Caracul-like 5, a dominant mutation resembling *Krt2-6g*^{Ca} (caracul) and mapping to the same chromosomal location.

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Mutation (allele) symbol: *Cal5*

Mutation (allele) name: caracul-like 5

Gene symbol: *Cal5*

Strain of origin: SWR/J

Current strain name: SWR/J- *Cal5*/GrsrJ

Stock #:005131

Phenotype categories: Hair

Abstract
A spontaneous, dominant, curly coat mutation resembling caracul (*Krt2-6g*^{Ca}) has been discovered and named caracul-like 5 (*Cal5*). This mutation maps to Chromosome 15 in the same region as *Krt2-6g*^{Ca}. *Cal5* may be a remutation to *Krt2-6g*^{Ca} however a direct test for allelism was not performed.

Origin and Description
This spontaneous mutation was discovered in a production colony of SWR/J mice at the Jackson Laboratory in August of 2001 by Dawn Martin. Mice carrying the *Cal5* 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.

Genetic Analysis
To determine the mode of inheritance an affected female was mated to an unrelated normal C57BL/6J male. In 2 litters produced, 8 progeny were affected and 7 were normal, thus proving the mutation to be dominant.

Cal5 maps between *D15Mit76* and *D15Mit263* and is non-recombinant with *D15Mit44* in 21 animals typed. The Ensembl placement of these markers and *KRT2Ca* is *D15Mit76* at 96.9 Mb, *D15Mit44* at 101.0Mb, *D15Mit263* at 101.3 Mb, *Krt2-6g*^{Ca} at 103.9. Consequently, it is likely that *Cal5* is a remutation to *Krt2-6g*^{Ca}.

Pathology
Our standard pathology screen revealed dyskeratosis of the follicles and hyperplasia of

the skin in a 4-week old *Cal5*/+ mutant mouse. At 8-weeks of age a different *Cal5*/+ mouse mutant and a +/+ control had no lesions. Auditory-evoked brainstem response testing revealed no significant hearing loss in 2 *Cal5*/+ and 2 +/? controls tested at 4 weeks of age.

Discussion

Based on it's phenotype and chromosomal location *Cal5* may be a remutation to *Krt2-6g*^{Ca}.

Acknowledgements

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References

Mouse Genome Database (MGD) Mouse Genome Informatics Project, The Jackson Laboratory, Bar Harbor, Maine. World Wide Web

MGSC19.32.2., Mouse Genome Sequencing Consortium (ensembl.org/Mus_musculus/)