Beige 16 Jackson: a remutation of the *Lyst* gene

Richard M. Samples, Patricia F. Ward-Bailey, Leah Rae Donahue, Roderick T. Bronson, and Muriel T. Davisson

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Mutation (allele) symbol: $Lyst^{bg\text{-}16J}$

Mutation (allele) name: beige 16 Jackson

Gene symbol: *Lyst*

Strain of origin: B6.129S7-$Rag1^{tm1Mom}$/J

Current strain name: B6(129S7) $Rag1^{tm1Mom}$-$Lyst^{bg\text{-}16J}$/J

Stock #006126

Phenotype categories: coat color

Abstract

A spontaneous, recessive remutation of $Lyst^{bg}$ has been discovered and named beige 16 Jackson ($Lyst^{bg\text{-}16J}$). The mutation causes affected mice to have a lighter coat color than non-affected littermates. A direct test for allelism confirmed that this new mutation is an allele of $Lyst^{bg}$.

Origin and Description

Mice carrying this new remutation to $Lyst^{bg}$ were discovered by Sabrina Gifford in a production colony of B6.129S7-$Rag1^{tm1Mom}$/J mice (stock #002216) at the Jackson Laboratory on June 08, 2005. Mice homozygous for this spontaneous, recessive mutation are recognized by a diluted coat color. Like the original $Lyst^{bg}$ mutation this new remutation also lightens the color of the eyes, feet, ears, and tail in affected animals.

Genetic Analysis

A direct test for allelism was accomplished by mating a homozygous B6(129S7) $Rag1^{tm1Mom}$-$Lyst^{bg\text{-}16J}$/J male mouse to two SB/LeJ (stock# 000269) females ($Lyst^{bg}$/ $Lyst^{bg}$) homozygous for satin and beige. These matings produced 36 offspring in 5 litters and all 36 animals displayed the beige phenotype proving that this new remutation is an allele of $Lyst^{bg}$.

Pathology

Hearing as assessed by auditory-evoked brainstem response testing of one homozygous mutant at two months of age revealed no hearing loss.

The eyes of 1 homozygous mutant mouse at two months of age were tested with an ophthalmoscope and showed pigment loss in the iris and retina which is typical of mice

carrying the beige mutation.

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