

Cream dilution coat colour

Applicable breeds: Numerous breeds

The basic coat colour can be diluted by several genes one of which is Cream. This gene has a dosage effect such that two copies of Cream give a more diluted coat colour than one copy. One copy of this gene converts a chestnut to palomino and a bay to dun, whereas two copies lightens the coat further converting a chestnut to cremello and a bay to perlino. Cream has a more subtle effect on a basic black coat colour, converting this to "smoky black" (one copy) and "smoky cream" (two copies).

This test is particularly useful for breeders:

- to determine whether their horse carries copies of the Cream dilution gene, rather than other dilution genes which can resemble the coat colours shown here. The results from this test can help in predicting possible coat colours which could be obtained from proposed breeding combinations.

This test will be reported as:

$C^{CR}C^{CR}$: two Cream dilution genes. Coat will be either cremello, perlino or smoky cream depending upon the red factor and bay/black genes, and in the absence of any other dilution genes.

$C^{CR}C$: one Cream dilution gene. Coat will be either palomino, buckskin or smoky black depending upon the red factor and bay/black genes, and in the absence of any other dilution genes.

CC : no evidence of Cream dilution gene. Coat will be either chestnut, bay or black depending upon the chestnut and bay/black genes, and in the absence of any other dilution genes.

Reference:

Mariat D, Taourit S, Guerin G (2003) A mutation in the MATP gene causes the cream coat colour in the horse. *Genetics Selection Evolution* 35: 119 – 133

No Cream gene (CC)

Chestnut (ee-- CC)



One Cream Gene (C^{CR}C)

Palomino (ee-- C^{CR}C)



Two cream genes (C^{CR}C^{CR})

Cremello (ee-- C^{CR}C^{CR})



Bay (E-A- CC)



Buckskin (E-A- C^{CR}C)



Perlino (E-A- C^{CR}C^{CR})



Black (E-aa CC)



Smoky black (E-aa C^{CR}C)



Smoky Cream (E-aa C^{CR}C^{CR})

