B6(Cg)P-m1m1(EUCOMM)Hmg/HzoJ

Stock No: 030715 | Rbm17

Targeted Mutation

PLACE ORDER

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.
Also Known As: *Rbm17<sup>f</sup>*

Exon 4 of the mouse *Rbm17* gene is flanked by loxP sites. Cre-mediated excision of the floxed region results in a null allele. This strain is useful in studies of gene isoform splicing (including splicing of cryptic junctions) and neurodegeneration.

Donating Investigator

Huda Zoghbi, Baylor College of Medicine

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### GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>tm1c(EUCOMM)Hmgm</td>
<td>Generation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted (Conditional ready (e.g. floxed), No functional change)</td>
<td><em>Rbm17</em></td>
<td>RNA binding motif protein 17</td>
</tr>
</tbody>
</table>

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### RESEARCH APPLICATIONS

- Neurobiology Research
- Cancer Research
- Research Tools

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### BASE PRICE

Starting at:

$2,854.50 Domestic price Cryo Recovery

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### Details

- Detailed Description
Rbm17 (RNA binding motif protein 17) is an RNA-binding protein that has been implicated in cancer and neurodegenerative diseases. It is widely expressed in the brain, including the cortex, hippocampus, midbrain, cerebellum and brain stem. RBM17 protein binds ataxin 1 (ATXN1) in a polyglutamine- and phosphorylation-dependent manner. Studies suggest RBM17 normally represses the splicing of cryptic junctions and its loss leads to the inclusion of intronic elements in mature transcripts.

In this targeted mutant strain, exon 4 of the mouse Rbm17 gene is flanked by loxP sites. Cre-mediated excision of the floxed region results in a null allele.

Constitutive loss of Rbm17 in mice causes embryonic lethality before implantation, and hindbrain-specific deletion leads to cerebellar and midbrain abnormalities and early death.

When crossed with Pcp2-cre mice (e.g. Stock No. 004146), postnatally expressing cre recombinase in Purkinje cells starting from day 6, knockout progeny develop ataxia and neurodegeneration. Although compound mutant mice are born at the expected Mendelian ratios and are viable, they develop noticeable ataxia at 8 weeks of age. They show reduced open-field activity and worse performance on the dowel and rotating rod tests compared with controls. This suggests impaired motor coordination. Immunostaining with a calbindin antibody shows rapid and progressive reduction of Purkinje cells in the conditional knockout mice.

When Pcp2-cre;Rbm17<sup>fl</sup> compound mutant mice are further bred to Pcp2-BacTRAP mice (see Stock No. 030266), Purkinje cells express GFP-tagged ribosome subunits. Bioinformatic analysis of RNA-seq datasets shows that loss of Rbm17 causes an upregulation of apoptotic genes and downregulation of ion channel genes.
Genotyping Protocols

**Standard PCR:** Rbm17<sup>tm1c(EUCOMM)Hmgu</sup>

Genotyping resources and troubleshooting

Breeding Considerations
Heterozygous and homozygous floxed mice are viable and fertile.

Additional Breeding and Husbandry Support

**Mating System**
Heterozygote x Heterozygote

**Citation**
When using the Rbm17 mouse strain in a publication, please cite the originating article(s) and include JAX stock #030715 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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**Pricing & Availability**

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

### Cryorecovery - Domestic Not-For-Profit & Academic Pricing

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous or wildtype for Rbm17&lt;sup&gt;tm1c(EUCOMM)Hmgu&lt;/sup&gt;</td>
<td>$2,854.50</td>
</tr>
</tbody>
</table>

We will fulfill your order by providing at least two carriers for each strain ordered. The total number, sex, and genotypes provided will vary, although typically 8 or more animals are provided. Please check genotypes which will be recovered. While the genotypes of all animals produced will be communicated to you prior to scheduling shipment, the genotypes of animals provided may not reflect the mating scheme and genotypes described in the strain description. Animals are typically ready to ship in 11-14 weeks. If a second recovery is required to produce the minimum number of animals, then delivery time would increase to approximately 25 weeks. If we fail to produce animals of the correct genotype, you will not be charged. We cannot guarantee the reproductive success of mice shipped to your facility. If the mice are lost after the first three days (post-arrival) or do not produce progeny at your facility, a new order and fee will be necessary.

Cryo recovery to establish a [Dedicated Supply](#) for greater quantities of mice. Mice recovered can be used to establish a dedicated colony to contractually supply you mice according to your requirements. Price by quotation.

### Related Products and Services

<table>
<thead>
<tr>
<th>RELATED PRODUCT</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen Mouse Embryo</td>
<td>B6(Cg)-Rbm17&lt;sup&gt;tm1c(EUCOMM)Hmgu&lt;/sup&gt;/HzoJ</td>
<td>$2595.00</td>
</tr>
</tbody>
</table>

**Payment Terms and Conditions**

Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are rendered are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside
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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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DONATE