**Overview**

The BXD set of RI strains is used in the genetic analysis of numerous complex or potentially complex physiologic phenotypes. The BXD strains are derived from the C57BL/6J (Stock No. 000664) and DBA/2J (Stock No. 000671) progenitor strains.

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**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F107+51</td>
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<tr>
<td></td>
<td>(2019-10-04 00:00:00)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spontaneous</td>
<td>rol</td>
<td>resistance to osmotic lysis</td>
</tr>
</tbody>
</table>

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**RESEARCH APPLICATIONS**

Research Tools
Neurobiology Research
The BXD RI strains are used to study the genetics of behavioral phenotypes including alcohol and drug addiction, stress, and locomotor activity. The BXD set of RI strains also is used in the genetic analysis of numerous complex or potentially complex physiologic phenotypes including differences in organ weight and bone mineral density. The BXD set of RI strains also are used in the genetic analysis of numerous complex or potentially complex physiologic phenotypes including differences in organ weight and bone mineral density.

The strain distribution pattern (SDP) for the BXD RI strains is available through the Mouse Genome Informatics Contributed Data Sets and Gene Network.

Additional tools and information are presented through the Mouse Phenome Database Specialized Strain Panel Query Form, and Gene Network.

### Development

### Control Suggestions

### Selected References

### Genetics

**rol**

### Disease/Phenotype

### Disease Terms
Genotyping Protocols  
**Genotyping resources and troubleshooting**  
Dietary Information  
LabDiet® 5K52 formulation (6% fat)

**Mating System**  
Sibling x Sibling  
**Appearance**  
black  
Related Genotype: *a/a Tyrp1+/Tyrp1+ Myo5a+/Myo5a+*

**Citation**  
When using the BXD31/TyJ mouse strain in a publication, please cite the originating article(s) and include JAX stock #000083 in your Materials and Methods section.

**Animal Health Reports**  
FGB29 (Standard)

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**Pricing & Availability**

Live mice available in varying quantities. Ask Customer Service for details.

<table>
<thead>
<tr>
<th>Live Mouse</th>
<th>SEX</th>
<th>PRICE</th>
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</thead>
<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>$139.90</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$139.90</td>
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</table>

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Email: TechTran@jax.org

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Related Strains

All

By Allele

By Gene

By Collection

All Related Strains

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