These transgenic mice express Cre recombinase under the control of the human beta hemoglobin (HBB) promoter and intron 2-enhancer fragment, and the human beta hemoglobin locus control region (LCR). When crossed with a strain containing a loxP site-flanked sequence, Cre-mediated recombination results in deletion of the targeted sequence in erythroid tissues. These Cre recombinase expressing mutant mice may be useful in generating tissue specific-targeted mutants useful in studies of erythropoiesis and hematopoiesis.

Donating Investigator
Kenneth R Peterson, University of Kansas Medical Center
Details

Detailed Description

These transgenic mice express Cre recombinase under the control of the human beta hemoglobin (HBB) promoter and intron 2-enhancer fragment, and the human beta hemoglobin locus control region (LCR). Cre recombinase expression is detected in blood, brain, gonads, spleen and liver by RT-PCR analysis and in blood by RNase protection assay analysis. During development Cre activity is restricted to erythroid tissues. The Donating Investigator reports that recombination occurs at 50-100% efficiency in erythroid/megakarycytic cell lineages beginning at onset of hematopoiesis at approximately embryonic day 7.5. When crossed with a strain containing a loxP site-flanked sequence, Cre-mediated recombination results in deletion of the flanked sequence in erythroid tissues. Mice hemizygous for the transgenic insert are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. This strain represents an effective tool for generating tissue specific-targeted mutants useful in studies of erythropoiesis and hematopoiesis.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tg(HBB-cre)12Kpe

Disease/Phenotype

Disease Terms

Research Areas By Phenotype
Genotyping Protocols
Standard PCR: Tg(HBB-Cre)
Standard PCR: Tg(HBB-cre)12Kpe
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, these mice can be bred as hemizygotes. The Donating Investigator has not attempted to make this strain homozygous.

Additional Breeding and Husbandry Support

Citation
When using the C57BL/6-Tg(HBB-cre)12Kpe/J mouse strain in a publication, please cite the originating article(s) and include JAX stock #008314 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200

Pricing & Availability

Cryo Recovery
Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

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<th>SERVICE/PRODUCT</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
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<tr>
<td>Cryo Recovery</td>
<td>Hemizygous or non-carrier for Tg(HBB-cre)12Kpe</td>
<td>$2,854.50</td>
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