

Pearl 13 Jackson, a remutation of the *Ap3b1* gene

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Mutation (allele) symbol: *Ap3b1*^{pe-13J}

Mutation (allele) name: Pearl 13 Jackson

Gene symbol: *Ap3b1*

Strain of origin: STOCK Tg(CAG-GFPU)B5Nagy/J

Current strain name: STOCK Tg(CAG-EGFP)B5Nagy/J-*Ap3b1*^{pe-13J}/GrsrJ

Stock #: 005444 (Available only as DNA from the Jackson Laboratory DNA Resource)

Phenotype categories: Coat color

Origin and Description

The *Ap3b1*^{pe-13J} remutation was discovered by Dolly Rossi in a production colony of STOCK TgN(GFPU)5Nagy/J mice in Annex 2 at the Jackson Laboratory on September 24, 2003. Mice homozygous for this spontaneous, recessive remutation are recognizable by a diluted gray coat color not different from the original pearl allele. A smaller amount of pigment in the eyes makes them appear lighter in color, and the ears, feet and tail are lighter in color than control littermates. Both homozygous males and females breed and live a normal lifespan.

Genetic Analysis

In order to determine the mode of inheritance, a female, homozygous for this new mutation, was mated to an unrelated C56BL/6J male. No affected offspring were observed in the F1 generation produced from this mating. Mice from this F1 generation were then mated together to produce F2s, and in this cross both affected and unaffected animals were produced showing that the mutation is recessive.

A direct test for allelism was set up by mating a female homozygous for the new mutation to a male homozygous for *Ap3b1*^{pe-11J}. This mating produced 1 litter in which all offspring were affected (5/5 animals), proving the new mutation to be an allele of *Ap3b1*^{pe}. The *Ap3b1*^{pe} gene is located at the 47 cM position on Mouse Chromosome 13 (MGD).

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