**Table S5**: *Mc1r* R301C and R306ter allelic states for 43 dogs belonging to 13 distinct modern breeds and 6 present day wolves. In bold: presence of the R301C or R306ter mutation either at homozygous or heterozygous state.

The R306ter premature stop codon, in the dog melanocortin receptor 1 (MC1R) gene, is present in the homozygous state in dogs in dogs with red or yellow coat color *(1, 2)*.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Species** | **Sample reference** | **Breed or subspecies** | ***MC1R* R301C (this study)** | | ***MC1R* R306ter (described in Newton 2000) *(1*,*2)*** | | |
| ***Number of clones with the R301C mutation (C -> T)*** | ***Allelic state*** | ***Number of clones with the R306ter mutation (C -> T)*** | | ***Allelic state*** |
| *Canis lupus familiaris* | Atout Coeur | Siberian Husky | 5/12 | **T / C** | 0/12 | C / C | |
| Dayak | 0/12 | C / C | 0/12 | C / C | |
| Farell | 6/12 | **T / C** | 0/12 | C / C | |
| Shelly | 4/12 | **T / C** | 0/12 | C / C | |
| Ambre | 5/8 | **T / C** | 0/8 | C / C | |
| Fraie | 10/10 | **T / T** | 0/10 | C / C | |
| Damyka | Alaskan malamute | 11/11 | **T / T** | 0/11 | C / C | |
| Phantom | 12/12 | **T / T** | 0/12 | C / C | |
| Unaaq | 10/10 | **T / T** | 0/10 | C / C | |
| Bandit | 12/12 | **T / T** | 0/12 | C / C | |
| Heilani | 4/12 | **T / C** | 5/12 | **T / C** | |
| Jenny | 12/12 | **T / T** | 0/12 | C / C | |
| 7728 | Sharpei | 0/7 | C / C | 0/7 | C / C | |
| 7826 | 0/8 | C / C | 3/8 | **T / C** | |
| 8238 | 0/8 | C / C | 1/8 | **T / C** | |
| 7220 | Chowchow | 0/8 | C / C | 8/8 | **T / T** | |
| 7663 | 0/8 | C / C | 0/8 | C / C | |
| 8248 | 0/8 | C / C | 8/8 | **T / T** | |
| 6347 | Akita | 0/8 | C / C | 0/8 | C / C | |
| 6430 | 0/7 | C / C | 6/7 | **T / C** | |
| 6495 | 0/8 | C / C | 0/8 | C / C | |
| 7622 | 0/8 | C / C | 4/8 | **T / C** | |
| 3298 | Eurasier | 0/8 | C / C | 0/8 | C / C | |
| 5272 | 0/8 | C / C | 0/8 | C / C | |
| 5985 | 0/8 | C / C | 5/8 | **T / C** | |
| 2960 | Greyhound | 0/8 | C / C | 0/8 | C / C | |
| 3159 | 0/7 | C / C | 0/7 | C / C | |
| 3277 | 0/8 | C / C | 0/8 | C / C | |
| 1685 | Saluki | 0/8 | C / C | 8/8 | **T / T** | |
| 1686 | 0/8 | C / C | 0/8 | C / C | |
| 1687 | 0/7 | C / C | 0/7 | C / C | |
| 4675 | Dogue du tibet | 0/7 | C / C | 0/7 | C / C | |
| 4676 | 0/8 | C / C | 0/8 | C / C | |
| 8210 | 0/8 | C / C | 0/8 | C / C | |
| 6637 | Boxer | 0/8 | C / C | 0/8 | C / C | |
| 6801 | 0/8 | C / C | 0/8 | C / C | |
| 6805 | 0/8 | C / C | 0/8 | C / C | |
| 5212 | Samoyède | 0/8 | C / C | 8/8 | **T / T** | |
| SAM | 0/7 | C / C | 7/7 | **T / T** | |
| 5128 | Chihuahua | 0/7 | C / C | 0/7 | C / C | |
| 6454 | 0/7 | C / C | 0/7 | C / C | |
| 7423 | Beagle | 0/7 | C / C | 4/7 | **T / C** | |
| 7947 | 0/8 | C / C | 0/8 | C / C | |
| *Canis lupus* | 6812 | Arctic wolf | 0/8 | C / C | 0/8 | C / C | |
| 7056 | 0/8 | C / C | 0/8 | C / C | |
| 6813 | Grey wolf | 0/12 | C / C | 0/12 | C / C | |
| 7036 | 0/11 | C / C | 0/11 | C / C | |
| 7180 | 0/12 | C / C | 0/12 | C / C | |
| 7269 | Undetermined | 0/12 | C / C | 0/12 | C / C | |

**References:**

1. Newton JM, *et al.* (2000) Melanocortin 1 receptor variation in the domestic dog. *Mammalian Genome* **11**, 24.
2. Everts RE, Rothuizen J, van Oost BA (2000) Identification of a premature stop codon in the melanocyte-stimulating hormone receptor gene (*MC1R*) in Labrador and Golden retrievers with yellow coat colour. *Animal Genetics* **31**, 194.