

VeriSNP™ for Cats includes:

- **Identity/Parentage Markers and Sex determinate markers**
- Polycystic Kidney Disease (**PKD**)
- Mucopolysaccharidosis Type VI,VI Mild and MPSVII (**MPS1, MPSM and MPS7**)
- Hypertrophic Cardiomyopathy (**MYBPC3 M and MYBPC3R**)
- Progressive Retinal Atrophy (**PRA**)
- B blood type (**BLDAB**)
- Albino (**ALBIN**)
- Cinnamon (**CINNAM**)
- Chocolate (**CHOC2**)
- Points (**Points1 and Points2**)
- Recessive black (**BLCK**)
- Dilute (**DILUT**)
- FGF5 longhair (**FGF5_1, 2,and 4**)

Understanding your VeriSNP™ Results in Cats

-/- IS NEGATIVE - The cat does not possess the physical attribute and/or disease being tested and therefore will not pass it to its offspring.

+/- IS A CARRIER - The cat carries the physical attribute and/or disease being tested and has one normal gene and one affected gene and therefore will pass the trait to 50% of its offspring.

+/+ IS POSITIVE - The cat carries the physical attribute and/or disease being tested and has two affected genes and therefore will pass the trait to 100% of its offspring.

Understanding the abbreviations for identity, physical attributes and diseases:

1. Identity and Sex

Markers starting with FC – These are identity markers used to identify the cat and to compare the cat to its sire and dam for parent verification. The 4 letters seen over this group of FC markers are abbreviations for the 4 nucleic acids (T,A,C,G) that comprise DNA and are inherited from the parents.

ZFXY1 and ZFXY2 - These are sex determinate markers.

2. Disease Markers

MPS1 and 7- Mucopolysaccharidosis more SEVERE form The mucopolysaccharidoses (MPS) 1 are a group of lysosomal storage disorders that involve the deficiency of specific enzymes required for the degradation of glycosaminoglycans. The disease is characterized by the lysosomal accumulation and urinary excretion of glycosaminoglycan dermatan sulfate . The clinical phenotype or appearance of MPS VI patients ranges from severe to relatively mild. The severe phenotype is characterized by growth retardation, coarse facial features, joint stiffness, corneal clouding, skeletal deformities, and organ and soft tissue involvement. As a result of DS storage in the heart valve and lung, the normal function of these organs is often compromised, leading to early death in affected individuals. (Please consult your veterinarian for all symptoms and complete information)

MPSM- Mucopolysaccharidosis MILD form This is the mild form of MPS1 (see above) (Please consult your veterinarian for all symptoms and complete information.)

MYBPC3M- Hypertrophic Cardiomyopathy (HCM) This is the form of HCM observed in Maine Coon cats. It causes heart failure in affected animals. (Please consult your veterinarian for all symptoms and complete information.)

MYBPC3R- Hypertrophic Cardiomyopathy (HCM) This is the form of HCM observed in Ragdoll cats. It causes heart failure in affected animals. (Please consult your veterinarian for all symptoms and complete information.)

PKD- Polycystic Kidney Disease This disease causes kidney failure in affected animals. (Please consult your veterinarian for all symptoms and complete information.)

PRA- Progressive retinal atrophy is a disease that causes the retina in the back of the eye to degenerate causing poor vision and blindness. (Please consult your veterinarian for all symptoms and complete information.)

BLDAB - B Blood Group This test determines the B blood type in cats. Being highly antigenic, it can be the cause of transfusion reactions and neonatal isoerythrolysis. (Please consult your veterinarian for all symptoms and complete information.) This test is not validated in Ragdolls and Turkish Angora and results may differ from serologic results.

Physical Attributes

ALBIN- Albino coloration

CINNAM- Cinnamon coloration

Point1-Siamese points

Point 2-Burmese points

CHOC2-Chocolate coloration.

DILUT - Dilute coloration This is a mutation that affects both types of melanin and results in black to grey and orange to cream color, chocolate to lilac/lavender.

BLCK- Black coloration This is a recessively inherited black color found as a deletion in the agouti gene.

FGF5_1, FGF5_2 and FGF5_4 (FGF5_4 has 3 markers)- These are markers for long hair. In order to have long hair, either the cat needs to be +/+ at one of these markers or +/- at any two of these markers which are FGF51, 2, and 4.