

STCA-HTF Scottish Terrier DNA Bank FAQ's

What is DNA Banking?

DNA Banking is the long-term, secure storage of DNA samples and genetic data generated from specific animal samples. There are several human ancestry DNA Banks as well as livestock DNA Banks already in existence.

How will submitting my Scottie's sample to the DNA Bank benefit me?

Individual Scottie owners may or may not realize an immediate benefit by the establishment of a DNA Bank, but the purpose for doing this is to preserve DNA from as many of the Scottish Terrier bloodlines that we can, so we have a repository of our breed's genetic heritage for future research studies that could benefit all Scotties. Technology is getting more affordable and available for discovery of genetic inheritance that affects the future of the breed. There are dogs alive today from most of the foundational bloodlines driving the Scottish Terrier breed both here in the US and from around the world. These dogs and their descendants carry the genetic heritage of our breed from its roots. With technology advancing rapidly, we want to position the breed to take advantage of tools to discover Scottie heritage in a unique long-term way. Now is the time to get ready for our future.

Where is the STCA-HTF DNA Bank located?

The STCA HTF has an agreement with Resero Genomics in Salt Lake City, Utah to receive blood (chiefly) samples of Scottish Terriers, extract DNA and build the Scottish Terrier DNA Bank for us.

Why not just use the CHIC DNA Repository with the OFA?

The key difference between the STCA-HTF Scottish Terrier DNA Bank and the CHIC DNA Repository is that, in the case of the STCA-HTF Bank, ownership, control and access to the dog's DNA remain with the designated owner of the dog. Therefore, the owner of the DNA can have samples sent elsewhere for analysis, donate for research purposes of their choosing and withdraw the DNA from the bank at any time. In other words, Resero Genomics will process and store the DNA, but the owners do not relinquish control of their dog's DNA to another entity, unless they choose to do so. By contrast, when samples are sent to the CHIC DNA Bank, the owner must sign a release form, relinquishing all control, knowledge, and decision making as to how the DNA is used. Over the years, Scottie owners and breeders have generously contributed samples to many studies, but, far too many times, irreplaceable genetic material has been lost and is now unavailable to us. The DNA from entire families of Scotties has been gobbled up in major research projects such as Cerebellar Abiotrophy (CA) and Scottie Cramp, with no applicable results. Now many of these precious dogs are gone, and their DNA is not available for future use. We can't let this happen any longer, nor should we when such an affordable method is available today to preserve DNA for the future.

What is the stability of Resero DNA Banking Systems? What if something happens to the biobank?

Resero: The security of your DNA is important to Resero Genomics because we know it is important to you. We have successfully stored and maintained both animal and human DNA since 2003. We set criteria for our biobank with the intent of storing a DNA sample for over 50 years that meets the quality needs for genotyping and sequencing purposes. We have developed fail-safe methods to protect against even the most unlikely catastrophic events. Two separate DNA samples using two different methods and two different locations will build a fail-safe system for the Scottish Terrier DNA Bank.

What are the best sample types for DNA banking?

Resero: Whole blood samples yield the highest quality and quantity of DNA for long-term storage and are the recommended storage choice from livestock and companion animals to ensure ample supply of genetic material for future research projects, testing, genotyping and sequencing. For other DNA sample types, such as tissue or frozen semen, contact Resero Genomics for assistance.

How are the samples stored?

DNA will be stored at Resero Genomics using several industry-proven methods that depend on the sample type and service ordered. From Resero: *We are able to offer storage in ultra-low temperature freezers, cryogenic liquid nitrogen tanks, and dehydration (dry) storage. We strive to store each DNA sample using two different methods in two different locations providing back-up security of Customer DNA.*

How long can I store DNA samples?

Resero: No one really knows! Maybe forever if properly handled. We use the best methods in the industry to preserve each sample for long term use. Integrity of the DNA is very important for correct analysis to derive the best information for you, the Customer. We guarantee high quality DNA for at least 50 years. Again, no one really knows. DNA is being discovered in frozen tundra that is many centuries old and still have enough integrity for valuable sequencing projects.

How is my dog's DNA protected?

Resero: In the unlikely event that the Resero Genomics business is dissolved or sold, every conceivable precaution is taken to protect your banked DNA that has been entrusted to us. In this circumstance, we will notify you well in advance of any change in ownership or dissolution to give you the option to re-direct your DNA to another location of your choice. This unlikely occurrence is explained in detail in our Standard Agreement.

Who owns the DNA and Data?

Resero: You own all the DNA that is submitted to, or extracted by, Resero Genomics using your submitted samples. You own and control all information derived from the DNA by Resero. When you submit samples for processing, we will ask for ownership information. You will designate who the owner is and who is authorized to have access to the DNA. Ownership of the DNA will always fall to the entity designated in records kept on-file for each sample. Changes to that ownership will be properly updated as received from the ownership of the originating sample.

Who has access to my samples?

Resero: You, the owner, decide who has access to your samples. At the time of submission, you will grant Resero Genomics authorization to extract DNA, store, and maintain your samples under the named owner(s) of the DNA, and you will indicate who has future access. Resero Genomics will not access or use the DNA for any reason without consent from the owner(s) named. We will also not allow anyone else to access the samples without written consent of the owner. If access to the DNA is granted to the STCA-HTF, then the manager of the Scottish Terrier DNA Bank will be the contact person for updating Ownership and Access changes as needed. More details on this are being drafted by the STCA-HTF.

Who determines how the samples are used?

You retain ownership of your samples and retain control of how your samples are used.

Can I transfer ownership of my samples?

Yes. The owner can change ownership by written instructions. You will need to fill out, sign, and return a change of ownership form to the Account Manager designated by the STCA-HTF to oversee the Scottish Terrier DNA Bank.

How much does it cost to store canine samples?

There are two options available to Scottie owners:

Option #1 The STCA-HTF Managed Account: This account is established at no cost to you other than for the collection of the blood sample by your veterinarian and mailing of the sample to Resero Genomics. Specialized blood collection tubes will be provided by STCA-HTF to allow room temperature storage and inexpensive mailing of the sample to Resero Genomics for DNA extraction. At the time of sample submission, the owners will agree to include their dogs' DNA in the STCA-HTF Managed DNA Account with Resero Genomics. In this case, all costs for extracting the DNA and yearly storage fees will be covered by the STCA-HTF. The owner will agree to allow the HTF to manage the account and to have access to the stored DNA for research purposes, but only with the owner's consent after full disclosure of how the DNA will be used and how the information derived will be communicated. (Details on this process and collection tube distribution with full instructions will follow soon.)

In return for having all DNA banking fees paid by the HTF, the owner will complete an on-line application for the STCA-HTF Database and will provide information about the dog including registered name, AKC number, pedigree, health history, etc. All data entered in the Database will be kept in strict confidence and be available ONLY to the STCA-HTF DNA Bank manager, Chairman of the STCA-HTF committee, and the President of the STCA.

Option #2 Individual Account: The owner will bear all costs for sample collection, DNA extraction and annual storage and will be billed directly by Resero Genomics for all samples submitted. Total annual storage cost depends on the number of samples in the customer's inventory. (All pricing information can be found on the Resero Genomics Banking Order Form.)

Will my samples be used in research studies?

Access to DNA by the STCA HTF Committee for future research is understood as part of the STCA-HTF Managed Account option, but always with the owner's knowledge and consent. There may be opportunities to have your samples involved in research studies, and researchers may request access to DNA samples or genetic data for their research projects. However, access will not be granted without the consent of the owners or full disclosure to the STCA membership about the study and how it could benefit the Scottish Terrier breed.

Will I receive data or test results if my samples are used in a study?

This will depend on the study and the arrangements made with the researcher but most likely, yes. The researcher requesting access to your samples will define what you will receive or not receive if your sample is selected for the study. You will have the option of participating in the study or not and the STCA-HTF will vet the project and the researcher to make sure it is beneficial for the Scottish Terrier breed to participate.

How can I be sure that my Scottie's data and other sensitive information on my dogs will be kept confidential in the Database managed by the STCA HTF?

The on-line HTF database will be set up with single or even a double layer of security, and all information contained in the database will be kept in strict confidence. This will not be an open database. Only you the owner will have access to your own dogs' information and you will be able to add, delete, edit and expand that information at your convenience. There will be a designated overseer (STCA-HTF Scottish Terrier DNA Bank manager) of the entire database to review aggregate data and track significant trends in the population of Scotties with respect to reported health issues and genetic disease incidence. The purpose of this Database will be to connect the individual dog information in the Database to the stored DNA samples with Resero to provide samples for important Scottie research as the need arises.

Can I order genetic testing from Resero for my DNA samples?

Resero: Yes. DNA from your banked samples can be used for genetic testing in the future, eliminating the need to recollect and extract the sample for testing. Resero is constantly updating the list of available tests for all species. By having stored DNA on your dogs, you will NOT need to collect a sample from your dog again. It is done and ample DNA will be available for several hundred DNA tests and for future sequencing efforts if needed.

Does Resero currently offer genetic tests accepted by OFA for the Scottish Terrier CHIC Registry?

Not at this time, but that could change in the near future. First, the OFA must approve Resero as an accepted lab to offer the tests that are currently included in the CHIC registry for Scotties. Resero will then be able to incorporate and offer the von Willebrand Disease (vWD) and Craniomandibular Osteopathy (CMO) tests and any other DNA test that may become a requirement for CHIC certification in the future. The CHIC registry, as far as we know, will remain an open registry option for Scottie breeders and owners to record their test results and earn a CHIC number for each of their dogs.

Can I send my samples to another genetic testing company for testing?

Resero: Yes. You can transfer a sample of the DNA stored on your dog to any entity you choose, provided that there is enough DNA in storage to meet the amount required by the third-party lab. Once the samples have left the DNA Repository, we can't guarantee quality or safety of the sample or how it will perform in the receiving laboratory using their analyses systems. Cost to send a sample for testing at another facility is \$5.00/DNA sample.

I've already sent a sample to another DNA Bank or genetic testing company. Can that sample be stored at Resero?

Resero: Yes. We can accept samples from other DNA banks or genetic testing companies that have your sample. Once the DNA reaches our lab, we will assess the quality and total amount of DNA received and report back to the customer. We will only store DNA if it meets our quality standards and we will advise you if there are issues with the quality and amount received. It is important to note that if the third-party lab has obtained ownership of your DNA, they will be considered the owner unless that ownership is transferred to you. Please contact us for proper forms to complete this transfer process.