Hendrix's Legacy *Fighting for every Staffy*

How to get your dog tested for NCL4A

A practical guide for breeders, owners, vets and rescues

Summary

- NCL4A is caused by one known change (variant) in the *ARSG* gene. A DNA test looks for that variant and tells you whether a dog has none, one or two copies.[1,2]
- The test uses a cheek swab or a small blood sample, and results usually take about two to four weeks.[3,4,5]
- NCL4A is not part of The Royal Kennel Club's DNA testing scheme for the Staffordshire Bull Terrier, so results are not recorded by The Royal Kennel Club.[7,8] Keep your certificate, and share your result.
- Every result counts, including clear results. Breeders, owners, vets and rescues are all on the front line of building the evidence for the breed.

What the test tells you

Result	Copies of the variant	What it means
Clear	None	Highly unlikely to develop NCL4A. Passes a normal copy to every puppy.[9]
Carrier	One	Highly unlikely to develop NCL4A. Each puppy has a 50% chance of inheriting the variant.[9]
Affected	Two	Likely to develop NCL4A. Passes the variant to every puppy.[9]

A DNA test shows a dog's genes, not its health today. For a dog that is showing signs, a vet interprets the result alongside the dog's signs and examination. Our guides "Recognising the signs of NCL4A" and "NCL4A: a clinical overview" explain more.

Asking for the right test

NCL is a family of diseases. Different breeds have different NCL genes, and a test for one will not detect another. Make sure you order the test for the *ARSG* variant, which laboratories may list as:

- NCL4A, NCL-A or NCL-*ARSG*
- "Neuronal Ceroid Lipofuscinosis" in the American Staffordshire Terrier
- *ARSG* c.296G>A[2]

Because the variant was discovered in the American Staffordshire Terrier, laboratories list the test under that breed. If you are testing a Staffordshire Bull Terrier, tell the laboratory, and confirm before you order that it will

run the *ARSG* test for your dog.

Where to test

These are the options we have found. Prices and details were checked on 4 October 2026 and change over time; always check with the laboratory before ordering. We have no commercial link with any laboratory.

Laboratory	Test	Price at 4 Oct 2026	Sample	Results
Laboklin UK	Test 8396, "Neuronal Ceroid Lipofuscinosis (CL / NCL) in American Staffordshire Terrier" (not test 8075, which covers other breeds' NCL variants)	£48 including VAT	Cheek swab or blood	2 to 3 weeks[3]
Wisdom Panel Premium (UK)	Includes "Neuronal Ceroid Lipofuscinosis 4" among more than 270 health tests, plus breed analysis	£144.99 (on offer at £108.74 when checked)	Home sampling kit (check with laboratory)	3 to 4 weeks[4]
Genomia (Czech Republic)	NCL-A, *ARSG* c.296G>A	US$56	Check with laboratory	About 12 working days[5]
University of Missouri, via OFA (USA)	NCL-*ARSG*	US$65 for a single test	Cheek swab or blood	Check with laboratory. Samples sent from outside the USA need US import documents on the package[6]

Prices, sample types and turnaround vary. Choose the option that suits you, and check with the laboratory before ordering.

How testing works

1. **Order a kit** from the laboratory, or ask your vet to arrange the test.
2. **Take the sample.** Follow the laboratory's instructions exactly. For a cheek swab, this usually means rubbing a swab inside the dog's cheek and letting it dry before packing.
3. **Make the result count.** If the result will be shared publicly or used for breeding decisions, ask your vet to take the sample and confirm the dog's microchip number. The Royal Kennel Club only records results for its official schemes when the report includes the dog's microchip number and registered details, and the same standard makes any NCL4A result more credible.[3]
4. **Send the sample** and wait for the certificate.
5. **Keep the certificate** with the dog's records. If you sell or rehome the dog, pass a copy on.

After the result

- **Breeders:** use the result to plan matings. A carrier or an affected dog can be bred to a clear dog without producing affected puppies. Our guide “Understanding NCL4A genetics” explains the options.[9]
- **Owners:** if your dog is affected, talk to your vet. Tell your dog’s breeder so that other litters can be protected.
- **Vets:** record the result in the clinical notes alongside any neurological or behavioural findings.
- **Rescues:** keep the result with the dog’s records and give it to the adopter.

The breeding rule

Every mating must include at least one tested clear dog. If one parent is a tested clear, no puppy can be affected, whatever the other parent’s result.[9]

Parent 1	Parent 2	Can you breed?	Puppies
Clear	Clear	Yes	All clear
Clear	Carrier	Yes	On average half clear, half carrier; none affected
Clear	Affected	Yes, with welfare care (see below)	All carriers; none affected
Carrier	Carrier	**No**	Risk of affected puppies
Carrier	Affected	**No**	Risk of affected puppies
Affected	Affected	**No**	All affected
Any result	Untested	**No**	Unknown: test first

If your dog is a carrier

A carrier result is not a reason to stop breeding from a dog. It tells you exactly how to breed safely.

- **A carrier is highly unlikely to develop NCL4A itself.**[9]
- **A carrier can be bred from, but only to a tested clear dog.** On average half the puppies will be clear and half will be carriers. None will be affected.[9]
- **Never mate a carrier to another carrier, an affected dog or an untested dog.** Each of these can produce affected puppies.[9]
- **Test any puppy you keep for breeding,** because it may be a carrier.
- **Tell puppy buyers** that a puppy may be a carrier, and that any puppy used for breeding must be tested and only mated to a clear dog.
- **Carriers matter to the breed.** The Royal Kennel Club advises that breeding only from clear dogs can reduce genetic diversity, and that carriers can be an important part of a breeding plan when mated to clear dogs.[9]

If your dog is “affected” but has no signs

An affected result is not the end of a breeding plan, and it is not something to hide. Declaring it is what allows you to breed safely.

- **An affected dog can be bred from, but only to a tested clear dog.** Every puppy will be a carrier, and none will be affected.[9]
- **Never mate an affected dog to a carrier, another affected dog or an untested dog.** Each of these can produce affected puppies.[9]
- **Tell puppy buyers** that every puppy is a carrier, so that any puppy kept for breeding is also only ever mated to a clear dog.
- **Think about the dog’s own welfare.** An affected dog is likely to develop NCL4A as it gets older, and signs in published cases usually began in adulthood, sometimes within a dog’s breeding years.[9,10] Talk to your vet before planning a litter, especially for a bitch, who will carry and raise the puppies. Watch for any change in behaviour, balance or sight.

A declared affected result, managed this way, protects every puppy. An undeclared one protects nobody.

Share your result

Because NCL4A is not part of The Royal Kennel Club’s scheme for the breed, results are not collected anywhere.[7,8] Under The Royal Kennel Club’s Health Standard, the route for a new test to be recognised for a breed is through the Breed Health Co-ordinator, and the first question asked is whether the variant has been found in that breed.[8] That is why every result matters.

- Share your result, clear, carrier or affected, with the Staffordshire Bull Terrier Breed Health Co-ordinator.
- **Best practice for breeders: publish your dogs’ NCL4A results.** Some UK Staffordshire Bull Terrier breeders already do, recording their stud dogs’ NCL4A clear status on their Champdogs listings.
- Hendrix’s Legacy does not collect results or any personal data.

Why we ask

> Hendrix, a Staffordshire Bull Terrier, died in September 2026. He was never diagnosed with NCL4A and was never DNA tested for it. Neither of his parents had been tested for NCL4A. If they had been, we would have an answer. A single test before breeding is the simplest way to make sure no other family has to wonder.

Next steps

- Breeders: read “Understanding NCL4A genetics”.
- Owners: read “Recognising the signs of NCL4A”.
- Vets: read “NCL4A: a clinical overview”.
- Rescues: read “NCL4A: screening guidance for rescues”.

All our guides are free at www.hendrix-legacy.com/resources. Follow the campaign at facebook.com/HendrixsLegacy.

Sources

All sources were accessed on 4 October 2026.

1. Abitbol M, Thibaud JL, Olby NJ, et al. A canine Arylsulfatase G (*ARSG*) mutation leading to a sulfatase deficiency is associated with neuronal ceroid lipofuscinosis. *Proceedings of the National Academy of Sciences USA*. 2010;107(33):14775-80. PMID 20679209. https://pubmed.ncbi.nlm.nih.gov/20679209/

2. OMIA (Online Mendelian Inheritance in Animals), University of Sydney. OMIA:001503-9615, Lysosomal storage disease, *ARSG* related, in dog. Last updated 3 December 2025. https://omia.org/OMIA001503/9615/

3. Laboklin UK. Neuronal Ceroid Lipofuscinosis (CL / NCL) in American Staffordshire Terrier, test 8396; and Neuronal Ceroid Lipofuscinosis (CL / NCL), test 8075. Undated. https://www.laboklin.co.uk/laboklin/showGeneticTest.jsp?testID=8396

4. Wisdom Panel UK. Wisdom Panel Premium. Undated. https://www.wisdompanel.com/en-gb/dog-dna-tests/premium

5. Genomia. Testing of dogs: NCL-A. Undated. https://www.genomia.cz/en/test/ncl-a/

6. University of Missouri College of Veterinary Medicine, Canine Genetics Laboratory. Testing. Undated. https://cvm.missouri.edu/canine-genetics-laboratory/canine-genetics-laboratory-testing/

7. The Royal Kennel Club. Staffordshire Bull Terrier breed page, health section. Undated. https://www.royalkennelclub.com/search/breeds-a-to-z/breeds/terrier/staffordshire-bull-terrier/

8. The Kennel Club. Health Standard. January 2025. https://kc-media-production.azureedge.net/media/qvffqvwg/kc_health_standard.pdf

9. The Royal Kennel Club. Understanding and using your dog's DNA test results. Undated. https://www.royalkennelclub.com/health-and-dog-care/health-dog-care/health/getting-started-with-health-testing-and-screening/dna-testing/breeding-advice-for-dna-test-results

10. Orthopedic Foundation for Animals. Neuronal Ceroid Lipofuscinosis (NCL-4A section). Page modified 6 March 2026. https://ofa.org/neuronal-ceroid-lipofuscinosis/

This guide is for information only and is not veterinary advice. Information correct as at October 2026; check with the laboratory before ordering. Version 2, October 2026. © 2026 Hendrix's Legacy.