B6. Crag1<sup>tm1Mom</sup> Fcgr<sup>tm1Dcr</sup> Tg(CAG-FCGRT)276Dcr/DcrJ

Stock No: 016919 | Rag1/- mFcRn/- hFcRn Tg 276

Congenic, Targeted Mutation, Transgenic

PLACE ORDER

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

Also Known As: Rag1/- mFcRn/- hFcRn Tg 276

Rag1 Fcgrt FCGRT knock-out/transgenic mice are immunodeficient and therefore applicable for xenograft studies. This humanized model may be useful in evaluating the pharmacokinetics, the pharmacodynamics and/or efficacy testing of human Fc-based molecules (e.g. human IgG, Fc-fusion proteins) or for analyzing the immunogenicity of antibodies.

Need assistance evaluating antibodies in FcRn mice? Human preclinical pharmacokinetic (PK) analysis is available. See our FcRn full service platform.

Donating Investigator
Dr. Derry Roopenian, The Jackson Laboratory

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td>Tg(CAG-FCGRT)276Dcr</td>
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</table>

Allele Type
Transgenic (Inserted expressed sequence, Humanized sequence)

Rag1<sup>tm1Mom</sup>

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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</thead>
<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Rag1</td>
<td>recombination activating gene 1</td>
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</tbody>
</table>

Fcgrt<sup>tm1Dcr</sup>

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Fcgrt</td>
<td>Fc receptor, IgG, alpha chain transporter</td>
</tr>
</tbody>
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Details

Detailed Description

Rag1 Fcgrt FCGRT mice harbor knockout alleles of the Fcgrt (formerly FcRn) and Rag1 genes and express a human FCGRT (FcRn α-chain) transgene under the CAG promoter. These mice have a normal level of serum albumin, but are deficient in mature B- and T-cells. In this model, longer half-lives are observed with mice homozygous for the human FCGRT transgene when compared to hemizygous mice, indicating that higher copy number correlates with higher expression of FcRn and provides greater protection of IgG from clearance. This model is useful for pharmacokinetic and pharmacodynamic studies of human IgG. It has been shown to be useful for screening of hIgGs in evaluations of serum half-life. Being immunodeficient, they are suitable for efficacy testing requiring xenografts. Zalevsky et. al. 2010 have shown good correlation between this mouse model and studies performed with Cynomolgus monkeys.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tg(CAG-FCGRT)276Dcr
Genotyping Protocols
Separated PCR: Tg(FCGRT)
Standard PCR: Fcgr1tm1Dcr
Standard PCR: Rag1tm1Mom
Standard PCR: Fcgr1tm1Dcr

Breeding Considerations
When maintaining a live colony, mice homozygous for the FcRn α-chain targeted allele (Fcgr1tm1Dcr), homozygous for the RAG1null allele (Rag1tm1Mom), and hemizygous or homozygous for the hFcRn (276) transgene (Tg(CAG-FCGRT)276Dcr) may be bred together.

Citation
When using the Rag1/-/mFcRn/-/ hFcRn Tg 276 mouse strain in a publication, please cite the originating article(s) and include JAX stock #016919 in your Materials and Methods section.

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.
We will fulfill your order by providing at least two carriers for each strain ordered. The total number, sex, and genotypes provided will vary, although typically 8 or more animals are provided. Please check genotypes which will be recovered. While the genotypes of all animals produced will be communicated to you prior to scheduling shipment, the genotypes of animals provided may not reflect the mating scheme and genotypes described in the strain description. Animals are typically ready to ship in 11-14 weeks. If a second recovery is required to produce the minimum number of animals, then delivery time would increase to approximately 25 weeks. If we fail to produce animals of the correct genotype, you will not be charged. We cannot guarantee the reproductive success of mice shipped to your facility. If the mice are lost after the first three days (post-arrival) or do not produce progeny at your facility, a new order and fee will be necessary.

Cryorecovery to establish a Dedicated Supply for greater quantities of mice. Mice recovered can be used to establish a dedicated colony to contractually supply you mice according to your requirements. Price by quotation.

**Payment Terms and Conditions**

Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are rendered are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside agencies and court filings.

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Terms of Use

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Email: TechTran@jax.org

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All

By Allele

By Gene

By Collection

All Related Strains