

## CATTLE COAT COLOR TEST REPORT

<p><i>Provided Information:</i></p> <p><i>Name:</i>           <b>HANK</b></p> <p><i>Registration:</i></p>	<p><i>Case:</i>                   <b>NC98491</b></p> <p><i>Date Received:</i>       27-Oct-2025</p> <p><i>Report Issue Date:</i>   30-Oct-2025</p> <p><i>Report ID:</i>           6597-8576-2268-7124</p> <p style="text-align: right;">Verify report at <a href="http://vgl.ucdavis.edu/verify">vgl.ucdavis.edu/verify</a></p>
<p><i>DOB:</i> <b>02/01/2024</b>   <i>Sex:</i> <b>Male</b>   <i>Breed:</i> <b>Miniature Highland</b></p>	

### RESULT

### INTERPRETATION

<b>DILUTION (PMEL17)</b>	<b>Dh/N</b>
<b>MC1R (EXTENSION)</b>	<b>E<sup>D</sup>/E<sup>+</sup></b>

One copy of the PMEL17-delTTC dilution variant. Coat color is gray or pale-red.

Dominant black, carrier of wild type.

# CATTLE COAT COLOR TEST REPORT

<p><i>Client/Owner/Agent Information:</i>          AMANDA FOWLER          253 MARTIN LANE          PENDLETON, SC 29670</p>	<p><b>Case:</b> <b>NC98491</b>  <i>Date Received:</i> 27-Oct-2025  <i>Report Issue Date:</i> 30-Oct-2025  <i>Report ID:</i> 6597-8576-2268-7124</p> <p style="text-align: center;">Verify report at <a href="http://vgl.ucdavis.edu/verify">vgl.ucdavis.edu/verify</a></p>
<p><i>Name:</i> <b>HANK</b></p>	

### Additional Information

If testing for a disease or a disorder was performed and results indicate the animal is affected or at risk, we recommend contacting your veterinarian for further clinical evaluation and for additional information on disease and management.

For more detailed information on Cattle Coat Color test results, please visit our website at:  
[vgl.ucdavis.edu/test/mc1r-cattle](http://vgl.ucdavis.edu/test/mc1r-cattle)  
[vgl.ucdavis.edu/test/cattle-dilution](http://vgl.ucdavis.edu/test/cattle-dilution)

For terms and conditions of testing, please see [vgl.ucdavis.edu/about/terms-and-conditions](http://vgl.ucdavis.edu/about/terms-and-conditions)

Results are determined using PCR-based methods. The results relate only to the sample tested as identified by the submitter (for example, identity and/or breed).

**Report authorized by Dr. Rebecca Bellone, VGL Director**

Veterinary Genetics Laboratory · University of California Davis · One Shields Ave · Davis, CA 95616  
[vgl.ucdavis.edu](http://vgl.ucdavis.edu) · (530) 752-2211



The coat color phenotype in cattle depends on multiple genes. The Veterinary Genetics Laboratory offers testing for Extension (*MC1R* gene) and Dilution (*PMEL17* gene).

The table below shows the expected phenotype based on the various possible genotype combinations of these two genes. While these two loci together explain some coat color phenotypes in Highland cattle, it is important to note that other, yet unknown, genes may influence the resulting coat color observed and the animal may have a different phenotype than what is predicted by the Extension and Dilution genotypes alone.

Extension ( <i>MC1R</i> )	Dun Dilution ( <i>PMEL17</i> )	Coat Color Phenotype Predictions
E+/E+	N/N	Red
E+/e	N/N	Red
e/e	N/N	Red
E+/E+	Dh/N	Yellow
E+/e	Dh/N	Yellow
e/e	Dh/N	Yellow
E+/E+	Dh/Dh	White/cream
E+/e	Dh/Dh	White/cream
e/e	Dh/Dh	White/cream
ED/ED	N/N	Black
ED/E+	N/N	Black
ED/e	N/N	Black
ED/ED	Dh/N	Dun
ED/E+	Dh/N	Dun
ED/e	Dh/N	Dun
ED/ED	Dh/Dh	Silver Dun (CAN) or Silver (USA)*
ED/E+	Dh/Dh	Silver Dun (CAN) or Silver (USA)*
ED/e	Dh/Dh	Silver Dun (CAN) or Silver (USA)*

Table 1: Coat color phenotypes based on Extension and Dilution genotypes. *Adapted from Schmutz SM, Dreger DL. (2013) doi: 10.1111/j.1365-2052.2012.02361.x.*

\* The Canadian Highland Cattle Society uses the term "Silver Dun" whereas the American Highland Cattle Association refers to this phenotype as "Silver"

For more detailed information about these coat color genes, please visit our website at <https://vgl.ucdavis.edu/test/mc1r-cattle> and <https://vgl.ucdavis.edu/test/cattle-dilution>

## DEXTER GENETIC TEST REPORT

<b>Provided Information:</b>  Name: <b>HANK</b>  Registration:	<b>Case: NC98491</b> Date Received: 27-Oct-2025 Report Issue Date: 30-Oct-2025 Report ID: 8139-0205-0816-9040  <p style="text-align: center; font-size: small;">Verify report at <a href="http://vgl.ucdavis.edu/verify">vgl.ucdavis.edu/verify</a></p>
DOB: 02/01/2024 Sex: Male Breed: Miniature Highland	

RESULT	INTERPRETATION
<b>MC1R (EXTENSION)</b>	
<b>E<sup>D</sup>/E<sup>+</sup></b>	
Animal has one copy of dominant black and one copy of wild type (red).	
<b>Dun (TYRP1)</b>	
Not Requested	
<b>Dexter Dilution (SLC45A2)</b>	
Not Requested	
<b>Pulmonary Hypoplasia with Anasarca (PHA)</b>	
Not Requested	
<b>Polled vs. Horned</b>	
<b>Pc/H</b>	
POLLED. One copy of the Polled-Celtic molecular marker is present. At least 50% of the offspring will be polled.	
<b>Bulldog Dwarfism (BD1)</b>	
<b>N/N</b>	
<b>Bulldog Dwarfism (BD2)</b>	
Normal, does not have the Dexter BD1 Bulldog mutation.	
Not Requested	

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<p><i>Name:</i>     <b>HANK</b></p>	

### Additional Information

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For more detailed information on Dexter Genetic test results, please visit our website at: [vgl.ucdavis.edu/services/cattle/dexter-tests](http://vgl.ucdavis.edu/services/cattle/dexter-tests)

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