Overview

Also Known As: ROSA26 eGFP-DTA

ROSA26-eGFP-DTA mice have a loxP-flanked STOP cassette preventing expression of diphtheria toxin fragment A (DTA). Exposure to Cre recombinase removes the lox-stop fragment - resulting in ablation of the cre-expressing cells. These ROSA26-eGFP-DTA mice are useful for Cre-inducible deletion of specific groups of cells.
C57BL/6J-congenic ROSA26-eGFP-DTA mice are available as Stock No. 032087.

Donating Investigator
Juan Pedro Martinez-Barbera, UCL Institute of Child Health

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
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<tbody>
<tr>
<td>N1F14p+N1F5</td>
<td>(2019-11-05 00:00:00)</td>
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</tbody>
</table>

**Gt(ROSA)26Sor**

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Targeted (Conditional ready (e.g. floxed), Reporter, Inserted expressed sequence)</td>
<td>Gt(ROSA)26Sor</td>
<td>gene trap ROSA 26, Philippe Soriano</td>
</tr>
</tbody>
</table>

RESEARCH APPLICATIONS

Research Tools
Cell Biology Research
Neurobiology Research

BASE PRICE
Starting at:
- $255.00 Domestic price for female 4-week
- $510.00 Domestic price for breeder pair

The ROSA26-eGFP-DTA allele has a loxP-flanked STOP sequence (EGFP::PGK-neo::3xpolyA) upstream of the diphtheria toxin A.
subunit (DTA) gene. Mutant mice display widespread expression of EGFP, but DTA transcription is prevented by the strong transcriptional stop sequence. When bred to mice that express Cre recombinase under the control of a promoter of interest, the floxed-STOP cassette is removed and DTA expression is activated - resulting in the specific ablation of the cre-expressing cells. Homozygous mice are viable, normal in size, and do not display any gross physical or behavioral abnormalities. The donating investigator reports that some homozygous males are subfertile.

ROSA26-eGFP-DTA mice may be useful on their own as a fluorescent reporter, or in combination with cre-expressing mice to produce conditional deletions of specific groups of cells. ROSA26-eGFP-DTA mice may also have applications in toxicology and protein synthesis research.

For example, when crossed to a strain expressing Cre recombinase in the midbrain and dorsal spinal cord (see Stock No. 007807 or 009107), DTA expression is activated resulting in elimination of the cre-expressing cells, this mutant mouse strain may be useful in studies of midbrain and neural tube development.

For example, when crossed to a strain expressing tamoxifen-inducible Cre recombinase in keratinocytes (see Stock No. 005107), DTA expression is activated resulting in alterations in the location and morphology of KRT7 expressing cells and may be useful in studies of acid reflux.

C57BL/6J-congenic ROSA26-eGFP-DTA mice are available as Stock No. 032087.
Genotyping Protocols
Standard PCR: Gt(ROSA)26Sor STD
Genotyping resources and troubleshooting

Dietary Information
LabDiet® 5K52 formulation (6% fat)

Breeding Considerations
When maintaining a live colony at The Jackson Laboratory, homozygous females are bred with heterozygous males.

The donating investigator breeds homozygous females with heterozygous males and reports that some homozygous males may be subfertile, although breeding homozygous mice together has been successful at The Jackson Laboratory in the past.

Additional Breeding and Husbandry Support
Mating System
Homozygote x Heterozygote

Citation
When using the ROSA26<sup>eGFP-DTA</sup> mouse strain in a publication, please cite the originating article(s) and include JAX stock #006331 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.

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>4 weeks</td>
<td>Female</td>
<td>Homozygous for Gt(ROSA)26Sor</td>
<td>$255.00</td>
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<tr>
<td>4 weeks</td>
<td>Male</td>
<td>Heterozygous for Gt(ROSA)26Sor</td>
<td>$255.00</td>
</tr>
<tr>
<td>5 weeks</td>
<td>Female</td>
<td>Homozygous for Gt(ROSA)26Sor</td>
<td>$255.00</td>
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<tr>
<td>5 weeks</td>
<td>Male</td>
<td>Heterozygous for Gt(ROSA)26Sor</td>
<td>$255.00</td>
</tr>
<tr>
<td>6 weeks</td>
<td>Female</td>
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<tr>
<td>6 weeks</td>
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<td>$255.00</td>
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<tr>
<td>7 weeks</td>
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<tr>
<td>7 weeks</td>
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<tr>
<td>8 weeks</td>
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<tr>
<td>8 weeks</td>
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## Related Products and Services

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Price</th>
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<tbody>
<tr>
<td>Frozen Mouse Embryo</td>
<td>$2595.00</td>
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</table>

## Breeder Pair

<table>
<thead>
<tr>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>Homozygous for Gt(Rosa26Sor)\textsuperscript{tm1(DTA)Lpm}\textsuperscript{Jpmb}</td>
<td>$510.00</td>
</tr>
<tr>
<td>Male</td>
<td>Heterozygous for Gt(Rosa26Sor)\textsuperscript{tm1(DTA)Lpm}\textsuperscript{Jpmb}</td>
<td>$510.00</td>
</tr>
</tbody>
</table>

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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.

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

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