

Certagen GmbH | Marie-Curie-Str. 1 | D-53359 Rheinbach

LETORT Céline  
Veaux -  
63820 Laqueuille  
Frankreich

## Test Report

Order No.: 209833  
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### Analysis of the predisposition to dwarfism in Miniature Horses (ACAN D1, D2, D3, D4)

Name: VL Gator Divine Star  
Lab-No.: 201800136 Identification: A218000  
Gender: female Date of birth: 2013-04-25

Test	Inheritance	Result
ACAN	recessiv	Normal (N/N)

**Remark:** The analysis was performed by a partner laboratory.  
In literature 4 mutations in the ACAN gene were described which are responsible for dwarfism in Miniature Horses. The genotypes D1/D1, D1/D2, D1/D3 and D1/D4 are lethal. Therefore, breeding with D1 carriers should be avoided.

**Legend:**  
**Normal:** The animal does not carry the mutation. When used in breeding this animal will not spread the predisposition into the population.  
**Carrier:** The animal is heterozygous for the predisposition. When used in breeding on average 50% of the offspring will inherit the mutated allele. Carriers (D1, D2, D3, D4) of the predisposition will not show dwarfism-like symptoms.  
**Affected:** The animal has two mutated alleles and will be affected by disproportionate dwarfism. When used in breeding all offspring will inherit a mutated allele.  
**Lethal:** Affected animals with a D1 genotype (D1/D1, D1/D2, D1/D3 or D1/D4) are not viable.  
**Unknown:** The genotypes D3/D3 and D4/D4 have not been detected in any animal yet. Therefore, the effect of these mutations remains unclear.

**Comment:** -

Rheinbach, 2018-02-08

**Please note:**

Sampling and shipment has been done by the client. All results and identifications refer to the samples and information sent by the customer and cannot be verified by Certagen.

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## SKELETAL ATAVISM REPORT

LETORT CÉLINE VEAUX 63820 LAQUEUILLE FRANCE	<b>Case:</b> <b>NQ54722</b> <b>Date Received:</b> 13-Jan-2020 <b>Print Date:</b> 17-Jan-2020 <b>Report ID:</b> 2720-8386-6350-2102 Verify report at <a href="http://www.vgl.ucdavis.edu/myvgl/verify.htm">www.vgl.ucdavis.edu/myvgl/verify.htm</a>
<b>Name:</b> <b>DIVINE</b> <b>YOB:</b> <b>Sex:</b> <b>Mare</b> <b>Breed:</b> <b>Miniature Horse</b>	<b>Reg:</b>

### Skeletal Atavism Test Result

**N/N**



#### Interpretation of Results

<b>N/N</b>	Normal. No copies of the skeletal atavism mutations detected.
<b>N/Del1</b>	Carrier. 1 copy of a skeletal atavism mutation detected.
<b>N/Del2</b>	Carrier. 1 copy of a skeletal atavism mutation detected.
<b>Del1/Del1</b>	Affected. 2 copies of mutation detected.
<b>Del2/Del2</b>	Affected. 2 copies of mutation detected.
<b>Del1/Del2</b>	Affected. 2 copies of mutation detected.

Skeletal atavism (SA) is a heritable recessive defect of bone development that occurs in Shetland ponies and American Miniature horses. SA limb deformities progressively worsen with age and usually lead to euthanasia within six months.

For more information on Skeletal Atavism test, see  
<https://www.vgl.ucdavis.edu/services/horse/SkeletalAtavism.php>  
<http://www.capiletgenetics.com/en/skeletal-atavism-test-eng>