

# Result report certificate

## Detection of mutation in dog PRCD gene

**Customer**

Judy Challenger  
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**Sample**

Sample: 18331  
Name: KissMe Its All About Andy  
Breed: Miniature American Shepherd  
Reg. number: DN32398201  
Date of birth: Aug 8, 2011  
Sex: male  
Date received: 07.02.2013  
Sample type: buccal swab

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## Result: N/N

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**Result codes:**

N/N clear (normal homozygote)  
N/P carrier (heterozygote)  
P/P affected (mutated homozygote)

**Explanation**

Mutation 1298G>A in PRCD gene in CFA9 (canine chromosome 9) has been examined. This mutation induces progressive retinal atrophy – prcd (progressive rod cone degeneration). Disease causes the degeneration of retinal cells in the eye. Firstly, rod cells are affected and the animal develops night blindness. Later, cone cells degenerate. That results in complete blindness of animal. The age of onset of disease varies, but, generally, it cannot be recognized before the adulthood of the animal.

Prcd-PRA is inherited as an autosomal recessive trait. That means the disease affects dogs with P/P genotype only. The dogs with P/N genotype are considered carriers of the disease (heterozygotes). In offspring of two heterozygous animals following genotype distribution can be expected: 25 % N/N (healthy non-carriers), 25 % P/P (affected), and 50 % N/P (healthy carriers).

The PRA-prcd mutation was found in following dog breeds: Am. Eskimo Dog, Austr. Cattle Dogs, Austr. Shepherd (normal, mini), Austr. Stumpy Tail Cattle Dog, Retriever (Chesapeake Bay, Golden, Labrador, Nova Scotia Duck Tolling), Chinese Crested Dog, Cockapoos, Cocker Spaniel (Am., Engl.), Basenji, Poodles (Dwarf, Miniature, Toy), Entlebucher Mountain Dog, Lapphund (Swedish, Finnish), Goldendoodle, Karelian Bear Dog, Kuvasz, Magyar Vizsla, Labradoodle, Lapponian Herder, Norwegian Elkhound, Papillon, Water Dog (Portuguese, Spanish), Terrier (Silky, Yorkshire). With lower probability, other breeds can be also affected by PRA-prcd.

Report date: 13.02.2013

Responsible person: Mgr. Markéta Dajbychová, Analyst



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