

Detection of 18 bp insertion in position -53 5'UTR of the CMAH gene implicating feline blood group phenotype

Customer: Jan Novák, Dlouhá 1, 30000 Plzeň, Czech Republic

Sample:

Sample: 08-12346

Date received: 01.01.2008

Sample type: buccal swab

Information provided by the customer

Name: Madame Théophile DEMO

Breed: Persian cat

Date of birth: 31.12.1909

Reg. number: (CZ)ABCD EF 123/45/XYZ

Microchip: 123 456 789 012 345

Sex: female

Date of sampling: 01.01.2008

The identity of the animal has been checked.

Result: Based on mutation examination genotype was determined non-b/b

Explanation

Presence or absence of 18 bp insertion in position -53 5'UTR of the CMAH gene implicating feline blood group phenotype was tested. Genetic test is based on detection of allele **b**, which is linked to feline serological B blood group.

Result codes:

- **non-b/non-b** – **b** allele not detected, serological blood group A or AB
- **non-b/b** – one copy of **b** allele detected, **b** allele carrier, serological blood group A or AB
- **b/b** – two copies of **b** allele detected, serological group B

The genetic test is not suitable for Ragdoll and Turkish Angora cats.

The knowledge of blood groups in cats is important in any need of blood transfusion and in case of neonatal isoerythrolysis (NI) in newborn kittens. Kittens can suffer from NI in case of crossbreeding of a B blood type female cat to a A blood type male cat. Risk arises for kittens with A blood group (in fact these kittens are genetically A/b). Kittens are fed with colostrum containing anti-A antibodies. These anti-A antibodies destroy their own erythrocytes. Within a few hours hemolytic disease develops and kittens are in danger of life. Accompanying symptoms of hemolytic disease are disappearance of suction reflex, lethargy, restlessness, icterus, brown colour of urine. The main prevention of NI is to find out blood groups of parent cats to prevent mating a B blood type female cat to a A blood type male cat.

Method: SOPAgriseq_feline, MPS

Date of issue: 06.01.2008

Date of testing: 12.06.2008 - 06.01.2008

Approved by: Mgr. Martina Šafrová, Laboratory Manager

