

# Result report certificate

## Detection of mutation in dog PRCD gene

### Customer

Gerda van Empel  
Dollemanstraat 2  
7223kg BAAK  
Netherlands

### Sample

Sample: 45391  
Name: Marveil Zucchero  
Breed: English Cocker Spaniel  
Microchip: 380 260 080 295 807  
Reg. number: 3015442  
Date of birth: 16-11-2014  
Sex: male  
Date received: 22.04.2016  
Sample type: buccal swab

## Result: N/N



clear (normal homozygote)



carrier (heterozygote)



affected (mutated homozygote)

### Explanation

Presence or absence of mutation 1298G>A in PRCD gene in CFA9 (canine chromosome 9) has been examined. This mutation induces PRA-prcd (Progressive Retinal Atrophy form Progressive Rod Cone Degeneration). Disease causes degeneration of retinal cells. Firstly, rods are affected and night blindness develops in the animal. Later, cones degenerate. That results in complete blindness of the animal. The age of onset of disease varies, but, generally, it cannot be recognized before the adulthood of the animal.

Mutation that causes Prcd-PRA is inherited as an autosomal recessive trait. That means the disease trait. That means the affects dogs with P/P genotype only. The dogs with N/P 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. Shepered (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 also suffer from PRA-prcd.



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Responsible person: Mgr. Kateřina Štampachová, Analyst

DAJBYCH SLOVAKIA, s.r.o., Madridská 3, 040 13 Košice, Slovak Republic, ICO: 36186058, www.prcdtest.com, e-mail: lab@prcdtest.com