B6.Cg-Comm10 Tg[Vav1-icre]A2Kio/J

Stock No: 008610 | Vav-iCre

Congenic, Transgenic

PLACE ORDER

2–4 week lead time for most orders depending on quantity and age range requested

Also Known As: Vav-iCre

Vav-iCre transgenic mice have the mouse HS21/45 control regions directing expression of an optimized variant of Cre recombinase (iCre) to hematopoietic cells (and their progenitors), and may be useful for generating conditional mutations in hematopoietic cells.

In Goodwin et al. 2017 bioRxiv, it was discovered that the transgene integrated into an intron of Comm10 (COMM domain containing 10) on chromosome 18– creating a Comm10 null allele.

Donating Investigator

Dimitris Kioussis, MRC Natl Inst for Med Research

READ MORE +

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tr>
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**Comm10 Tg[Vav1-icre]A2Kio**

Allele Type

Transgenic (Recombinase-expressing, Null/Knockout)

VIEW GENETICS

RESEARCH APPLICATIONS

Hematological Research
Immunology, Inflammation and Autoimmunity Research
Cancer Research
Research Tools
Developmental Biology Research

VIEW ALL RESEARCH APPLICATIONS
Details

Detailed Description

These transgenic mice express Cre recombinase under the control of the mouse vav 1 oncogene (Vav1) promoter. The transgene integrated into an intron of Commd10 (COMM domain containing 10) on chromosome 18. The insertion results in a functional knock-out of Commd10 in homozygous mice.

Mice hemizygous for this Vav-iCre transgene are viable and fertile, with the mouse HS21/45-vav control regions directing expression of an optimized variant of Cre recombinase (iCre) to hematopoietic cells (and their progenitors). Using crosses to a reporter strain, variegated germ line (testis and ovaries), and heart and gut expression is also reported. When bred with mice containing a loxP-flanked sequence of interest, Cre-mediated recombination will result in deletion of the floxed sequencel(s) in the offspring. These Vav-iCre transgenic mice may be useful for generating conditional mutations in hematopoietic cells.

Joseph et al. 2013 Cell Stem Cell 13:520 reports that Vav-iCre mice express iCre in hematopoietic cells and endothelial cells, as well as in the testes. For Cre-lox experiments and to avoid germline deletion of the floxed allele, researchers may consider breeding Vav-iCre females with floxed males. However, female germline expression may also be observed (see below).

If the recombinase activity pattern of this allele is further characterized by the Genetic Resource Science group at The Jackson Laboratory, such findings will be reported on the Mouse Genome Informatics (MGI) Allele Detail entry (Commd10^{tgVav1-iCre}A2Ko). This same information would also be found searching the MGI Recombinase Activity database.

This Vav-iCre strain (Stock No. 008610) allows reliable deletion of specific genes throughout the entire hematopoietic compartment, whereas the hCD2-iCre strain (Stock No. 008520) allows targeting to be focused to T cells and B cells.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Commd10^{tgVav1-iCre}A2Ko

Disease/Phenotype
Genotyping Protocols
Standard PCR: Generic iCre
MELT: Generic iCre
High Resolution Melting: Tg(Vav1-cre)A2Kio
Genotyping resources and troubleshooting

Dietary Information
LabDiet® 5K52 formulation (6% fat)

Breeding Considerations
When maintaining a live colony, hemizygous mice may be bred to wildtype (noncarrier) siblings or to C57BL/6J. The donating investigator reports that homozygous mice are not viable.
Joseph et al. 2013 Cell Stem Cell 13:520 reports that Vav-iCre mice express iCre in hematopoietic cells and endothelial cells, as well as in the testes. For Cre-lox experiments and to avoid germline deletion of the floxed allele, researchers may consider breeding Vav-iCre females with floxed males. However, female germline expression may also be observed (see the Mouse Genome Informatics (MGI) Allele Detail entry: Commd10^Tg(Vav1-cre)A2Kio^).

Additional Breeding and Husbandry Support

Mating System
Noncarrier x Hemizygote

Citation
When using this mouse strain in a publication, please cite the originating article(s) and include JAX stock #008610 in your Materials and Methods section.

Facility Barrier Level Descriptions

FGB29 (Standard)

Pricing & Availability
2–4 week lead time for most orders depending on quantity and age range requested

Domestic  International
Pricing effective for USA, Canada and Mexico shipping destinations
Live Mouse

<table>
<thead>
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<th>AGE</th>
<th>SEX</th>
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<th>PRICE</th>
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<td>Hemizygous for Commd10 (^{TgLVav1-icreA2Xio})</td>
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<td>Hemizygous for Commd10 (^{TgLVav1-icreA2Xio})</td>
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<td>Approx 4-8 weeks</td>
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<td>Noncarrier</td>
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Breeder Pair

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Email: TechTran@jax.org

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Related Strains

- **All**
- **By Allele**
- **By Gene**
- **By Collection**

All Related Strains
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Shipments have begun at our new facility, allowing increased access to JAX mouse models.