

## Canine Genetic Health Certificate™

<b>Call Name:</b>	Texas	<b>Laboratory #:</b>	68917
<b>Registered Name:</b>	Mtn Springs Smoke Rings In the Dark	<b>Registration #:</b>	E200091/DN46045207
<b>Breed:</b>	Australian Shepherd	<b>Microchip #:</b>	956000004556152
<b>Sex:</b>	Male	<b>Certificate Date:</b>	Nov. 10, 2017
<b>DOB:</b>	May 2016		

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

Disease	Gene	Genotype	Interpretation
Collie Eye Anomaly	NHEJ1	WT/WT	Normal (clear)
Cone Degeneration	CNGB3	WT/WT	Normal (clear)
Degenerative Myelopathy	SOD1	WT/M	Carrier
Hereditary Cataracts (Australian Shepherd Type)	HSF4	WT/WT	Normal (clear)
Hyperuricosuria	SLC2A9	WT/WT	Normal (clear)
Multidrug Resistance 1	ABCB1	WT/WT	Normal (clear)
Multifocal Retinopathy 1	BEST1	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 6	CLN6	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration	PRCD	WT/WT	Normal (clear)

WT, wild type (normal); M, mutant; Y, Y chromosome (male)



**Helen F Smith, PhD**  
 Assistant Laboratory Director



**Christina J Ramirez, PhD, DVM, DACVP**  
 Medical Director

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. 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. Genetic counseling is available at Paw Print Genetics.



Orthopedic Foundation for Animals

2300 E. Niangua Blvd., Columbia, MO 65201-3806
Phone: (573) 442-0418; Fax: (573)875-5073
www.ofa.org, A not-for-profit organization

Companion Animal Eye Registry (CAER)

EXONS
Springs Smoke Rings In The Dark
Australian Shepherd
AKC # 00091
Date of Exam (month/day/yr): 15/16 02/1/22
AKC # 1516

Name: Sarah K. Sayre
Phone: 940-395-3076
Address: 64 S FM 51
City: Rader TX 76073
Email: erd123@gmail.com

I authorize the OFA to release the results of the evaluation animal described on this application to the public if the results are non-passing (initials) \_\_\_\_\_

I DID verify microchip/tattoo on this dog
I DID NOT verify microchip/tattoo on this dog
NO MICROCHIP/TATTOO PRESENT

ACVO # 09 Date 2-12-22

AND CREDIT CARD INFORMATION ON THE BACK
E WHITE (OWNER) COPY

- RIGHT EYE GLOBE LEFT EYE
microphthalmos
keratoconjunctivitis sicca
glaucoma
EYELIDS
entropion
ectropion
distichiasis
ectopic cilia
imperforate lacrimal punctum
NICITANS
cartilage anomaly/eversion
gland prolapse
plasmoma/atypical pannus
CORNEA
dystrophy - epithelial/stromal
dystrophy - endothelial
pannus
pigmentary keratitis/keratopathy
uveitis
uvea
uveal cyst

Form with diagrams for CATARACT, CORNEA, and LENS. Includes checkboxes for conditions like endothelial opacity, iris sheets, and free floating lens.

Ophthalmologist: Nicholas Millichamp, BVetMed, PhD, DACVO
Optical Internist: DACVO
Eye Care for Animals
(281) 820-3937
Zip/postal code:

- RIGHT EYE FUNDS LEFT EYE
retinal detachment
retinal atrophy - generalized
CMR/CMR-like retinopathy
other presumed inherited retinopathy
retinal dysplasia
choroidal hypoplasia
coloboma
optic nerve hypoplasia
micropapilla
OTHER CONDITIONS
Unlisted conditions suspected as inherited. Describe in comments
Unlisted conditions suspected as not inherited

Comments section with a grid for recording observations and a 'NORMAL' checkbox.

## Coat Color and Trait Certificate

<b>Call Name:</b>	Texas	<b>Laboratory #:</b>	68917
<b>Registered Name:</b>	Mtn Springs Smoke Rings In the Dark	<b>Registration #:</b>	E200091/DN46045207
<b>Breed:</b>	Australian Shepherd	<b>Microchip #:</b>	956000004556152
<b>Sex:</b>	Male	<b>Certificate Date:</b>	Nov. 10, 2017
<b>DOB:</b>	May 2016		

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

Coat Color/Trait Test	Gene	Genotype	Interpretation
B Locus (Brown)	TYRP1	B/b	Black coat, nose and foot pads (carries brown)

**Interpretation:**

This dog carries one copy of **B** and at least one copy of **b** at the  $b^c$ ,  $b^d$  or  $b^s$  locus 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 50% of its offspring and **b** 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.



**Helen F Smith, PhD**  
Assistant Laboratory Director



**Christina J Ramirez, PhD, DVM, DACVP**  
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. 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.

## Laboratory Report

<b>Laboratory #:</b>	68917	<b>Call Name:</b>	Texas
<b>Order #:</b>	30068	<b>Registered Name:</b>	Mtn Springs Smoke Rings In the Dark
<b>Ordered By:</b>	Deborah Sayre	<b>Breed:</b>	Australian Shepherd
<b>Ordered:</b>	Oct. 31, 2017	<b>Sex:</b>	Male
<b>Received:</b>	Nov. 3, 2017	<b>DOB:</b>	May 2016
<b>Reported:</b>	Nov. 10, 2017	<b>Registration #:</b>	E200091/DN46045207
		<b>Microchip #:</b>	956000004556152

### Results:

Disease	Gene	Genotype	Interpretation
Collie Eye Anomaly	<i>NHEJ1</i>	WT/WT	Normal (clear)
Cone Degeneration	<i>CNGB3</i>	WT/WT	Normal (clear)
Degenerative Myelopathy	<i>SOD1</i>	WT/M	Carrier
Hereditary Cataracts (Australian Shepherd Type)	<i>HSF4</i>	WT/WT	Normal (clear)
Hyperuricosuria	<i>SLC2A9</i>	WT/WT	Normal (clear)
Multidrug Resistance 1	<i>ABCB1</i>	WT/WT	Normal (clear)
Multifocal Retinopathy 1	<i>BEST1</i>	WT/WT	Normal (clear)
Neuronal Ceroid Lipofuscinosis 6	<i>CLN6</i>	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration	<i>PRCD</i>	WT/WT	Normal (clear)

WT, wild type (normal); M, mutant; Y, Y chromosome (male)

### Interpretation:

Molecular genetic analysis was performed for nine specific mutations reported to be associated with disease in dogs. We identified two normal copies of the DNA sequences in eight of the mutations tested. Thus, this dog is not at an increased risk for the diseases associated with these eight mutations. However, we identified one normal copy and one mutant copy of the DNA sequences for *SOD1*. Thus, this dog is a carrier of Degenerative Myelopathy.

### Recommendations:

Degenerative Myelopathy is inherited in an autosomal recessive fashion. Based on this, and the fact that this dog showed a mutation in one copy of the *SOD1* gene, this dog is a carrier of this disease. Although dogs that carry only one copy of this mutation will not be clinically affected, if bred with another carrier, the pairing could produce affected offspring. To avoid producing affected offspring, this dog should be bred with dogs that are normal (WT/WT) for this gene. Dogs related to this dog have an increased risk to be affected by or carry the mutated gene. Additional testing for this mutation is indicated for related dogs.

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.

**ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.**

registered name  
MTN SPRINGS SMOKERINGSINTHEDARK

breed  
AUSTRALIAN SHEPHERD

956000004556152  
tattoo/microchip/DNA profile

1954174  
application number

9/6/2018  
date of report

**RESULTS:**

The results of the examination submitted to OFA indicate that no evidence of patellar luxation was recognized.

owner  
DEBORAH SAYRE  
618 COUNTY RD 2261  
VALLEY VIEW, TX 76272

DN46045207  
registration no.

M  
sex

5/15/2016  
date of birth

27  
age at evaluation in months

AS-PA747/27M/P-VPI  
OFA NUMBER

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

A Not-For-Profit Organization



NORMAL - PRACTITIONER

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

www.ofa.org

ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

registered name  
MTN SPRINGS SMOKERINGSINTHEDARK

breed  
AUSTRALIAN SHEPHERD

548284  
film/test/lab #

956000004556152  
lat/lon/microchip/DNA profile

1954174  
application number

11/8/2018  
date of report

DN46045207  
registration no.

M  
sex

5/15/2016  
date of birth

28  
age at evaluation in months

AS-EYE2716/28M-VPI  
O.F.A. NUMBER

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

A Not-For-Profit Organization



RESULTS:

Based upon the exam dated 9/25/2018, this dog has been found to be free of observable inherited eye disease and has been issued an Eye Certification Registry Number which is valid for one year from the time of the exam.

owner  
DEBORAH SAYRE  
618 COUNTY RD 2261  
VALLEY VIEW, TX 76272

*Handwritten signature: G.G. Keller, D.V.M.*  
G.G. KELLER, D.V.M., M.S., DACVR  
CHIEF OF VETERINARY SERVICES

www.ofa.org

ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

registered name  
MTN SPRINGS SMOKERINGSINTHEDARK

breed  
AUSTRALIAN SHEPHERD

registration no.  
DN46045207

sex  
M

date of birth  
5/15/2016

age at evaluation in months  
27

A Not-For-Profit Organization



AS-36439G27M-VP1

OFA NUMBER

This number listed with the right to correct or revoke by the Orthopedic Foundation for Animals

956000004556152  
lasttwo/microchip/DNA profile

1954174  
application number

9/12/2018  
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:

GOOD

owner  
DEBORAH SAYRE  
618 COUNTY RD 2261  
VALLEY VIEW, TX 76272

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

www.ofa.org



Established 1957

# AUSTRALIAN SHEPHERD CLUB OF AMERICA, INC.®

presents to the **AUSTRALIAN SHEPHERD**  
**MTN SPRINGS SMOKE RINGS IN THE DARK DNA-VP**

Registration No. **E200091**

## THE AWARD OF DNA-VP

*has been verified and recorded in the DNA Database.*  
having fully completed the requirements of this club

On this date **June 7, 2019**

**OWNER**  
**DEBORAH K SAYRE**



**June 7, 2019**  
**Issued this date**

  
**ASCA President**