaining a carrier or affected test result, always refer to the corresponding online test documentation for more detailed information on the condition and any exceptions.

## Genoscooper Laboratories - Legal Notice

Genoscooper Laboratories' MyDogDNA services and test results are produced based on samples and materials supplied by the Client. Testing and analysis is performed by using methods and processes that Genoscooper Laboratories deems appropriate. Genoscooper Laboratories reserves the right to make changes in the collection of the single-gene tests included in the MyDogDNA testing service as well as to remove results derived from them, if new information comes available that in any way questions the validity of the test results. Results provided by Genoscooper Laboratories are prepared solely for the use of the Client.

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