dr. van haeringen laboratorium b.v.

a VHLGenetics company

Analysis Certificate

Animal data

Name: Date of birth: Sexe: CRUZ CONTROL 23.11.2014 Male

Reg. nr.: PUPJE ZWART Breed: German Shepherd Sample data

VHL_ID: Test ID-nr: Material: H72334 72198 13 Swab

H806 - DM - Date of test: 23.12.2014

Testresult: NORMAL

W.A. van Haeringen, PhD Executive Director



H806 - DM

Explanation about the result:

NORMAL: The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

CARRIER: The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

AFFECTED: The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

VHL exercises the utmost care in performing each of its engagements. No party other than the principal may derive any rights from the results of these engagements, and the principal expressly indemnifies VHL in respect of any third-party claims. VHL policy provides that any complaints must be received within eight days of the completion of an engagement and imposes restrictions on liability. In that respect, VHL refers to its General Conditions, which are applicable to all engagements VHL performs and which were enclosed with the submission form. These General Conditions can also be reviewed at www.vhlgenetics.com. The work VHL performs is based on the material and/or data it receives from its principal. This report may only be copied in its entirety. The organization is ISO:9001 certified for all her work. A few tests are performed under accreditation. For a complete overview of accredited tests, please visit www.vhlgenetics.com. This test is based on PCR technology.

(Certificate nr: H16546/Date of issue: 22.12.2015)

page 1 of 1 <end of report>

Agro Business Park 100,NL-6708 PW Wageningen - T.+31(0)317416402 - F.+31(0)317426117 - info@vhlgenetics.com - www.vhlgenetics.com Chamber of commerce Arnhem 09112692 - VAT nr NL8088.07.973.B.01

dr. van haeringen laboratorium b.v.

a VHLGenetics company

Analysis Certificate

Animal data

Name: Date of birth: CRUZ CONTROL 23.11.2014

Male

Sexe: Reg. nr.: Breed:

PUPJE ZWART German Shepherd Sample data

VHL_ID: Test ID-nr: Material:

H76319 77124 1 Swab

H872 - Pituitary Dwarfism - Date of test: 16.01.2015

Testresult: NORMAL

W.A. van Haeringen, PhD **Executive Director**



H872 - Pituitary Dwarfism

Explanation about the result:

NORMAL: The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

CARRIER: The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

AFFECTED: The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

NO RESULT: The genetic test for this mutation is known to exist in a few breeds. This may lead to a situation where the test does not produce a result. In such cases, it is not possible to determine whether an animal is free, carrier or affected for this mutation.

VHL exercises the utmost care in performing each of its engagements. No party other than the principal may derive any rights from the results of these engagements, and the principal expressly indemnifies VHL in respect of any third-party claims. VHL policy provides that any complaints must be received within eight days of the completion of an engagement and imposes restrictions on liability. In that respect, VHL refers to its General Conditions, which are applicable to all engagements VHL performs and which were enclosed with the submission form. These General Conditions can also be reviewed at www.vhlgenetics.com. The work VHL performs is based on the material and/or data it receives from its principal. This report may only be copied in its entirety. The organization is ISO:9001 certified for all her work. A few tests are performed under accreditation. For a complete overview of accredited tests, please visit www.vhlgenetics.com. This test is based on PCR technology

(Certificate nr: H16349/Date of issue: 17.12.2015)

page 1 of 1 <end of report>