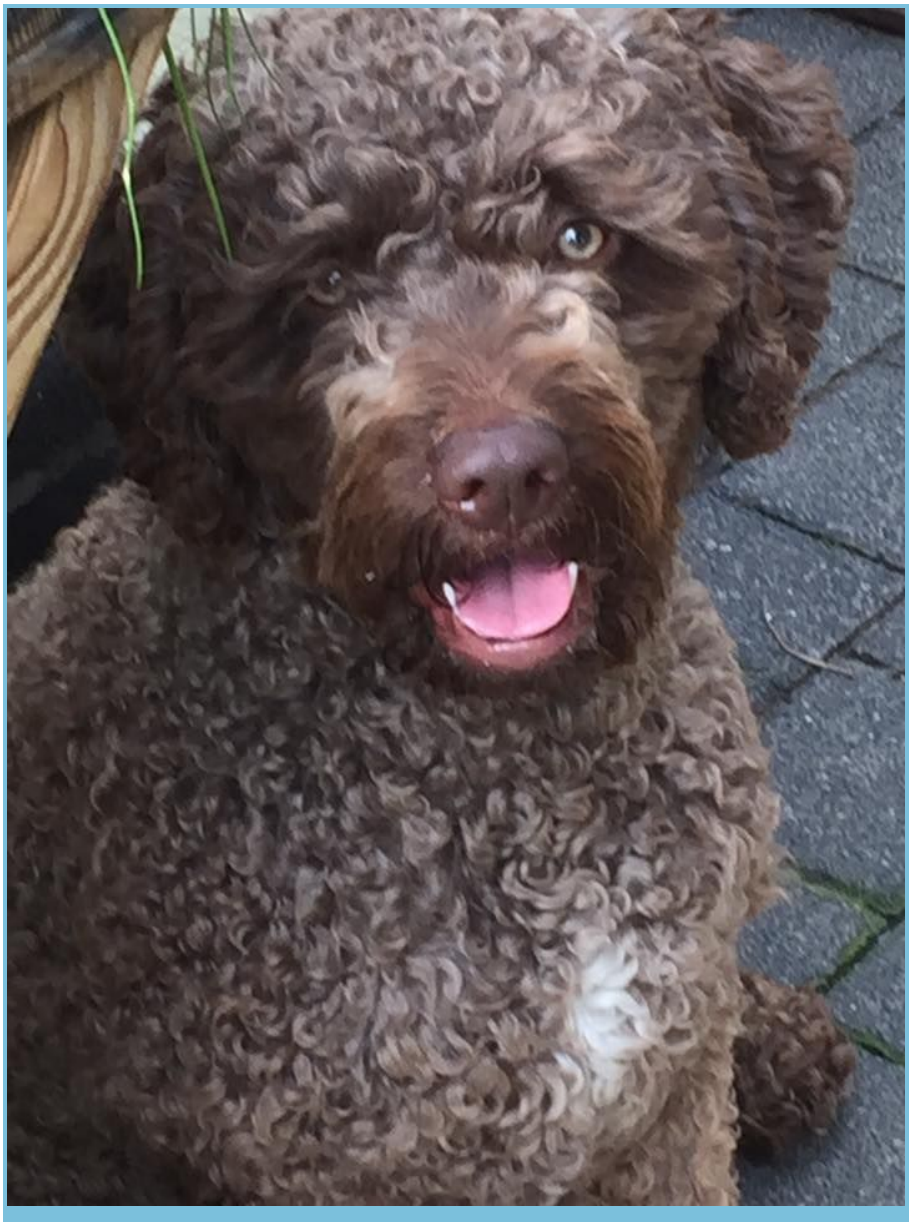

Beethoven

HOME
LOG IN

Dog photos (2)

BREEDSpanish Water Dog

MIXNo

NICKNAMEBeethoven

REGISTEREDYes

REGISTRATION IDNHSB 3064280

REGISTERED NAMEBeethoven De Tarbuxena

DATE OF BIRTH2015-12-20

GENDERMale

NEUTEREDNo

TATTOO / MICROCHIP938000000775752

DECEASED

COUNTRY OF ORIGINNetherlands

DESCRIBE YOUR DOG FOR THE BREEDER TOOL Beethoven De Tarbuxena (Maestro) Free NAD Labo Germany 2016 off. cert, Hipp A, FCI Eye Goniodysplasia Free & Eye certificaat 31-03-2017 ECVO at 6 month 43cm

TAGS

Working dog Hunting dog Show dog FCI registered

PRODUCTMyDogDNA 2015

GENETIC HEALTH INDEX112

SAMPLE ID870023223745075

OWNERAntoinette Zwijndregt

COUNTRYNetherlands

- Disorders
- Traits
- Genetic Diversity
- Genetic Relationships
- Breeder Tool

Symbols:

CARRIER

AT RISK

NO CALL

Discovered by Genoscoper and Mars Veterinary

Known Disorders in the Breed

DISORDER**Hyperuricosuria, (HUU)**CLEAR

TYPERenal Disorders

MODE OF INHERITANCEAutosomal Recessive

GENOTYPEG/G

SEVERITYMild

CARRIERS/HETEROZYGOTES< 1%

GENETICALLY AFFECTED/HOMOZYGOTES< 1%

DISORDER**Neuroaxonal Dystrophy (NAD); mutation originally found in Spanish Water Dog**

2016NOT AVAILABLE

TYPENeurologic Disorders

MODE OF INHERITANCEAutosomal Recessive

GENOTYPE

SEVERITYSevere

CARRIERS/HETEROZYGOTESNot available

GENETICALLY AFFECTED/HOMOZYGOTES< 1%

144 additional disease mutations found in other breeds were also tested. **No findings for this dog**.

Why are these disorders tested?

Show Results for All Tested Disorders

A majority of the tested genetic disorders follow either a recessive (autosomal or X-linked) or dominant pattern of inheritance. The results are reported as 'Clear', 'Carrier' or 'At risk' for recessively and 'Clear' or 'At risk' for dominantly inherited disorders.

The genotype column shows the actual genotype of your dog at the measured site (locus) of the genome. At each site, your dog carries two alleles (genetic variants), separated by a forward slash: one inherited from its dam, and the other from its sire. E.g. for a dominantly inherited disorder, this column reveals whether an affected dog is heterozygous or homozygous for the disease mutation (i.e., carries one or two copies of it). Without examination of the parents' genomes, it is not possible to tell which one of the alleles is inherited from the dam and which from the sire.

Please read the disease descriptions carefully, should your dog turn out to be a carrier or at risk and share this information also with your veterinarian.

In particular, note that any condition may exhibit incomplete penetrance on the phenotypic level, and the onset, expression and progressivity of the disease may be influenced by other genetic and environmental factors. For instance, not all dogs with the result 'At risk' will necessarily manifest the condition.

Note that the disease severity rating presented here is only suggestive and it should not be used for other purposes. Always consult your veterinarian for the most accurate information on your dog's health status and available treatment options.

RECOMMENDED READING

» Clinical Perspective: Bleeding Disorders

» New study on the canine breed disease heritage gives a comprehensive insight into the breed distribution of disease related genetic risk variants

» The Dog, the DNA-test, and the Scientist - a reflection of our four years of panel screening

- Disorders
- Traits
- Genetic Diversity
- Genetic Relationships
- Breeder Tool
- Coat Colour
- Coat Type
- Body Size
- Morphology

BEETHOVEN - COLOURS BASIC

COLOURSMODIFYING COLOURSE locus (Extensions)Grizzle/DominoEg/EOnly in Saluki, Afghan Hound & Borzoi. Requires tan point genotype on the A locus.Eg/EgEg/eCocker SableOnly in Cocker Spaniel.Eh/EhEh/EEh/eRecessive rede/eNo black colour in the coat. Hides expression of the K and A locus.No EffectAllows dominant black, brindle, sable, agouti, tan

points and recessive black to be expressed.E/EE/eMelanistic maskSeen in sable, agouti and tan coloured dogs. Can be hidden behind black coat or modifying colours.Em/EmEm/EEm/eK locus (Dominant Black)Dominant BlackKB/KBKB/kbrKB/KyHides expression of the A locus. Can be modified by merle, brown and dilution.BrindleBlack stripes on red/yellow base. Extent of brindling depends on the A locus.kbr/kbrkbr/kyORNon-BlackAllows sable, agouti, tan points and recessive black to be expressed.ky/kyA locus (Agouti)Sable/FawnShaded sable, clear sable or tipped sable.ay/ayay/away/atay/aTan pointsTan markings on a dark dog.at/atat/aRecessive BlackRare colour mainly encountered in herding breeds.a/aAgouti/Wolf GrayBanded hair with lighter and darker areas.aw/awaw/ataw/aI locus (Intensity)Genes not knownLightens red/yellow pigments to lighter shades or white.S locus (White Spotting)Minimal white spottingS/SWhite spotting (Piebald)Varying degrees of white markings occur on any colour.S/spsp/spM locus (Merle)MerleM/mAffects black, brown, blue or isabella coat colour.m/mNon-MerleB locus (Brown)B/BB/bNon-Brownb/bBrownTurns all black into brown.ORD locus (Dilution)D/DD/dNon-Diluted/dDiluteDilutes black to blue, brown to isabella. May lighten red/yellow pigments.H/hHarlequinOnly expressed with merle (Mm).H locus (Harlequin)h/hNon-Harlequin

TRAIT**Colour Locus E - Extensions**

GENOTYPEE/E

DESCRIPTIONThe dog is likely to express the coat colour defined by the K and A loci.

TRAIT**Colour Locus E (MC1R gene): Recessive Red, Yellow, Cream (e allele)**

GENOTYPEC/C

DESCRIPTIONDogs with this genotype do not carry any copies of the e allele typically associated with recessive red coat colour.

HETEROZYGOTES27.27%

HOMOZYGOTES6.82%

TRAIT**Colour Locus E (MC1R gene): Dark Mask (Em allele)**

GENOTYPEA/A

DESCRIPTIONDogs with this genotype do not carry any copies of the Em allele typically associated with a dark facial mask.

HETEROZYGOTES43.18%

HOMOZYGOTES6.82%

TRAIT**Colour Locus E (MC1R gene): Grizzle, Domino (Eg allele)**

GENOTYPEG/G

DESCRIPTIONDogs with this genotype do not carry any copies of the EG allele, the genetic variant associated with grizzle or domino coat colour.

HETEROZYGOTES< 1%

HOMOZYGOTES< 1%

TRAIT**Colour Locus B - Brown**

GENOTYPEb^c/b^c

DESCRIPTIONThe dog is likely to have brown coat.

TRAIT**Colour Locus B (TYRP1 gene): Brown, liver (bc allele)**

GENOTYPE A/A

DESCRIPTION Dogs with this genotype have two copies of the bc allele typically associated with brown coat colour.

HETEROZYGOTES 34.09%

HOMOZYGOTES 36.36%

TRAIT **Colour Locus B (TYRP1 gene): Brown, liver (bs allele)**

GENOTYPE C/C

DESCRIPTION Dogs with this genotype do not carry any copies of the tested bs allele typically associated with brown coat colour.

HETEROZYGOTES 34.09%

HOMOZYGOTES 9.09%

TRAIT **Colour Locus K - Dominant Black**

GENOTYPE K^B/K^B || K^B/k^{br} || k^{br}/k^{br}

DESCRIPTION The dog is genetically dominant black or brindle.

TRAIT **Colour Locus K (CBD103 gene): Dominant Black (KB allele)**

GENOTYPE DEL/DEL

DESCRIPTIONDogs with this genotype have two copies of the KB allele associated with solid black coat colour.

HETEROZYGOTES22.73%

HOMOZYGOTES75.00%

TRAIT**Colour Locus A - Agouti**

GENOTYPEaᵗ/aᵗ

DESCRIPTIONThe dog has genetically tan points or saddle tan pattern.

TRAIT**Colour Locus A (ASIP gene): Fawn, sable (ay-allele)**

GENOTYPEG/G

DESCRIPTIONDogs with this genotype do not carry the ay allele.

HETEROZYGOTES2.27%

HOMOZYGOTES< 1%

TRAIT**Colour Locus A (ASIP gene): Black and Tan, Saddle Tan (at allele)**

GENOTYPEC/C

DESCRIPTIONDogs with this genotype have two copies of the at allele associated with black and tan or saddle tan colour. The dog may carry the a allele instead of the at allele if recessive black is expressed in the breed.

HETEROZYGOTES13.64%

HOMOZYGOTES86.36%

TRAIT**Colour Locus A (ASIP gene): Recessive Black (a allele)** 2015

GENOTYPEG/G

DESCRIPTIONDogs with this genotype don't carry the a allele associated with recessive black coat colour.

HETEROZYGOTES< 1%

HOMOZYGOTES< 1%

TRAIT**Colour Locus S - Piebald or extreme white spotting**

GENOTYPES/S

DESCRIPTIONThe dog is likely to have solid coat colour with minimal white.

TRAIT**Colour Locus S: Piebald or extreme white spotting** 2015

GENOTYPE-/-

DESCRIPTIONDogs with this genotype don't carry the allele typically associated with piebald spotting or extreme white spotting.

HETEROZYGOTES27.27%

HOMOZYGOTES33.33%

TRAIT**Colour Locus H - Harlequin**

GENOTYPEh/h

DESCRIPTIONThe dog doesn't have harlequin pattern.

TRAIT**Colour Locus H (PSMB7 gene): Harlequin (H allele)**

GENOTYPET/T

DESCRIPTIONDogs with this genotype don't carry the H allele associated with harlequin patterning.

HETEROZYGOTES< 1%

HOMOZYGOTES< 1%

TRAIT**Colour Locus C - Albinism (c^{aL}-allele)** 2016

GENOTYPENot available

DESCRIPTION

HETEROZYGOTESNot available

HOMOZYGOTESNot available

TRAIT**Colour Pattern (RALY gene) - Saddle Tan** 2015

GENOTYPEdup/dup

DESCRIPTIONThe dog may have tan points if it has tan point genotype at the A locus.

HETEROZYGOTES18.18%

HOMOZYGOTES81.82%

SEE NEXT: Coat Type

This section contains test results for several genetic traits. For clarity, the test results have been divided by category; coat color, coat type and morphological traits.

Please note that the list includes both traits showing single-gene inheritance and traits influenced by multiple genetic factors. Many of the genetic factors involved in the multi-genetic traits are still unknown to date and therefore subject to ongoing research. Therefore, it is not always possible to predict the actual appearance of your dog based on these results.

This section includes information primarily provided for descriptive purposes, and we advise caution in the use of this information for breeding.

RECOMMENDED READING

» The Dog's Genetic size - Weak and Strong Size Markers

» Understanding the Dog's Genetic Size Facilitates Planning Individual Care and Weight Control

» Recessive black (allele a)

» Different genetic variants can cause a long-haired phenotype

» Ear erectness - What is this test telling you?

- Coat Colour
- Coat Type
- Body Size
- Morphology

Select units: cm/kginches/lbs

Beethoven De Tarbuxena

WEIGHT**18.9**

UNIT**kg**

HEIGHT**46.0**

UNIT**cm**

Canine size is a complex trait, which means that it is influenced by multiple genes in combination with the environment. We tested your dog for up to seven* genetic variants known to play a role in the determination of size. Comparison of genetic variant results and measured body size for your dog and others of the breed can be found below.

As a general rule, the more ancestral ("wolf") alleles present, the larger the dog/breed. Conversely, the more derived alleles (alternative gene forms gained by modern dog breeds), the smaller the dog/breed.

* Depending on panel test version. Upgrades to the most recent version are recommended for the most complete information.

Spanish Water Dog - Adult body size (12+ months)

How to use this graph

Beethoven

Breed reference size - maleBreed reference size - female131415161718192021222 3Weight (kg)40414243444546474849 50Height (cm)

	♀ #	Avg weight (kg)	Avg height (cm	♂ #	Avg weight (kg)	Avg height (cm
Spanish Water Dog - totals:	0	-	-	3	18.9	45.7
Beethoven's genotype						
	0	-	-	1	18.9	46.0

All genotypes, sorted by height

0	-	-	1	18.(	46.(

0	-	-	1	18.9	46.(

	0	-	-	1	19.9 45.0

Legend:

- **Ancestral genotype typically present in wolves**
- **Derived genotype typically present in small-sized dogs**
- **One copy of the ancestral allele and one copy of the derived allele**
- **No call**

Beethoven's results

TRAIT**Body mass, insulin-like growth factor 1 (IGF1) gene variant**

GENOTYPE**A/G**

DESCRIPTION**The dog is heterozygous for the ancestral allele. This means that it carries one copy of the genetic allele typically associated with small body mass and one copy typically associated with large body mass.**

HETEROZYGOTES**40.91%**

HOMOZYGOTES**54.55%**

TRAIT**Body size, GHR1 gene variant E191K** 2015

GENOTYPE**A/G**

DESCRIPTION**The dog carries one ancestral allele and one derived allele.**

HETEROZYGOTES**63.64%**

HOMOZYGOTES**18.18%**

TRAIT**Body size, GHR2 gene variant P177L** 2015

GENOTYPE**C/C**

DESCRIPTION**The dog has two copies of the ancestral allele associated with larger body size.**

HETEROZYGOTES**< 1%**

HOMOZYGOTES**< 1%**

TRAIT**Body size, HMGA2 gene variant** 2015

GENOTYPE**G/G**

DESCRIPTION**The dog has two copies of the ancestral allele associated with larger body size.**

HETEROZYGOTES**3.03%**

HOMOZYGOTES**< 1%**

TRAIT**Body size, STC2 gene variant chr4:39182836** 2015

GENOTYPE**A/T**

DESCRIPTION

The dog carries one copy of the allele associated with reduced body size and one copy of the allele associated with no size reduction.

HETEROZYGOTES **42.42%**

HOMOZYGOTES **9.09%**

TRAIT **Chondrodysplasia; breed-defining trait** 2016

GENOTYPE **Not available**

DESCRIPTION

HETEROZYGOTES **Not available**

HOMOZYGOTES **Not available**

TRAIT **Tiny size, insulin-like growth factor 1 receptor (IGF1R) gene variant**

GENOTYPE **G/G**

DESCRIPTION **The dog carries two ancestral alleles typically found in larger-sized breeds.**

HETEROZYGOTES **2.27%**

HOMOZYGOTES **< 1%**

SEE NEXT: Morphology

This section contains test results for several genetic traits. For clarity, the test results have been divided by category; coat color, coat type and morphological traits.

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» Ear erectness - What is this test telling you?

- Coat Colour
- Coat Type
- Body Size
- Morphology

TRAIT**Bobtail**

GENOTYPE**C/C**

DESCRIPTION**The dog does not carry any copy of the bobtail mutation. It therefore likely has a long-tailed phenotype.**

HETEROZYGOTES**28.57%**

HOMOZYGOTES**< 1%**

TRAIT**Ear erectness (pricked ears versus floppy ears), variant chr10:11072007**

GENOTYPE**C/C**

DESCRIPTION**Your dog is homozygous for (carries two copies of) a genetic variant typically associated with floppy ears. This genotype is common in breeds like English Springer Spaniel, Leonberger, Saluki, and Dachshunds. Interestingly, the C-allele of this variant is the ancestral allele frequent in wolf.**

HETEROZYGOTES**11.36%**

HOMOZYGOTES**86.36%**

TRAIT**Snout/skull length (shortened head versus elongated head), bone morphogenetic protein 3 (BMP3) gene variant**

GENOTYPE**C/C**

DESCRIPTION**Your dog is homozygous for the genetic variant typically found in breeds with an elongated head (e.g. Saluki, Collie, Irish Wolfhound).**

HETEROZYGOTES**11.36%**

HOMOZYGOTES**2.27%**

This section contains test results for several genetic traits. For clarity, the test results have been divided by category; coat color, coat type and morphological traits.

Please note that the list includes both traits showing single-gene inheritance and traits influenced by multiple genetic factors. Many of the genetic factors involved in the multi-genetic traits are still unknown to date and therefore subject to ongoing research. Therefore, it is not always possible to predict the actual appearance of your dog based on these results.

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» Understanding the Dog's Genetic Size Facilitates Planning Individual Care and Weight Control

» Recessive black (allele a)

» Different genetic variants can cause a long-haired phenotype

- Disorders
- Traits
- Genetic Diversity
- Genetic Relationships
- Breeder Tool

The test measures the dog's genetic diversity by screening thousands of sites in its DNA. Genetic diversity represents the heterozygosity level within the breed or breed group. Each tested dog updates the view of the breed's genetic diversity.

Beethoven

Spanish Water Dog

870023223745075

Beethoven: 38.4%

Select a view

Spanish Water Dog

(30-100 tested dogs)

Median: 39.3%

Water Dogs

Median: 35.7%

- **American Water Spaniel**
- **Barbet**
- **Irish Water Spaniel**
- **Lagotto Romagnolo - Romagna Water Dog**
- **Portuguese Water Dog**
- **Spanish Water Dog**

Barbet and Putative Related Breeds

Median: 35.8%

All dogs

Median: 34.7%

GENETIC DIVERSITYDOG POPULATIONless diversemore diverse4.050.7

» What does the graph tell about my dog

- Spanish Water Dog
- Water Dogs
- Barbet and Putative Related Breeds

How to use this graph

Beethoven

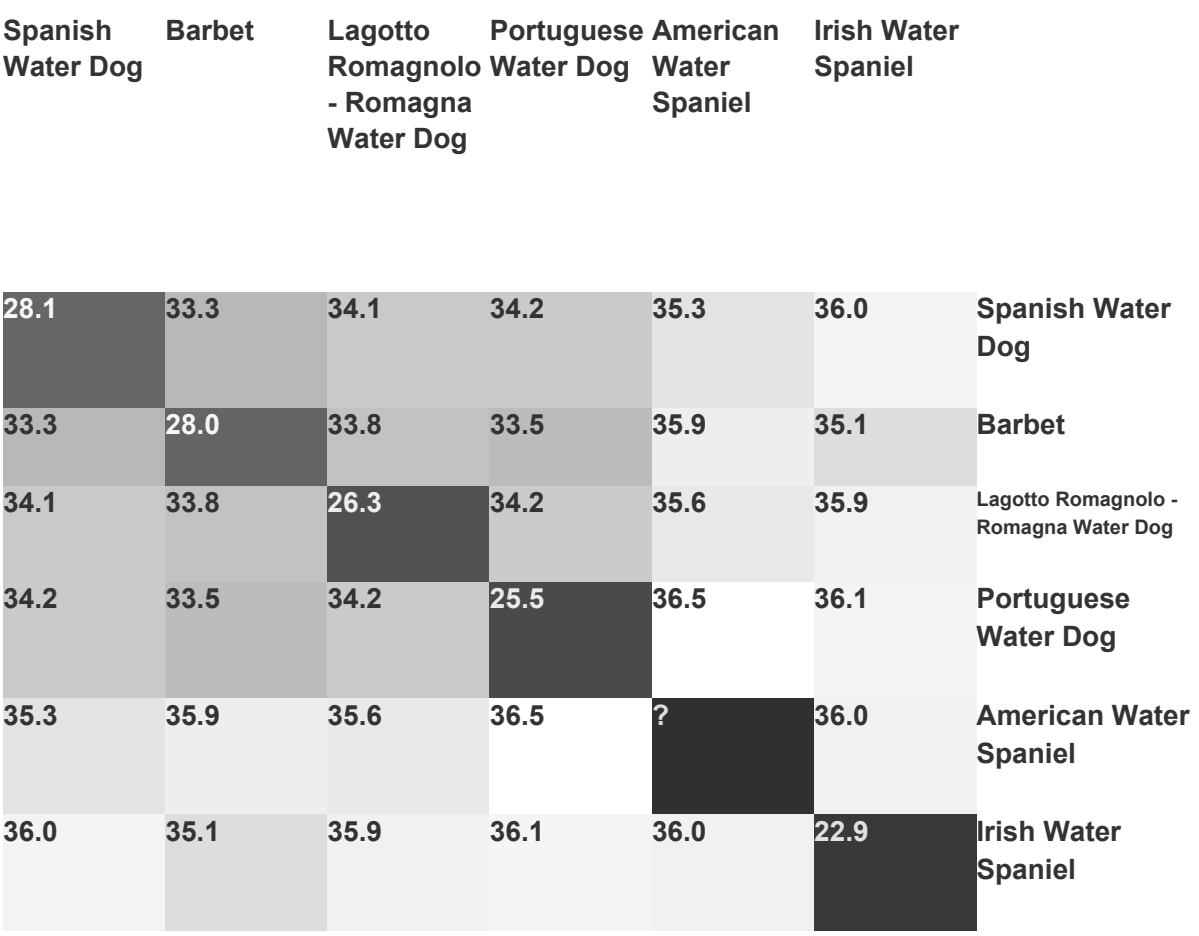
Colour by countryColour by tags

Move the cursor over the text to highlight dogs in the graph:

- Finland
- United States
- Netherlands
- United Kingdom
- Austria
- France
- Slovakia
- Croatia
- Other

How to use this graph

Beethoven



Average genetic difference % between/within groups

[What does this table mean?]

SEE NEXT: Breeder Tool

☐ **Beethoven**

Spanish Water Dog	Barbet	Lagotto Romagnolo - Romagna Water Dog	Portuguese Water Dog	Poodle - Standard (FCI size standard) - Grey and apricot	Poodle - Standard (FCI size standard) - Black, brown and white	
28.1	33.3	34.1	34.2	34.7	34.9	Spanish Water Dog
33.3	28.0	33.8	33.5	32.5	32.5	Barbet
34.1	33.8	26.3	34.2	34.9	35.0	Lagotto Romagnolo - Romagna Water Dog
34.2	33.5	34.2	25.5	34.9	35.1	Portuguese Water Dog
34.7	32.5	34.9	34.9	26.1	27.6	Poodle - Standard (FCI size standard) - Grey and apricot
34.9	32.5	35.0	35.1	27.6	26.6	Poodle - Standard (FCI size standard) - Black, brown and white

Average genetic difference % between/within groups

[What does this table mean?]

Find the Best Match for Your Dog

With **Breeder Tool** you can search for potential mates for your dog that are genetically different and do not carry the same inherited diseases that your dog is carrying, if it is carrying any. The ranking is based on the estimated health of the potential offspring. In the ideal pairing, the Genetic Health Index of the puppies produced would be better than the indices of their parents.

You will be able to see where the optimal dogs are located geographically and can send a message to their owners with just one click.

Browse only dogs actively available for breeding

Working dog

Hunting dog

Show dog

Companion dog

Dog sports

FCI registered

AKC registered

Raisa

11 months

Spanish Water Dog

Sipoo

he owner has not added a description for this dog yet.

64%

estimated Genetic Health Index for puppies is **114**

Raeka

3 years

Spanish Water Dog

Maasbracht

onnagitcha`s Gaia (Raeka)

60%

estimated Genetic Health Index for puppies is **111**

Breeder Tool gives the search results based on the measured genetic health of the individual dogs present in the database. Both genetic diversity, as well as the single tests giving affected and/or carrier results, are considered. The genetic information should never replace any clinical health checks carried out by a veterinarian or any other health information provided by the owners of the individual dogs.

Please bear in mind the following when interpreting the search results given by Breeder Tool:

- Your dog's pedigree is not part of the Breeder Tool, rather it proposes the mating partners purely based on the measured genetic health. In cases where there are only a few dogs tested within your breed or your breed has a very narrow gene pool, close relatives can show up in the search results.
- Breeder Tool does not take into consideration any possible breed-specific restrictions or recommendations in terms of the number of litters or amount of offspring that a single dog can have. Breeders need to gain this information from their Breed Club advisors.
- Your breed may have known inherited diseases for which there are no DNA tests or which are not offered in the current test. You will need to consider whether these diseases have been present in the pedigrees of your dog and the potential mating partner and whether additional tests for these may be indicated.

Antoinette van Zwijndregt
Voorsterstraat 83 - 6361 ET Nuth
Tel: 0031 (045) 8509642 - Mob: 0031 646 321897
Mail : info@gonnagitchas.nl - Mail: a.v.zwijndregt@gmail.com

Registered Name: Beethoven De Tarbuxena
Nickname: Beethoven
Registration ID: Unregistered
Microchip: 938000000775752
Breed: Spanish Water Dog
Gender: Male

14/2/2017

ID
8700 2322 3745 075

Owner: Antoinette Zwijndregt
Country: Netherlands
Testing date: 28/5/2016
DNA identification profile:
Identified with standard ISAG 2006 markers
Dog's identity verified from microchip or tattoo by veterinarian or other authorised person during sample taking: **Yes**

Certificate of DNA Identification Profile

AHT121	AHTK211	AHTH171	AHTH260	AHTK253	CXX279	FH2054	INRA21	REN162C04	REN54P11
94/104	89/89	221/229	246/254	286/288	120/124	151/172	97/101	200/206	226/234

AHT137	FH2848	INU005	INU030	INU055	REN169D01	REN169O18	REN247M23	AMELOGENIN
145/149	230/230	104/124	144/150	210/212	216/218	162/164	268/272	X/Y

On behalf of Genoscoper Laboratories,

Jonas Donner

SIGNATURE

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

PROVIDED BY **GENOSCOPER LABORATORIES**
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