Emx1-IRES-Cre knock-in mice have the endogenous Emx1 locus directing expression of Cre recombinase to approximately 88% of the neurons of the neocortex and hippocampus, and in the glial cells of the pallium. These mice are useful in studies of forebrain development and function.

Donating Investigator

Kevin R. Jones, University of Colorado- Boulder

88% of the neurons of the neocortex and hippocampus, and in the glial cells of the pallium. These mice are useful in studies of forebrain development and function.

Emx1tm1(cre)Krj

Allele Type | Gene Symbol | Gene Name
--- | --- | ---
Targeted (Recombinase-expressing) | Emx1 | empty spiracles homeobox 1
Mice homozygous for the targeted mutation are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. This strain expresses Cre recombinase from the endogenous \textit{Emx1} locus. Western blot analysis of cortical brain tissue does not detect reduced endogenous gene product (protein). When crossed with a strain containing a \textit{LoxP}-site flanked sequence, Cre-mediated recombination results in tissue-specific deletion of the flanked sequence. Recombination occurs in approximately 88\% of the neurons of the neocortex and hippocampus, and in the glial cells of the pallium, mimicking the pattern of expression of the endogenous gene. Further, the donating investigator reports that Cre recombinase is also expressed in a subset of male germline cells. Luo \textit{et al.}, 2020 Neuron 106:37 Table 1 shows that \textit{Emx1-Cre};\textit{floxed} double mutant males bred to \textit{floxed} females produced some offspring with germline deletion of the \textit{floxed} allele. Our findings with Stock No. 022762 suggest that females may also be similarly affected (2014). Additional links below may or may not have identified germline expression.

View cre expression characterization (for Stock No. 005628).

If the recombinase activity pattern of this allele is further characterized by the Genetic Resource Science group at The Jackson Laboratory, such findings will be reported on the Mouse Genome Informatics (MGI) Allele Detail entry. This same information may also be found searching the MGI Recombinase Activity and MGI Gene Expression + Recombinase Activity Comparison Matrix.

**Genetics**

\textit{Emx1}^{\text{tm1T(cre)Krj}}
Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

Genotyping Protocols
Standard PCR: Emx1 Alternate3
Genotyping resources and troubleshooting
Dietary Information
LabDiet® 5K52 formulation (6% fat)
Breeding Considerations

When maintaining a live colony, these mice are bred as homozygotes.

For Cre-lox experiments and to avoid/minimize germline deletion of the floxed allele, see Detailed Description for more details.

Additional Breeding and Husbandry Support
Mating System
Homozygote x Homozygote

Citation
When using the Emx1^{IRES cre}, Emx1-Cre mouse strain in a publication, please cite the originating article(s) and include JAX stock #005628 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

AX10 (Standard)
## Pricing & Availability

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

### Domestic

Pricing effective for USA, Canada and Mexico shipping destinations

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 weeks</td>
<td>Female</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td>5 weeks</td>
<td>Female</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td>6 weeks</td>
<td>Female</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td>7 weeks</td>
<td>Female</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td>8 weeks</td>
<td>Female</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td>9 weeks</td>
<td>Female</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td>10 weeks</td>
<td>Female</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td>11 weeks</td>
<td>Female</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td>12 weeks</td>
<td>Female</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Emx1 tm1(cre)Krj</td>
<td>$270.00</td>
</tr>
</tbody>
</table>

### International

Pricing effective for all other destinations

---

**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 agencies and court filings.

**THE JACKSON LABORATORY'S GENOTYPE PROMISE**

The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. Therefore, we cannot guarantee a strain's phenotype will meet all expectations. To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain...
that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project. We do not guarantee breeding performance and therefore suggest that investigators order more than one breeding pair to avoid delays in their research.

Terms Of Use

TERMS OF USE

General Terms and Conditions

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

Related Strains

All

By Allele

By Gene

By Collection