Overview

Also Known As: Gi1 plus Gi3, Gi1 - Gi3-

Gna1 and Gna3 double knockout mice exhibit fusions of ribs and lumbar vertebrae. This strain may be useful for studying the role of the inhibitory heterotrimeric G proteins.

Donating Investigator

Lutz Birnbaumer, National Institutes of Health
### GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td><strong>Gna1&lt;sup&gt;tm1Lbi&lt;/sup&gt;</strong></td>
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<tr>
<td><strong>Allele Type</strong></td>
<td><strong>Gene Symbol</strong></td>
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<tr>
<td>Targeted (Null/Knockout)</td>
<td>Gna1</td>
</tr>
<tr>
<td><strong>Gna3&lt;sup&gt;tm1Lbi&lt;/sup&gt;</strong></td>
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<tr>
<td>Targeted (Null/Knockout)</td>
<td>Gna3</td>
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</tbody>
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### RESEARCH APPLICATIONS

- Developmental Biology Research
- Internal/Organ Research

### Details

#### Detailed Description

Gna1 (guanine nucleotide binding protein (G protein), alpha inhibiting 1) or Gα1 and Gna3 (guanine nucleotide binding protein (G protein), alpha inhibiting) or Gα3 encode the alpha 1 and 3 subunits of a G protein inhibitory complex. Mice homozygous for these two knockout alleles exhibit fusions of ribs and lumbar vertebrae. The fusion phenotype is more severe than in the homozygous Gna3 knockout. This strain may be useful for studying the role of the inhibitory heterotrimeric G proteins.

#### Development

#### Control Suggestions

#### Selected References

#### Genetics

### Gna1<sup>tm1Lbi</sup>
Genotyping Protocols
MELT: **Generic Neo**
Separated PCR: $\text{Gna}i3^{\text{tm1Lbi}}_{\text{alternate1}}$
High Resolution Melting: $\text{Gna}i1^{\text{tm1Lbi}}_{\text{alternate1}}$
MELT: $\text{Gna}i3^{\text{tm1Lbi}}_{\text{alternate1}}$
Separated PCR: $\text{Gna}i1^{\text{tm1Lbi}}_{\text{alternate1}}$
Probe: **Generic Neo**
Genotyping resources and troubleshooting

Breeding Considerations
While maintaining a live colony, these mice are bred as double homozygotes.
Additional Breeding and Husbandry Support

Citation
When using this strain in a publication, please cite the originating article(s) and include MMRRC stock #37344 in your Materials and Methods section.
Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, **G200**

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