Pearl 16 Jackson, a remutation of the *Ap3b1* gene

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Mutation (allele) symbol: *Ap3b1*$^{pe\text{-}16J}$

Mutation (allele) name: pearl 16 Jackson

Gene symbol: *Ap3b1*

Strain of origin: C57BL/6J-*jc*/J

Current strain name: C57BL/6J *Sobp*^{jc}-*Ap3b1*$^{pe\text{-}16J}$/GrsrJ

Stock #005961 available only as DNA from The Jackson Laboratory DNA Resource

Phenotype categories: Coat color

Origin and Description

The *Ap3b1*$^{pe\text{-}16J}$/J remutation was discovered by Sandra Gray in a Mouse Mutant Resource colony of C57BL/6J-*jc*/J (stock #000563) mice at the Jackson Laboratory on October 6, 2005. Mice homozygous for this spontaneous, recessive mutation are recognized by a diluted gray coat color. Like the original *Ap3b1*^{pe} mutation, the *Ap3b1*$^{pe\text{-}16J}$/J mutation also lightens the eyes, ears, feet and tail of homozygotes. (See photos – ventral and dorsal). The coat color of mice homozygous for pearl does darken slightly with age, as does the new *Ap3b1*$^{pe\text{-}16J}$/J. Both homozygous males and females breed and live a normal lifespan. Descriptions of three other remutations of the *Ap3b1* gene, *Ap3b1*$^{pe\text{-}13J}$, *Ap3b1*$^{pe\text{-}14J}$, and *Ap3b1*$^{pe\text{-}15J}$ are also available on this website.

Genetic Analysis

Based on the phenotypic similarities of this new mutation to the previously described *Ap3b1*^{pe} mutation on Chromosome 13, a direct test for allelism was set up by mating a female heterozygote from the strain B10.RIII *H2*^{r} *H2-T18*^{b}/(71NS)Sn- *Ap3b1*$^{pe\text{-}11J}$/J (stock #003599) to a male homozygous for this new mutation. This mating produced 9 progeny in two litters, of which 6 mice were affected and 3 were not, proving the new mutation to be an allelic with *Ap3b1*$^{pe.}$

Pathology

A routine pathological screen of mice carrying *Ap3b1*$^{pe\text{-}16J}$ mutation was not performed.

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