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

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

- *Rag1*<sup>tm1Mom</sup>
- *Fcgrt*<sup>tm1Dcr</sup>
- Tg(CAG-FCGRT)276Dcr

Disease/Phenotype

- Disease Terms
- Research Areas By Phenotype
- Mammalian Phenotype Terms by Genotype
- References

Technical Support

Genotyping Protocols
Separated PCR: Tg(FCGRT) alternate1
Standard PCR: Fcgrt
Standard PCR: Rag1Alternate1
Standard PCR: Fcgrt Alternate1
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, mice homozygous for the FcRn α-chain targeted allele (*Fcgrt*<sup>tm1Dcr</sup>), homozygous for the RAG1<sup>null</sup> allele (*Rag1*<sup>tm1Mom</sup>), and hemizygous or homozygous for the hFcRn (276) transgene (Tg(CAG-FCGRT)276Dcr) may be bred together.

Additional Breeding and Husbandry Support
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.

Animal Health Reports
Facility Barrier Level Descriptions

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

Pricing & Availability

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>Homozygous for Rag1&lt;tm1Mom&gt;, Homozygous for Fcgrt&lt;tm1Dcr&gt;, Hemizygous for Tg(CAG-FCGRT)276Dcr</td>
<td>$2,854.50</td>
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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.

THE JACKSON LABORATORY’S GENOTYPE PROMISE

The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. Therefore, we cannot guarantee a strain’s phenotype will meet all expectations. To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project. We do not guarantee breeding performance and therefore suggest that investigators order more than one breeding pair to avoid delays in their research.
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