

**REFERENCE NO.:** 2019 - 27050

**OWNER:**

SJÖLUND INGER  
SCHULWEG 16  
CH-2562 PORT  
SWITZERLAND

**NAME/LABEL:**

HECTOR VOM SEEHAIN  
**SPECIES:** DOG  
**BREED:** COLLIE ROUGH  
**SEX:** MALE  
**MICROCHIP NO.:** 756098000041519  
**TATOO NO.:** NOT PROVIDED  
**PEDIGREE NO.:** NOT PROVIDED

## GENETIC REPORT

**SAMPLE:** BLOOD

**SAMPLE TAKEN BY:** UTA VON BODUNGEN, DVM

**REQUESTED TEST:** COLLIE EYE ANOMALY (CEA)

**RESULT:** CARRIER

**COMMENT :**

The test examines presence or absence of NHEJ1 gene mutation (c.588+462\_588+8260del7799bp) described as the cause for collie eye anomaly (CEA) in several dog breeds. The disease is characterized by different level of impairment of retina and choroid sclera that occurs during development of the eye. Collie eye anomaly is inherited as an autosomal recessive trait.

Regarding to the presence of tested mutation animals are classified in three groups:

- Clear (wt/wt) - mutation is not present, normal genotype
- Carrier (mut/wt) - one of two alleles carries tested mutation, disease is not clinically manifested
- Affected (mut/mut) - both alleles carry tested mutation, disease is clinically manifested

For each group different breeding strategies should be followed. Breeding of affected and carrier animals should be avoided. If particularly valuable animal is classified as affected, it should be bred only with clear animal. In such case, all first generation siblings will be carriers. If a carrier is bred with clear animal, 50% of siblings are expected to be clear. In case two carriers are bred, 25% of siblings are expected to be clear and 50% are expected to be carriers. However, 25% of siblings are expected to be affected, therefore such breeding practice is discouraged.

AUTHORIZED SIGNATURE:

MARIBOR, 18.06.2019