



DNA Sample Collection Basics

Please review these points prior to collecting samples to help avoid any issues that could cause unnecessary sample failure. Once the samples have been collected, the Submission Instructions will help you complete the Order form.

Blood Card

- Ideal sample locations include the animal's ear or the underside of the tail.
- Use a NEW needle or pricking device for each animal. DO NOT simply wash the needle/pricking device between animals, this does not prevent cross-contamination.
- Ensure that the location of the animal in which the sample will be collected is clean.
- Fill the entire pre-printed circle on the card with blood, but don't flood the card.
- Allow collected samples to dry **prior** to closing the card to ensure the felt portion of the card that holds the sample does not stick to either side of the card.
- PREVENT direct contact between collected cards, as cross-contamination can occur.
- Keep collected sample out of direct sunlight, extreme temperatures and dust.
- Twin animals SHOULD NOT have a blood sample submitted, as it will fail.
- Blood samples can be shipped in a standard shipping box or padded envelope.

Tissue Sampling Unit (TSU)

- **ONLY** to be collected from the ear with an approved TSU device from AllFlex.
- Make sure the sample does not include an area of the ear that has been tattooed.
- Ensure that the TSU is sealed properly by noting the green ball is inside the tube.
- Check to see that there is liquid visible inside of the TSU, to preserve the sample.
- Ensure that there is a visible amount of tissue sample inside of the tube.
- Keep the TSU's at room temperature before and after use. Refrigerate if necessary, **DO NOT FREEZE**.
- *Do not ship TSUs in a basic envelope as the envelope can tear open and samples will be lost in mail.*

If Blood Cards are needed, please contact the RAAA office at (940)387-3502 ext. 8 or email dna@redangus.org.
We will supply blood cards to be used for Red Navigator testing, free of charge.

Red Navigator

Submission Instructions

Step 1: Collect and Clearly Identify Samples

Step 2: Complete RAAA Red Navigator DNA Order Form

If 30+ head are submitted PLEASE complete the Order Form via computer and email Excel file to dna@redangus.org.

- Fill out Animal and Sample Information.
 - The Animal ID should be UNIQUE for each sample. IDs that are shorter and simpler will report clearer.
 - DNA Barcode can be found on the back of DNA card/TSU. Typically a 10 or 11 digit number.
 - DOB is for producer reference only, this field CANNOT be populated in the final result sheet.
- Select the Testing Option for each sample.
 - Indicate Red Navigator test by placing a Y in the respective column.
 - IF a sample on a potential sire will be submitted concurrently, DO NOT mark The Red Nav. Test. Please provide sires reg# in Animal ID box and write *Parentage* in the DOB column.
- Enter Potential Sires for samples selected for Red Navigator.
 - Sire columns do not have to be completed to receive Red Navigator results.
 - Sire reg# should be listed in Most Probable Sire (A.I.), and Alternative Sire (Clean-up) columns.
 - If multi-sire pastures were used please see Step 3.

Step 3: Complete Multi-Sire Breeding Groups Page (if applicable)

- Create and name Breeding Group with ALL sires who potentially parented submitted females.
 - If sire is not a RAAA registered animal, provide breed abbreviation with that assoc. registration #.
- Ex: Canadian Angus = CAN#####, American Angus = UAN#####, Simmental = USM#####
- For females that apply, list Breeding Group name on Order Form under Multi-sire Breeding Group.

Step 4: Calculate Payment to be Submitted with Samples

- Checks can be made out to the Red Angus Association of America.
- RAAA Staff can contact you to take a card over the phone when your samples arrive.

Step 5: Submit Order to RAAA :

- Mail complete and signed Order Form + Samples to Red Angus:
 - Attn: DNA Samples: 18335 E. 103rd Ave, Suite 202 Commerce City, CO 80022

Pricing

| <i>Test</i> | <i>Details</i> | <i>Price</i> |
|---------------|----------------------------|--------------|
| Red Navigator | Sire verification included | \$22 |
| Parentage | For potential sires ONLY | \$15 |

RAAA Red Navigator DNA Order Form



Name: _____ RAAA Acct#: _____
 Address: _____ Phone: _____
 City: _____ State: _____ Zip: _____ Fax: _____
 **E-Mail: _____ **Test results and all communication regarding your order will be via e-mail, unless otherwise requested.

Payment must be submitted with samples. Number of Samples Submitted _____ x \$22 = _____ Payment Enclosed: Yes _____ No _____

Expected Turnaround Time: 20 Business Days. May be delayed if delivered samples are of poor quality or order form is not properly completed. Please review "DNA Sample Basics" to ensure a quality sample is received at the lab. Questions must be directed to the RAAA National Office. DO NOT contact the lab.

ANIMAL INFORMATION

TEST

POTENTIAL SIRES

| | Animal ID (6 characters max) | DNA Barcode Number | DOB (if known) | Red Navigator | Most Probable Sire Reg# | Alternative Sire Reg# | Multi-Sire Breeding Group |
|----|---------------------------------|-----------------------|----------------|---------------|----------------------------|--------------------------|------------------------------|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |

Terms: Upon submitting samples to the Red Angus Association of America (RAAA), the submitting party conveys ownership of the sample to RAAA. The submitting party agrees and acknowledges that RAAA intends to perform genetic testing on the submitted sample in an effort to describe the animal's genetics. The submitting party further agrees and acknowledges that it assumes all risks that are associated with the genetic testing results and any associated implications. RAAA has the right to make any results determined through the genetic testing publicly available. In the event that the submission of this/these samples results in a parentage exclusion(s) or identification of genetic defect carrier(s), the process through which owners/breeders are notified will follow RAAA Rules and Regulations. The submitting party agrees that all samples are submitted to RAAA in an effort to fulfill the RAAA mission of advancing the quality, reliability, and value of Red Angus and Red Angus influenced seedstock used in the commercial beef industry. Therefore, RAAA shall not be held responsible for damages of any kind, including but not limited to, lost profits, lost value of progeny, lost value of embryos and/or semen, interruption of business that may arise from the publication of genetic testing results. The term 'submitting party' shall mean any RAAA member/customer submitting a DNA sample and test request, as well as any RAAA member/customer submitting a DNA test request for a DNA sample that is already on file with RAAA.

Signature: _____

Multi-Sire Breeding Group Information

(Complete for Multi-Sire Pastures)

Breeding Group: _____

| | Association | Reg # | Tattoo | Sample Enclosed? |
|--------|-------------|-------|--------|------------------|
| Sire 1 | | | | |
| Sire 2 | | | | |
| Sire 3 | | | | |
| Sire 4 | | | | |
| Sire 5 | | | | |
| Sire 6 | | | | |

Breeding Group: _____

| | Association | Reg # | Tattoo | Sample Enclosed? |
|--------|-------------|-------|--------|------------------|
| Sire 1 | | | | |
| Sire 2 | | | | |
| Sire 3 | | | | |
| Sire 4 | | | | |
| Sire 5 | | | | |
| Sire 6 | | | | |

Breeding Group: _____

| | Association | Reg # | Tattoo | Sample Enclosed? |
|--------|-------------|-------|--------|------------------|
| Sire 1 | | | | |
| Sire 2 | | | | |
| Sire 3 | | | | |
| Sire 4 | | | | |
| Sire 5 | | | | |
| Sire 6 | | | | |

Breeding Group: _____

| | Association | Reg # | Tattoo | Sample Enclosed? |
|--------|-------------|-------|--------|------------------|
| Sire 1 | | | | |
| Sire 2 | | | | |
| Sire 3 | | | | |
| Sire 4 | | | | |
| Sire 5 | | | | |
| Sire 6 | | | | |