

## HEALTHGENE IS NOW TESTING FOR SPOTTING ALLELES

The major sequence of genes affecting the allocation of melanocytes (pigment responsible for hair color) in dogs are commonly called the "S" or spotting series - alleles that affect the distribution of pigment bearing cells. When these cells are absent, unpigmented white patches appear. If one of these patches of white skin is taken and transplanted into a dark colored spot on the animal the resulting transplant will remain white since it has no pigment cells. White appears commonly on the toes and tail tips in most breeds unless extreme selection is exercised in breeding programs. All other things being equal, the colored spots are larger in dogs with full color (especially black) and smaller in littermates who are paler, diluted colors. Here is the breakdown of each spotting allele.

### **S, solid color.**

This is the normal gene in breeds without white markings. An "SS" dog can completely lack white, but it can also express very minor white markings - white toes, white tail tip, or a star or streak on the chest. "SS" breeds generally fault these markings.

### **s(i), Irish spotting.**

Irish spotting is generally limited to the neck, the chest, the underbody, the legs and the tail tip. White does not cross the back between the withers and the tail, though it may appear on the back of the neck.

### **s(p), piebald.**

The piebald and Irish spotting seems to overlap in phenotype in one direction, while piebald and extreme white overlap in the other. In general, it seems a piebald has more than 50% white, white often crosses the back and the pattern gives the impression of fairly large colored spots on a white ground.

HealthGene now offers the spotting allele test for the following breeds (please, note that testing only for S and s(p) alleles are available):

- Great Dane,
- Newfoundland,
- German Longhaired and Shorthaired Pointers,
- Poodle.

To learn more about available test for your breed, please visit [www.healthgene.com](http://www.healthgene.com)