

# Result report certificate

## Detection of mutation in dog PRCD gene

**Customer**

Melinda Vierig / Lulu's Lil  
Aussies  
8047 S. Danish Oaks Drive  
84093 Cottonwood Heights, UT  
United States

**Sample**

Sample: 9991  
Name: HUGHES TOYS LULU'S LIL HUNT IS OVER -  
TRIGGER  
Breed: Toy Australian Shepherd  
Reg. number: -  
Microchip: -  
Date of birth: 6-7-2011  
Sex: male  
Date received: 09.09.2011  
Sample type: buccal swab

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## Result: N/P

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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: 16.09.2011

Responsible person: Mgr. Markéta Dajbychová, Analyst



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