

UNDERSTANDING VERISNP™ DNA TEST RESULTS

1. IDENTITY PROFILE

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

ZFXY1 and **ZFXY2** are markers for sex. XX (female), XY (male).

2. DISEASE PROFILE

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

+/- IS A CARRIER - Your 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 - Your 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.

If you have a carrier (+/-) at least one or both of the parents will have to be tested to determine which parent is the carrier. If one or both of the parents have been previously tested, you will automatically have the data to know which one is the carrier. This is a good reason for having all of your breeding cats tested and on file in CatGenes data banks.

MPS1 - Mucopolysaccharidosis (SEVERE form). The mucopolysaccharidoses (MPS)1 is 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, 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. **If your MPS1 results show +/+ or +/-, please consult your veterinarian for complete information.**

MPSM - Mucopolysaccharidosis MILD form. This is the mild form of MPS1 (see above). **If your MPSM results show +/+ or +/-, please consult your veterinarian for complete information.**

MYBPC3M - Hypertrophic Cardiomyopathy (HCM) - This is the form of HCM observed in **Maine Coon** cats. It causes heart failure in affected animals. **If your MYBPC3M results show +/+ or +/-, please consult your veterinarian for complete information.**

MYBPC3R - Hypertrophic Cardiomyopathy (HCM) - This is the form of HCM observed in **Ragdoll** cats. It causes heart failure in affected animals. **If your MYBPC3R results show +/+ or +/-, please consult your veterinarian for complete information.**

PKD - Polycystic Kidney Disease - This disease causes kidney failure in affected animals. **If your PKD results show +/+ or +/-, please consult your veterinarian for 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 (destruction of red blood cells) when a Type-B cat is bred to a Type-A cat. Type AB is very rare, but can occur. It usually does not cause reactions.

3. PHYSICAL CHARACTERISTICS (COLOR PROFILE)

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

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ALBIN - Albino coloration

CINNAM - Cinnamon coloration

Point1 - Siamese points

Point 2 - Burmese color shading

CHOC2 - Chocolate coloration

DILUT - Dilute coloration

This is a dilution that affects both types of melanin and results in a visual color change of black to blue, red 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, FGF5_4 – Hair length

These are markers for longhair. In order to be a longhair, either the cat needs to be +/+ at one of these markers or +/- at any two of these markers. Ragdolls and Maine Coons require an additional test that will be available soon.

The results of these tests should be used to indicate a genetic possibility of clinical disease. We recommend sharing these test results with your veterinarian. Further consultation with your own veterinarian is advised if the results indicate a positive disease marker.