Mouse Information

**Common Name:** Rbpjl-lacZKO  
**MGI Official Name:** Rbpjl\(^{tm1(lacZ)Macd}\)  
**Description:** This mouse strain has the Rbpjl gene region spanning exons 7, 8, and 9 replaced with lacZ in-frame. A pgk-neo resistance cassette has been removed by Cre-loxP deletion from the founder. Mice heterozygous and homozygous for the lacZ replacement are viable, fertile, of normal size, and do not display any behavioral abnormalities. In mature mice, the pancreas is one-third smaller than normal, due to less acinar tissue. Expression of the lacZ, measured by beta-galactosidase histostaining is very low.

**Categories:** LacZ  

Genetic Alterations

1) **Targeted Mutagenesis**

<table>
<thead>
<tr>
<th>Type of Allele</th>
<th>Global Mutation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Targeted Gene</strong></td>
<td>Recombination signal binding protein for immunoglobulin kappa J region-like (Rbpjl - NCBI GeneID:19668)</td>
</tr>
<tr>
<td><strong>Targeted Allele</strong></td>
<td>Rbpjl(^{tm1Macd}) (Rbpjl(^{tm1(lacZ)}))</td>
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**Description of Targeting Vector**

Targeting vector Rbpjl-KOlacZ contained a 2.4-Kb 5' homology arm (XmaI -XX-Kb to MluI YY-Kb fragment) and a 4.9-Kb 3' homology arm (ScaI +ZZ-Kb to HindIII +AA-Kb) from BAC library RPCI-22, clone K19-559 (BACPAC, Oakland, CA) in a pBSII SK+ cloning vector. The coding sequence of lacZ was inserted in-frame relative to Rbpjl at the MluI site, followed by a neo-resistance gene flanked by loxP sites. An HSV tk cassette was present outside the 3' homology arm.

**Targeting Vector Genbank File**

RBPJLKOseq.gb.txt  

**Citations**

<table>
<thead>
<tr>
<th>PubMed ID</th>
<th>Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>20398665</td>
<td>Replacement of Rbpj with Rbpjl in the PTF1 complex controls the final maturation of pancreatic acinar cells (2010) Gastroenterology 139: 270-80 (Added 2013-04-23 09:40:34.426046)</td>
</tr>
</tbody>
</table>

Strain Information

**Strain Type:** Congenic Strain  
**Chimera/Founder Genetic Background:** 129S6/SvEvTac  
**Current Genetic Background:** C57BL/6 (date recorded: 03/27/2015)  
**Strain Description:** Founder mice were crossed with mice bearing the E2A-tvE transgene to delete the floxed pgk-neo gene from the modified Rbpjl locus. The mice with pgk-neo deleted were backcrossed to C57Bl/6 mice for at least 5 generations.

**Access Status**

This resource is publicly viewable.

**Request this Resource**

Request from a repository  
Primary contributor: MacDonald Lab  
Co-contributed by: BCBC Mouse / ES Cell Core

**Resource Tags**

lacZ, mESC Core, mouse, mouse strain, Rbpjl, Rbpjl-lacZKO

**Resource History & Actions**

Approved on Dec 29, 2007  
Last modified on May 19, 2011

**Related resources**

BCBC  
No matching resources  
Other Consortia  
No matching resources

Data courtesy of dkCOIN. Only public resources are displayed.
Annotated, numbered, conceptual nucleotide sequence of the Rbpjl knockout vector with lacZ replacement. First 9900 bp. BLACK, Bluescript pBSII SK+ cloning vector. MAGENTA, pgk-TK negative selection. BLUE, left arm Rbpjl gene homology from the middle of intron 4 through part of exon 7 (short magenta). GREEN, lacZ gene. (Parts A and B of sequence divided near the end of lacZ gene.) ORANGE, bovine growth hormone 3'UTR with polyA addition signal and site. PURPLE, loxP forward for subsequent deletion of pgk-neo resistance gene. RED, pgk-neo gene. PURPLE, second loxP forward site. BLUE, right arm Rbpjl gene homology from near the beginning of intron 9 to past the end of exon 12.

Reference: Not provided

CONTINUATION of the annotated, numbered, conceptual nucleotide sequence of the Rbpjl knockout vector with lacZ replacement. Last 8.2-Kbp. See description for Rbpjl KO sequenceA.jpg.

Reference: Not provided

Schematic of the Rbpjl gene with its 12 exons showing the region (purple) containing exon 8 and 9 and part of 7 that was replaced with a cassette containing lacZ, the 3'UTR of the bovine growth hormone gene with polyA addition site and a floxed pgk-neomycin resistance gene for selection by homologous recombination. The insertion created an in-frame fusion between the N-terminal region of RBPJL and beta-galactosidase.

Reference: 20398665

Repositories
MacDonald Lab
Stock #: Rbpjl-lacZKO
Availability Notes: Not provided

Contact Information
Preferred Contact
Name Ray MacDonald
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<thead>
<tr>
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<th>University of Texas Southwestern Medical Center</th>
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<td>Primary Lab Contact</td>
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**Associated Publications**
No publications associated

**Comments**
There are no comments for this entry.