NOD.Cg-Rag1 \textsuperscript{tm1Mom} Fanca \textsuperscript{tm1Don} Il2rg \textsuperscript{tm1Wij} /SzJ

Stock No: 026062 | ARGN

- Congenic Targeted Mutation, Endonuclease-Mediated Mutation

REPOSITORY LIVE

PLACE ORDER

3–6 week average lead time depending on quantity and age requests are not accepted
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\textsuperscript{tm1Mom}\nIl2rg\textsuperscript{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

### GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rag1\textsuperscript{tm1Mom}</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Allele Type</strong></td>
<td><strong>Gene Symbol</strong></td>
</tr>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Rag1</td>
</tr>
<tr>
<td><strong>Il2rg\textsuperscript{tm1Wjl}</strong></td>
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<tr>
<td><strong>Fanca\textsuperscript{em1Dvs}</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Allele Type</strong></td>
<td><strong>Gene Symbol</strong></td>
</tr>
<tr>
<td>Endonuclease-mediated (Hypomorph)</td>
<td>Fanca</td>
</tr>
</tbody>
</table>

### RESEARCH APPLICATIONS

- Immunology, Inflammation and Autoimmunity Research
- Research Tools
- Internal/Organ Research
### 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^{tm1Mom}\_ll2rg^{tm1Wjl}/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^{em1Dvs} allele are viable and fertile. Males homozygous for the Fanca^{em1Dvs} allele are infertile. When maintaining a live colony, HOM HOM HOM females may be bred to HET HOM HOM males, or NOD.Cg-Rag1^{tm1Mom}\_ll2rg^{tm1Wjl}/SzJ inbred mice (Stock No. 007799).

### Development

### Control Suggestions

### Genetics

- **Rag1^{tm1Mom}**
- **ll2rg^{tm1Wjl}**
- **Fanca^{em1Dvs}**

### Disease/Phenotype

### Disease Terms
## Genotyping Protocols

Probe: Il2rg^{tm1Wij}PROBE  
Probe: Fanca^{em1Dvs} 2 bp del  
MELT: Rag1^{tm1Mom} Alternate1  
Genotyping resources and troubleshooting

## Breeding Considerations
Female mice homozygous for the Fanca^{em1Dvs} allele are viable and fertile. Males homozygous for the Fanca^{em1Dvs} allele are infertile. When maintaining a live colony, HOM HOM HOM females may be bred to HOM HET HEMI males, or NOD.Cg-Rag1^{tm1Mom} Il2rg^{tm1Wij}/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

3–6 week average lead time depending on quantity and age requests are not accepted

### Repository Live

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
</thead>
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<tr>
<td>Approx 4–8 weeks</td>
<td>Female</td>
<td>Homozygous for Rag1^{tm1Mom} Il2rg^{tm1Wij}/SzJ</td>
<td>$140.37</td>
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**Breeder Pair**

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Terms of Use

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- All
- By Allele
- By Gene
- By Collection

All Related Strains