

Coat Color and Trait Certificate

Call Name:	Si	Laboratory #:	11572
Registered Name:	-	Registration #:	XXXXXXXXXX
Breed:	Border Collie	Certificate Date:	June 17, 2015
Sex:	Male		
DOB:	Nov. 2011		

This canine's DNA showed the following genotype(s):

Coat Color/Trait Test	Gene	Genotype	Interpretation
A Locus (Agouti)	<i>ASIP</i>	a^t/a^t	Tricolor, black and tan
B Locus (Brown)	<i>TYRP1</i>	B/B	Black coat, nose and foot pads
D locus (Dilute)	<i>MLPH</i>	D/D	Non dilute
E locus (Yellow/red)	<i>MC1R</i>	E/E	Black
K locus (Dominant black)	<i>CBD103</i>	K^B/K^B	No agouti expression allowed
L locus (Long hair)	<i>FGF5</i>	Sh/Lh	Shorthaired (carries longhaired)

Interpretation:

This dog carries two copies of a^t which results in tan points and can also present as a black and tan or tricolor coat color. However, this dog's coat color is also dependent on the E, K, and B genes. The tan point coat color is only expressed if the dog is also E/E or E/e at the E locus and k^y/k^y at the K locus. This dog will pass on a^t to 100% of its offspring.

This dog carries two copies of **B** at all three of the b^c , b^d and b^s loci making the overall B locus genotype of this dog **B/B**. The overall B locus genotype for a dog is determined by the combination of the genotypes at the b^c , b^d , and b^s loci. The b^c , b^d , and b^s variants confer brown coat, nose, and foot pads when at least one of these DNA changes is present on both genes of the dog at the B locus. If the dog has one or no copies of **b** then the dog will have a black coat, nose, and foot pads. However, this dog's coat color is also dependent on the E, K, and A genes. This dog will pass on **B** to 100% of its offspring.

This dog carries two copies of **D** which does not result in the "dilution" or lightening of the black and yellow/red pigments that produce the dog's coat color. The base coat color of this dog will be primarily determined by the E, K, A, and B genes. This dog will pass on **D** to 100% of its offspring.

This dog carries two copies of **E** which allows for the production of black pigment. However, this dog's coat color is also dependent on the K, A, and B genes. This dog will pass on **E** to 100% of its offspring.

The K locus genotype for this dog is K^B/K^B 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, A, and B loci. This dog will pass on K^B to 100% of its offspring.



Canine Genetic Health Certificate TM

Call Name: Si
Registered Name: -
Breed: Border Collie
Sex: Male
DOB: Nov. 2011

Laboratory #: 11572
Registration #: [REDACTED]
Certificate Date: June 17, 2015

This canine's DNA showed the following genotype(s):

Disease	Gene	Genotype	Interpretation
Collie eye anomaly	<i>NHEJ1</i>	WT/WT	Normal
Degenerative myelopathy	<i>SOD1</i>	WT/WT	Normal
Intestinal cobalamin malabsorption (Border Collie type)	<i>CUBN</i>	WT/WT	Normal
Multidrug resistance 1	<i>ABCB1</i>	WT/WT	Normal
Neuronal ceroid lipofuscinosis 5	<i>CLN5</i>	WT/WT	Normal
Trapped neutrophil syndrome	<i>VPS13B</i>	WT/WT	Normal

WT, wild type (normal); M, mutant

Paw Print Genetics™ performed the tests listed on this dog. See the Laboratory Report for interpretation and recommendations based on these findings. The genes/diseases reported here were selected by the client. Normal results do not exclude inherited mutations not tested in these or other genes that may cause medical problems or may be passed on to offspring. These tests were developed and their performance determined by Paw Print Genetics. This laboratory has established and verified the tests' accuracy and precision. Because all tests performed are DNA-based, rare genomic variations may interfere with the performance of some tests producing false results. If you think these results are in error, please contact the laboratory immediately for further evaluation. Genetic counseling is available at Paw Print Genetics.

Blake C Ballif, PhD
Laboratory & Scientific Director

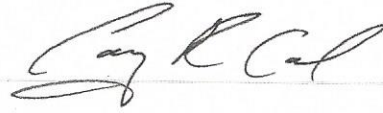
Casey R Carl, DVM
Associate Medical Director

This dog carries one copy of **Sh** and one copy of **Lh** which results in short hair. This dog will pass on **Sh** to 50% of its offspring and **Lh** 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.



Blake C Ballif, PhD
Laboratory & Scientific Director



Casey R Carl, DVM
Associate Medical Director

Normal results do not exclude inherited mutations not tested in these or other genes that may cause medical problems or may be passed on to offspring. These tests were developed and their performance determined by Paw Print Genetics™. This laboratory has established and verified the tests' accuracy and precision. Because all tests performed are DNA-based, rare genomic variations may interfere with the performance of some tests producing false results. If you think these results are in error, please contact the laboratory immediately for further evaluation.

ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.



SI

registered name

BORDER COLLIE

breed

[REDACTED]
registration no.

M

sex

11/4/2011

date of birth

43

age at evaluation in months



A Not-For-Profit Organization

[REDACTED]
1731459

application number

7/6/2015

date of report

RESULTS:

Based upon the radiograph submitted, the consensus was that no evidence of hip dysplasia was recognized. The hip joint conformation was evaluated as:

BCO-10994G43M-VPI

O.F.A. NUMBER

*This number issued with the right to correct or
revoke by the Orthopedic Foundation for Animals.*

GOOD

owner

ASHLEY FRAKER

[REDACTED]
FORT LITTLETON, PA 17223

G.G. Keller, D.V.M.

G.G.KELLER, D.V.M., M.S., DACVR
CHIEF OF VETERINARY SERVICES

American Border Collie Association, Inc.

Certificate of Registration

ABC No: _____
Name SI Sex Male Date of Birth 11/4/2011 Tran. No. 1 Litter Females 2 Litter Males 6
Owner ASHLEY FRAKER Breeder: MELINDA MCCALL Color and Markings: BLACK/WHITE; Medium ; Medium
FT. LITTLETON, PA 17223 LOUISA, VA 23093

Sire GLEN ABC 339708

Owner: JAN WAGNER NUNN, CO

Breeder: BILL REED PIPERTON, TN

Dam MEG ABC 296701

Owner: MELINDA MCCALL LOUISA, VA

Breeder: MELINDA MCCALL LOUISA, VA

Transfer of Ownership To:

Name: _____

Address: _____

This the _____ day of _____

SIGNATURE OF PREVIOUS OWNER(S)

J.R. RED ABC 303492

JUAN D. REYES WHEATLAND, WY

W.D. RED OLIVER CALDWELL, TX

@ANN ABC 303752

DIANE BARRENTINE COILA, MS

STEWART HARVARD OPELIKA, AL

PETE ABC 243824

R.E. FORRESTER STRASBURG, VA

R.E. FORRESTER STRASBURG, VA

JESSIE ABC 198936

MELINDA MCCALL LOUISA, VA

DANNY HARR BRISTOL, TN

LUKE ABC 169654

W.D. RED OLIVER CALDWELL, TX

QUEENIE ABC 183717

JIM CHANT BAGGS, WY

@BEN ABC 156553

DEBBIE BAILEY CATAULA, GA

FLASH ABC 148397

STEWART HARVARD OPELIKA, AL

BUD(APACHE) ABC 66938

TOM FORRESTER ALDIE, VA

MAID ABC 90302

R. E.FORRESTER ALDIE, VA

KATCH ABC 144934

STEVE MCCALL MEADOWVIEW, VA

SHAY ABC 129391

DANNY HARR BRISTOL, TN

TAG AIBC 113307

CHRIS THOMSON, BLUM, TX

MEG(MAGGIE) ABC 112291

KEVIN E. CRAUN, PERKASIE, PA

@HATSOFF BILL ABC 61226

JERRY CARTE, WESTVILLE, OK

*TEE ABC 40343

DWAIN W. THOMPSON, HUNTSVILLE

DONNIE ABC 13918

RAY MCDUGALD, MAPLE CREEK,

LACEY ABC 148000

DALE/DAWN MONTGOMERY, MAPL

@GOYALLT DRIFT ABC 133810

JOAN P. ROGERS, PATRICK SPRINGS

JADE ABC 60385

STEWART HARVARD, OPELIKA, AL

IMP.MIRK ABC 29004

HENRY KUYKENDALL, ASHEBORO, N

KELLY ABC 32777

L.COULTER & H.KUYKENDALL, ASHI

IMP.MAX ABC 30873

NATHAN MOONEY, CARLISLE, PA

JAN(BOXER) AIBC 82922

R.E.FORRESTER, ALDIE, VA

IPSWITCH CAP ABC 119314

STEVE MCCALL, GLADE SPRING, VA

LACY ABC 103452

LEE ANNE ADDISON, CEDAR BLUFF,

KYLE ABC 80055

LARRY MAGGARD, CEDAR BLUFF, V.

NIKKI ABC 65992

LARRY MAGGARD, CEDAR BLUFF, VA

This the _____ day of _____, 2015

AMERICAN BORDER COLLIE ASSOCIATION

Signature

Debra Bailey

ABCA, PO Box 100 Cataula GA 31804
abca@americanbordercollie.org (706) 322-4400

This is to certify that the above named and described Border Collie has been registered in the Stud Book of the American Border Collie Association. This certificate is issued in reliance on a written application submitted and attested by the owner at time of whelping and upon the express condition that the Association has the right to correct and/or cancel this certificate for cause under its rules and regulations.
@Hips-Veterinary Radiologist Approved #G.B. International Champion *USBCHA Finals Champion
(OFA or Canadian Equivalent) G.B. National Champion CEA Normal

Note: If this dog is named a confirmation champion by any registry after January 1, 2004, its ABCA registration will be rescinded and its offspring will not be eligible for registration with the American Border Collie Association.