

## **Caracul-like 6, a dominant mutation resembling *Krt2-6g<sup>Ca</sup>* (caracul) and mapping to the same chromosomal location.**

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Mutation (allele) symbol: *Cal6*

Mutation (allele) name: caracul-like 6

Gene symbol: *Cal6*

Strain of origin: B6.129S4-*C4<sup>tm1Crr</sup>/J*

Current strain name: B6.129S4-*C4<sup>tm1Crr</sup>/J*- *Cal6/GrsrJ*

Stock #005211

Phenotypic categories: Hair

### **Abstract**

A spontaneous, dominant, curly coat mutation resembling caracul (*Krt2-6g<sup>Ca</sup>*) has been discovered and named caracul-like 6 (*Cal6*). This mutation maps to Chromosome 15 in the same region as *Krt2-6g<sup>Ca</sup>*. *Cal6* may be a remutation to *Krt2-6g<sup>Ca</sup>* however a direct test for allelism was not performed because caracul is only available as frozen embryos.

### **Origin and Description**

This spontaneous mutation was discovered in a production colony of B6.129S4-*C4<sup>tm1Crr</sup>/J* mice at the Jackson Laboratory in May of 2001 by Serrena Lovley. Mice carrying the *Cal6* mutation are easily recognizable at 3 weeks of age by their very curly coat and kinked vibrissae. With age, the coat of mutant mice straightens some and appears to be rubbed the wrong way, while the vibrissae are kinked to a lesser degree. The original caracul mutation has a very similar dominant phenotype showing wavy hair and curved vibrissae and the waves disappear with age, but the hair continues to have a plush look. (MGD 2004)

### **Genetic Analysis**

To determine the mode of inheritance an affected (*Cal6/+*) female was mated to an unrelated normal C57BL/6J male. In 2 litters produced, 7 progeny were affected and 4 were normal, thus proving the mutation to be dominant.

*Cal6* maps between *D15Mit76* and *D15Mit16* and is non-recombinant with *D15Mit44* in 21 animals typed. The Ensembl placement of these markers and *KRT2-6gCa* is *D15Mit76* at 96.9 Mb, *D15Mit44* at 101.0Mb, *Krt2-6gCa* at 103.9, and *D15Mit16* at 105 Mb.

Consequently, it is likely that *Cal6* is a remutation to *Krt2-6g<sup>Ca</sup>*.

### **Pathology**

Our standard pathology screen revealed no lesions in an 8-week-old *Cal6/+* mouse mutant and a *+/+* control. Auditory-evoked brainstem response testing revealed normal hearing in 2 *Cal6/+* and 2 *+/?* controls.

### **Discussion**

Based on its phenotype and chromosomal location *Cal6* may be a remutation to *Krt2-6g<sup>Ca</sup>*.

### **Acknowledgements**

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### **References**

Mouse Genome Database (MGD) Mouse Genome Informatics Project, The Jackson Laboratory, Bar Harbor, Maine.  
MGSC19.32.2., Mouse Genome Sequencing Consortium ([ensembl.org/Mus\\_musculus](http://ensembl.org/Mus_musculus))