# Long Hair

**Applicable breeds:** Chihuahua, Chow Chow, Dachshund, German Shepherd, Cardigan Welsh Corgi, Pembroke Welsh Corgi, St Bernard, Saluki, Weimaraner

> Please note this test is only relevant in specific breeds; in other breeds where long hair occurs other, as yet undiscovered, genes are responsible.

Long or short hair lengths are acceptable or desirable in some breeds, such as Dachshunds, German Shepherd, Weimaraners etc., and some breeders may want to identify which of their breeding stock carry long hair. In other breeds, such as Pembroke Welsh Corgis, the appearance of long-haired offspring, termed "fluffies" is undesirable.

This test will identify those short-haired dogs which carry the gene for long hair. These carriers can produce offspring with long hair (sometimes described as "rough" or "fluffy") when mated with other carriers. The gene for long hair is denoted L, and the gene for short hair is denoted S.

**This test is particularly useful for breeders:**
- To identify short-haired dogs which carry the long-hair gene, and could therefore produce long-haired offspring when mated with other carriers
- To confirm that their apparently long-haired dog does indeed have the long hair gene

**This test will be reported as:**

**SS** : dog is short-haired and does not carry the long-hair gene
**SL** : dog is short-haired but carries the long-hair gene
**LL** : dog is long-haired and carries two long-hair genes

**The genetic status of dogs can be used to predict breeding outcomes when different combinations are mated:**

SS X SS     = 100% SS
SS X SL     = 50% SS, 50% SL
SL X SL     = 25% SS, 50% SL, 25% LL
SL X LL     = 50% SL, 50% LL
LL X LL     = 100% LL

**References**
Housley DJE, Venta PJ (2006) The long and short of it: evidence that FGF5 is a major determinant of 'hair'-itability. Animal Genetics 37: 309-315
Cadieu E, Neff MW, Quignon P, Walsh K, Chase K, Parker HG, VonHoldt BM, Rhue A, Boyko A, Byers A, Wong A, Mosher DS, Elkahloun AG, Spady TC, Andre C, Lark KG, Cargill M, Bustamante CD, Wayne RK, Ostrander EA (2009) Coat variation in the domestic dog is governed by variants in three genes. Science 326(5949): 150-153