This strain carries the same trisomic segment as other strains that are models for Down syndrome, but may have advantages in that...
transmission of the trisomic segment through the female germline is greater and males are fertile.

**GENETIC OVERVIEW**

**Genetic Background**

*Generation*

N11+N22
(2019-06-17 00:00:00)

**Rb(12.Ts17<sup>16</sup>65Dn)2Cje**

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Not Applicable</td>
<td>Rb(12.Ts17&lt;sup&gt;16&lt;/sup&gt;65Dn)2Cje</td>
<td>Robertsonian translocation, Chr 12 and T17&lt;16&gt;Dn, Charles J Epstein 2</td>
</tr>
</tbody>
</table>

**RESEARCH APPLICATIONS**

Neurobiology Research
Mouse/Human Gene Homologs

**BASE PRICE**

Starting at:

- $247.50 Domestic price for female 4-week
- 408.00 Domestic price for breeder pair

**Important Note**

*Pde6b<sup>rd1</sup>*, the recessive retinal degeneration 1 mutation, is segregating in this colony. Animals that are homozygous for *rd1* will be blind.

**Detailed Description**

The trisomic segment in the Rb(12.Ts17<sup>16</sup>65Dn)2Cje strain is genetically identical to the Ts65Dn strains, Stock No. 001924 and Stock No. 005252, with trisomy of the Chr 16 genes, from *Mrpl39* to the distal telomere. Quantitative PCR confirmed the triplication of Chr 16 genes from *App* to *Mx1*. Transmission of the chromosome 16 segmental trisomy through the female germline is significantly improved over Ts65Dn (43% versus 24%). Dendritic spines on granule cells in the fascia dentata are enlarged in size and decreased in density (Villar AJ, et al. 2005). Unlike Ts65Dn, males are fertile. Trisomic mice are 20% smaller in size than
controls. This strain serves a model for Down syndrome.

The \textit{Clcc1}^{m1J} spontaneous mutation, which causes increased sensitivity to endoplasmic reticulum stress in the cerebellum, is a homozygous strain characteristic of C3H/HeSnJ (Jia et al., 2015) so is segregating in this strain.

\section*{Genetics}

\subsection*{Rb(12.Ts17^{16}65Dn)2Cje}

\section*{Disease/Phenotype}

\subsection*{Disease Terms}

\subsection*{Research Areas By Genotype}

\subsection*{Mammalian Phenotype Terms by Genotype}

\section*{References}

\section*{Technical Support}

\section*{Genotyping Protocols}

\textbf{QPCR:} \textit{Ts(17^{16})65Dn}

\textbf{Separated PCR:} \textit{Clcc1}^{m1J}

\textbf{Standard PCR:} \textit{Pde6b}^{rd1}

\textbf{Separated PCR:} \textit{Ts(17^{16})65Dn}

\textbf{Standard PCR:} \textit{Ts(17^{16})65Dn}

\textbf{Standard PCR:} \textit{Pde6b}^{rd1}

\textbf{Probe:} \textit{Pde6b}^{rd1}

\textbf{Genotyping resources and troubleshooting}

\section*{Dietary Information}

\textbf{LabDiet® 5K52 formulation (6% fat)}

\section*{Mating System}

\textit{Rb(12.Ts17^{16}65Dn)2Cje} female x B6EiC3SnF1/J (001875) male or reciprocal

\section*{Appearance}

agouti or black

\textbf{Related Genotype:} \textit{A/A} or \textit{A/a} or \textit{a/a}
When using the B6EiC3Sn-Rb(12.Ts1765Dn)2Cje/CjeDnJ mouse strain in a publication, please cite the originating article(s) and include JAX stock #004850 in your Materials and Methods section.

### Pricing & Availability

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

#### Domestic Pricing for
- Commercial & For-Profit
- Not-For-Profit & Academic

<table>
<thead>
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<th>AGE</th>
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<tr>
<td></td>
<td>Male</td>
<td>Trisomic for distal Chromosome 16</td>
<td>$247.50</td>
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<tr>
<td>4 weeks</td>
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Available for USA, Canada and Mexico shipping destinations.
### Related Products and Services

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<th>Breeder Pair</th>
<th>GENOTYPE</th>
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Email: TechTran@jax.org

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- **By Allele**
- **By Gene**
- **By Collection**

All Related Strains