NOD.Cg-Rag1^{tm1Mom} Fanca^{em1Dvs} Il2rg^{tm1Wjl}/SzJ

Stock No: 026062 | ARGN

- Congenic, Targeted Mutation, Endonuclease-Mediated Mutation

REPOSITORY LIVE

PLACE ORDER

3–6 week lead time for most orders depending on quantity and age range requested

Also Known As: ARGN

ARGN mice lack exon 37 of the Fanconi anemia, complementation group A (Fanca) gene and are maintained on a NOD.Cg-Rag1^{tm1Mom} Il2rg^{tm1Wjl}/SzJ (Stock No. 007799) background. This strain may have an enhanced ability to be engrafted with human hematopoietic stem cells.

Donating Investigator

Dr. David Serreze, The Jackson Laboratory

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GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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</thead>
<tbody>
<tr>
<td>Rag1^{tm1Mom}</td>
<td></td>
</tr>
<tr>
<td>Allele Type</td>
<td>Gene Symbol</td>
</tr>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Rag1</td>
</tr>
</tbody>
</table>

| Il2rg^{tm1Wjl}     |            |
| Allele Type        | Gene Symbol | Gene Name            |
| Targeted (Null/Knockout) | Il2rg      | interleukin 2 receptor, gamma chain |

| Fanca^{em1Dvs}    |            |
| Allele Type       | Gene Symbol | Gene Name            |
| Endonuclease-mediated (Hypomorph) | Fanca      | Fanconi anemia, complementation group A |

VIEW GENETICS
Research Applications

Immunology, Inflammation and Autoimmunity Research
Research Tools
Internal/Organ Research
Cancer Research
Hematological Research

Base Price
Starting at:

- $126.04 Domestic price for male
- $280.74 Domestic price for breeder pair

Details

Detailed Description

ARGN mice lack exon 37 of the Fanconi anemia, complementation group A (Fanca) gene and are maintained on a NOD.Cg-Rag1<sup>tm1Mom</sup>Il2rg<sup>tm1Wjl</sup>/SzJ (Stock No. 007799) background. FANCA is a member of the Fanconi anemia (FA) complementation group (FANC) which make up a multi-protein nuclear complex involved in cellular responses to DNA damage and germ cell survival. Mutations in this gene are the most common cause of Fanconi anemia, a heterogeneous recessive disorder characterized by cytogenetic instability, hypersensitivity to DNA crosslinking agents, increased chromosomal breakage, and defective DNA repair. This strain is an immune deficient model of Fanconi’s Anemia which may be used as recipients for human xenografts, which has been shown to give recipients a profound selective growth advantage.

Of note, female mice homozygous for the Fanca<sup>em1Dvs</sup> allele are viable and fertile. Males homozygous for the Fanca<sup>em1Dvs</sup> allele are infertile. When maintaining a live colony, HOM HOM HOM females may be bred to HET HOM HOM males, or NOD.Cg-Rag1<sup>tm1Mom</sup>Il2rg<sup>tm1Wjl</sup>/SzJ inbred mice (Stock No. 007799).

Development

Control Suggestions

Genetics

- Rag<sup>tm1Mom</sup>
- Il2rg<sup>tm1Wjl</sup>
- Fanca<sup>em1Dvs</sup>

Disease/Phenotype
Genotyping Protocols
Probe: Il2rg<sup>tm1Wjl</sup>PROBE
Probe: Fanca<sup>em1Dvs</sup> 2 bp del
MELT: Rag1<sup>tm1Mom</sup> Alternate1
Genotyping resources and troubleshooting

Breeding Considerations
Female mice homozygous for the Fanca<sup>em1Dvs</sup> allele are viable and fertile. Males homozygous for the Fanca<sup>em1Dvs</sup> allele are infertile. When maintaining a live colony, HOM HOM HOM females may be bred to HOM HET HEMI males, or NOD.Cg-Rag1<sup>tm1Mom</sup> Il2rg<sup>tm1Wjl</sup>/SzJ inbred mice (Stock No. 007799).
Additional Breeding and Husbandry Support

Citation
When using the ARGN mouse strain in a publication, please cite the originating article(s) and include JAX stock #026062 in your Materials and Methods section.

Pricing & Availability

Repository Live

3–6 week lead time for most orders depending on quantity and age range requested

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Homozygous for Rag1&lt;sup&gt;tm1Mom&lt;/sup&gt; Il2rg&lt;sup&gt;tm1Wjl&lt;/sup&gt;/SzJ</td>
<td>$140.37</td>
</tr>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Homozygous for Fanca&lt;sup&gt;em1Dvs&lt;/sup&gt; 2 bp del</td>
<td>$140.37</td>
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<tr>
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<td>$126.04</td>
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</table>

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- All
- By Allele
- By Gene
- By Collection

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