B6.129-Arntl<sup>tm1Bra</sup>/J

Stock No: 009100 | Mop3 -  

Congenic, Targeted Mutation  

REPOSITORY LIVE

PLACE ORDER

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

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Overview

Also Known As: Mop3<sup>-</sup>

The Arntl knock-out strain may be useful in studies of circadian rhythm, arthritis, ankylosis, and glucose homeostasis.

Donating Investigator

Dr. Joseph S. Takahashi, Univ Texas Southwestern Medical Ctr

READ MORE +
**GENETIC OVERVIEW**

**GENETIC BACKGROUND**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td>N15xN1F6</td>
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<tr>
<td></td>
<td>(2018-12-10 00:00:00)</td>
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**Arntl1m1Bra**

<table>
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<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Arntl</td>
<td>aryl hydrocarbon receptor nuclear translocator-like</td>
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</table>

**RESEARCH APPLICATIONS**

- Neurobiology Research
- Mouse/Human Gene Homologs
- Metabolism Research
- Internal/Organ Research

**BASE PRICE**

Starting at:

- $76.22 Domestic price for female
- $47.22 Domestic price for breeder pair

**Details**

**Detailed Description**

These targeted mutation mice exhibit a loss of both behavioral and molecular circadian rhythms. When placed in constant darkness, the mice undergo an immediate loss of circadian rhythmicity. Locomotor activity is impaired in both light and constant dark cycles.

Reduced total activity is seen as the mice age. They display a progressive noninflammatory arthropathy. Little pathology is seen prior to 11 weeks of age, but virtually all homozygotes develop joint ankylosis due to flowing ossification of ligaments and tendons by 35 weeks of age. Bone density and articular cartilage are unaffected.

Inactivation of the gene suppresses diurnal variation in glucose and triglycerides. Gluconeogenesis is abolished in homozygotes, but the counterregulatory response of corticosterone and glucagon to insulin-induced hypoglycemia is retained.

Homozygotes are viable but not fertile and have an increased mortality rate after 26 weeks of age. A truncated, non-functional protein is produced. This strain may be useful in studies of circadian rhythm, arthritis, ankylosis, and glucose homeostasis.
Genotyping Protocols
MELT: Arnt<sup>tm1Bra</sup> Alternate 1
Genotyping resources and troubleshooting

Dietary Information
LabDiet<sup>®</sup> 5K52 formulation (6% fat)

Breeding Considerations
When maintained as a live colony, heterozygotes may be bred. It is recommended that females be disturbed as little as possible because they are prone to killing their litters. Heterozygotes are viable, but both males and females are reportedly sterile.
Additional Breeding and Husbandry Support

Mating System
+/+ sibling x Heterozygote
# Pricing & Availability

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

## Domestic | International
Pricing effective for USA, Canada and Mexico shipping destinations

### Live Mouse

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Heterozygous for Arntl&lt;sup&gt;tm1Bra&lt;/sup&gt;</td>
<td>$271.00</td>
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<tr>
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<td>Male</td>
<td>Heterozygous for Arntl&lt;sup&gt;tm1Bra&lt;/sup&gt;</td>
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<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Wild-type for Arntl&lt;sup&gt;tm1Bra&lt;/sup&gt;</td>
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<td></td>
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<td>Wild-type for Arntl&lt;sup&gt;tm1Bra&lt;/sup&gt;</td>
<td>$76.22</td>
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### Breeder Pair

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<tr>
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### Related Products and Services

- Frozen Mouse Embryo | $2,595.00 per straw or vial

## Payment Terms and Conditions

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Phone: 207-288-6470
Email: TechTran@jax.org

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