



PUG PYRUVATE KINASE DEFICIENCY (PK DEF) TEST REPORT

<p><i>Provided Information:</i></p> <p>Name: MYSTIC RIVERS WITCH PLEASE "BLAIR"</p> <p>Registration: KQ4213264MW Litter</p>	<p>Case: NCD249284</p> <p>Date Received: 22-Jan-2025</p> <p>Report Issue Date: 28-Jan-2025</p> <p>Report ID: 0542-2169-8839-1184</p> <p style="text-align: center; font-size: small;">Verify report at vgl.ucdavis.edu/verify</p>
<p><i>DOB:</i> 11/27/2024 <i>Sex:</i> Female <i>Breed:</i> Pug <i>Color:</i> Black</p>	
<p><i>Call Name:</i> Blair</p>	
<p><i>Sire:</i> FESTIVALS SOUL IDRIS ELBA <i>Reg:</i> 1139413 <i>Microchip:</i></p>	<p><i>Dam:</i> NORTHGATE'S RAIZIN' THE BAR <i>Reg:</i> KQ4213264 <i>Microchip:</i></p>

PUG PK DEFICIENCY RESULT

N/N

Interpretation

- N/N:** No copies of the PKDef mutation; dog is normal.
- N/K:** 1 copy of the PKDef mutation; dog is a carrier and unaffected but has half the normal Pyruvate Kinase activity of N/N dogs.
- K/K:** 2 copies of the PKDef mutation; dog is affected.



**PUG PYRUVATE KINASE DEFICIENCY (PK DEF) TEST
 REPORT**

<p><i>Client/Owner/Agent Information:</i> BRANDI BLACK</p>	<p><i>Case:</i> NCD249284 <i>Date Received:</i> 22-Jan-2025 <i>Report Issue Date:</i> 28-Jan-2025 <i>Report ID:</i> 0542-2169-8839-1184</p> <p style="text-align: right;">Verify report at vgl.ucdavis.edu/verify</p>
<p><i>Name:</i> MYSTIC RIVERS WITCH PLEASE "BLAIR"</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 PK Deficiency test results, please visit our website at: vgl.ucdavis.edu/test/pkdef-dog

For terms and conditions of testing, please see 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 · (530) 752-2211



DEGENERATIVE MYELOPATHY (DM) TEST REPORT

<p><i>Provided Information:</i></p> <p><i>Name:</i> MYSTIC RIVERS WITCH PLEASE "BLAIR"</p> <p><i>Registration:</i> KQ4213264MW Litter</p>	<p><i>Case:</i> NCD249284</p> <p><i>Date Received:</i> 22-Jan-2025</p> <p><i>Report Issue Date:</i> 28-Jan-2025</p> <p><i>Report ID:</i> 7983-3490-7038-1151</p> <p style="text-align: center; font-size: small;">Verify report at vgl.ucdavis.edu/verify</p>
<p><i>DOB:</i> 11/27/2024 <i>Sex:</i> Female <i>Breed:</i> Pug <i>Color:</i> Black</p>	
<p><i>Call Name:</i> Blair</p>	
<p><i>Sire:</i> FESTIVALS SOUL IDRIS ELBA <i>Reg:</i> 1139413 <i>Microchip:</i></p>	<p><i>Dam:</i> NORTHGATE'S RAIZIN' THE BAR <i>Reg:</i> KQ4213264 <i>Microchip:</i></p>

RESULT

INTERPRETATION

Degenerative Myelopathy (DM)	N/DM
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1 copy of the DM mutation.

DEGENERATIVE MYELOPATHY (DM) TEST REPORT

<p><i>Client/Owner/Agent Information:</i> BRANDI BLACK</p>	<p><i>Case:</i> NCD249284 <i>Date Received:</i> 22-Jan-2025 <i>Report Issue Date:</i> 28-Jan-2025 <i>Report ID:</i> 7983-3490-7038-1151</p> <p style="text-align: center; font-size: small;">Verify report at vgl.ucdavis.edu/verify</p>
<p><i>Name:</i> MYSTIC RIVERS WITCH PLEASE "BLAIR"</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 DM test results, please visit our website at:
vgl.ucdavis.edu/test/degenerative-myelopathy

For terms and conditions of testing, please see 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).

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Degenerative Myelopathy is associated with a genetic variant in the *SOD1* gene (c.118G>A). We therefore denote this associated allele as DM on our reports.

Many dog breeds carry the *SOD1* allele associated with Degenerative Myelopathy. The following breeds have been reported as having **clinically-affected** individuals with two copies of the *SOD1* associated variant (denoted on our report as **DM/DM**): American Eskimo Dog, Australian Shepherd, Bernese Mountain Dog, Bloodhound, Borzoi, Boxer, Cardigan Welsh Corgi, Cavalier King Charles Spaniel, Chesapeake Bay Retriever, Czech Wolfhound, English Springer Spaniel, German Shepherd, Golden Retriever, Hovawart, Kerry Blue Terrier, Labrador Retriever, Pembroke Welsh Corgi, Pug, Rhodesian Ridgeback, Rough Collie, Soft Coated Wheaten Terrier, Standard Poodle, and Wire Fox Terrier. Testing is advisable for these breeds.

There have also been reports of crossbred dogs with two copies of the *SOD1* allele that were clinically affected by degenerative myelopathy.

What do the results mean for my dog?

Within clinically-affected breeds, dogs with two copies of DM (**DM/DM**) are considered at higher risk for developing clinical signs of DM. However, not all dogs that are DM/DM will develop clinical signs of disease, and not all cases of degenerative myelopathy are explained by the DM/DM result.

Why some DM/DM dogs display symptoms of disease and others do not, is not yet known, but one hypothesis is that there are other genetic modifiers that contribute to risk. This is still under investigation.

Dogs with one copy of DM (**N/DM**) are not expected to develop clinical signs of degenerative myelopathy. They are considered carriers, because they carry the allele associated with disease.

Dogs with **N/N** genotype do not have this *SOD1* variant associated with degenerative myelopathy.

Please note that there may be other causes for degenerative myelopathy in the dog that are not explained by the *SOD1* variant (c.118G>A) tested by the VGL.

What about breeding my dog?

Dogs with a DM/DM genotype will pass on the DM allele to all of their offspring.

Dogs with an N/DM genotype may pass on the DM allele to ~50% of their offspring. If bred to another N/DM dog, 25% of puppies will be expected to have a DM/DM genotype and be at increased risk for developing DM.

For more detailed information about DM, visit <https://vgl.ucdavis.edu/test/degenerative-myelopathy>



**SUSCEPTIBILITY TO PUG DOG ENCEPHALITIS (PDE)
 TEST REPORT**

Provided Information:		Case:	NCD249284
Name:	MYSTIC RIVERS WITCH PLEASE "BLAIR"	Date Received:	22-Jan-2025
Registration:	KQ4213264MW Litter	Report Issue Date:	28-Jan-2025
		Report ID:	5662-8692-3769-5099
Verify report at vgl.ucdavis.edu/verify			
DOB: 11/27/2024 Sex: Female Breed: Pug Color: Black			
Call Name: Blair			
Sire:	FESTIVALS SOUL IDRIS ELBA	Dam:	NORTHGATE'S RAIZIN' THE BAR
Reg:	1139413	Reg:	KQ4213264
Microchip:		Microchip:	

Susceptibility to Necrotizing Meningoencephalitis (NME) Result

N/N

Interpretation

- N/N:** No copies of the NME associated markers (homozygous for normal). These dogs have a low risk of developing NME.
- N/S:** One copy of the NME associated marker (heterozygous for susceptibility). These dogs have a low risk of developing NME.
- S/S:** Two copies of the NME associated marker. These dogs are 12.75 times more likely to develop NME in their lifetime.

SUSCEPTIBILITY TO PUG DOG ENCEPHALITIS (PDE) TEST REPORT

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Name: MYSTIC RIVERS WITCH PLEASE "BLAIR"	

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 PDE test results, please visit our website at:
vgl.ucdavis.edu/test/pde-susceptibility

This is not a diagnostic test for NME in Pug Dogs or for NME disease or risk in other breeds.

For terms and conditions of testing, please see vgl.ucdavis.edu/about/terms-and-conditions

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