These TRE-mUbe3a_v1 transgenic mice allow Tet-Off/Tet-On expression of a FLAG-tagged Ube3a splice variant 1 protein, in addition to normal expression of endogenous Ube3a. These mice are useful to study temporally-controlled, tissue-specific Ube3a variant 1 overexpression as a model for maternal 15q11-13 duplication (dup15) and triplication (isodicentric extranumerary chromosome, idic15); both are associated with human autism spectrum disorder.

Donating Investigator
Scott V Dindot, Texas A&M University

**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tg(tetO-Ube3a*1)1Svd</td>
<td></td>
</tr>
</tbody>
</table>

**Allele Type**

Transgenic (Inserted expressed sequence)

**RESEARCH APPLICATIONS**

Research Tools
Developmental Biology Research
Neurobiology Research

Check out the NEW Design
The TRE-Ube3av1 transgene has a modified Tet response element (TRE or tetO) upstream of a cDNA sequence encoding a functional, full-length mouse ubiquitin protein ligase E3A transcript variant 1 protein with N-terminal FLAG tag (FLAG-Ube3a_v1).

When these TRE-mUbe3a_v1 transgenic mice are bred with another mouse expressing tetracycline-controlled transactivator protein (tTA) or reverse tetracycline-controlled transactivator protein (rtTA), FLAG-Ube3a_v1 expression in the resulting double mutant offspring can be regulated with tetracycline or its analog doxycycline (dox).

As designed, TRE-mUbe3a_v1 transgenic mice have no reported levels of FLAG-Ube3a_v1 expression in absence of tTA. When TRE-mUbe3a_v1 transgenic mice are bred to Camk2a-tTA transgenic mice (see Stock Nos. 003010 / 007004), the resulting CaMKIIα-mUbe3a_v1 double transgenic mice have FLAG-Ube3a_v1 expression in forebrain neurons.

TRE-mUbe3a_v1 transgenic mice have normal expression of endogenous Ube3a. Importantly, the endogenous Ube3a gene is only expressed from the maternal chromosome in neurons; a result of paternal imprinting (the antisense transcript functions to silence paternal expression in brain). Because the TRE-Ube3av1 transgene lacks the transcription initiation site of the antisense transcript, expression of FLAG-Ube3a_v1 is independent of parent-of-origin or sex of the animal.

Hemizygous TRE-mUbe3a_v1 transgenic mice are viable and fertile. The donating investigator has not tried to generate homozygous mice to date (December 2014).
Genotyping Protocols
Standard PCR: Tg(tetO-Ube3a*1)1Svd-V1
Standard PCR: Tg(tetO-Ube3a*2)884Svd-V2 and V3
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining our live colony, hemizygous mice may be bred to wildtype (noncarrier) mice from the colony or to FVB/NJ inbred mice (Stock No. 001800). The donating investigator has not attempted to breed homozygous animals to date (December 2014).

Additional Breeding and Husbandry Support

Citation
When using the FVB/N-Tg(tetO-Ube3a*1)1Svd/J mouse strain in a publication, please cite the originating article(s) and include JAX stock #026278 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200
Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

### CRYORECOVERY - DOMESTIC PRICING

<table>
<thead>
<tr>
<th>SERVICE/PRODUCT</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Hemizygous or Non carrier for Tg(tetO-Ube3a*1)1Svd</td>
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</table>

### RELATED PRODUCTS AND SERVICES

| Frozen Mouse Embryo               | FVB/N-Tg(tetO-Ube3a*1)1Svd/J Frozen Embryo                      | $2,595.00 |

### 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.
### Related Strains

<table>
<thead>
<tr>
<th>All</th>
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<tbody>
<tr>
<td>By Allele</td>
</tr>
<tr>
<td>By Gene</td>
</tr>
<tr>
<td>By Collection</td>
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