

Coat Color and Trait Certificate

| | Laboratory #: | 301903 |
|-------------------|--|---|
| rit's Etta James | Registration #: | - |
| hire Bull Terrier | Certificate Date: | May 25, 2022 |
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This canine's DNA showed the following genotype(s):

| Coat Color/Trait Test | Gene | Genotype | Interpretation |
|--------------------------|--------|--------------------------------|---|
| A Locus (Agouti) | ASIP | A ^y /a ^t | Sable/fawn (carries tricolor/black and tan) |
| K Locus (Dominant Black) | CBD103 | K ^B /k ^y | No agouti expression allowed (carrier) |

Interpretation:

This dog carries one copy of $\mathbf{A}^{\mathbf{y}}$ and one copy of $\mathbf{a}^{\mathbf{t}}$ which results in a sable/fawn coat color. However, this dog's coat color is also dependent on the E, K, and B genes. The sable/fawn coat color is only expressed if the dog is also E/E or E/e at the E locus and $\mathbf{k}^{\mathbf{y}}/\mathbf{k}^{\mathbf{y}}$ at the K locus which allows for agouti gene expression. This dog will pass on $\mathbf{A}^{\mathbf{y}}$ to 50% of its offspring and $\mathbf{a}^{\mathbf{t}}$ to 50% of its offspring.

This dog carries one copy of $\mathbf{K}^{\mathbf{B}}$ and one copy of $\mathbf{k}^{\mathbf{y}}$ which prevents expression of the agouti gene (A locus) and allows for solid eumelanin (black pigment) production in pigmented areas of the dog. However, this dog's coat color is also dependent on its genotypes at the E and B genes. This dog will pass on $\mathbf{K}^{\mathbf{B}}$ to 50% of its offspring and $\mathbf{k}^{\mathbf{y}}$ to 50% of its offspring.

Paw Print Genetics[®] has genetic counseling available to you at no additional charge to answer any questions about these test results, their implications and potential outcomes in breeding this dog.

Chthy

Blake C Ballif, PhD Laboratory & Scientific Director

Christina J Ramirez, PhD, DVM, DACVP Medical Director

Paw Print Genetics® performed the testing on the dog listed on this certificate. The genes/traits reported here were selected by the client. Normal results do not exclude inherited mutations not tested in these or other genes that may cause variation in traits, medical problems or may be passed on to offspring. The results included in this report relate only to the items tested using the sample provided. These tests were developed and their performance determined by Paw Print Genetics This laboratory has established and verified the test(s)' accuracy and precision with >99.9% sensitivity and specificity. The presence of mosaicism may not be detected by this test. Non-paternity may lead to unexpected results. This is not a breed identification test. Because all tests performed are DNA-based, rare genomic variations may interfere with the performance of some tests producing false results. If you think any results are in error, please contact the laboratory immediately for further evaluation. In the event of a valid dispute of results claim, Paw Print Genetics will do its best to resolve such a claim to the customer's satisfaction. If no resolution is possible after investigation by Paw Print Genetics with the cooperation of the customer, the extent of the customer's sole remedy is a refund of the fee paid. In no event shall Paw Print Genetics be liable for indirect, consequential or incidental damages of any kind. Any claim must be asserted within 60 days of the report of the test results.