Overview

Also Known As: ROSA26 \textsuperscript{eGFP-DTA}

ROSA26-eGFP-DTA mice have a loxP-flanked STOP cassette preventing expression of diphereria toxin fragment A (DTA). Exposure to Cre recombinase removes the lox-stop fragment - resulting in ablation of the cre-expressing cells. These C57BL/6J-congenic
ROSA26-eGFP-DTA mice are useful for Cre-inducible deletion of specific groups of cells.

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

GENETIC OVERVIEW

Genetic Background Generation
N2 (2019-03-18 00:00:00)

RESEARCH APPLICATIONS

BASE PRICE
Starting at:
$0.00 Domestic price for male

Details

Detailed Description

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 females are viable and fertile, while homozygous males do not breed.

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.

Specifically, C57BL/6J-congenic ROSA26-eGFP-DTA mice allow studying central nervous system demyelination in the immune system. For example, when crossed to mice expressing tamoxifen-inducible Cre recombinase in oligodendrocytes (see Stock No. 005975; B6.Cg-Tg(Pip1-cre/ERT)3Pop/J), the resulting mice with DTA expression exhibit widespread oligodendrocyte loss and demyelination of the central nervous system.
In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. It should be noted that the phenotype of this C57BL/6J-congenic ROSA26-eGFP-DTA line (Stock No. 032087) could vary from that of the parental line from which it was derived (Stock No. 006331). Unless stated otherwise, the phenotype description above is for the parental line.

### Development

### Control Suggestions

### Genetics

Currently there are no related genes or alleles for this strain.

### Disease/Phenotype

### Disease Terms

### Research Areas by Genotype

### Mammalian Phenotype Terms by Genotype

### References

### Technical Support

[Chat Offline](#)

### Genotyping Protocols

Probe: Gt(rosa)26sor<sup>tm15ser</sup> Probe

Genotyping resources and troubleshooting

### Dietary Information

New Diet as of March 2015: Lab Diet<sup>*</sup> 5K0Q (6% fat)

### Breeding Considerations

When maintaining a live colony at The Jackson Laboratory, homozygous females are bred with heterozygous males. The donating investigator reports that homozygous males do not breed.

**Additional Breeding and Husbandry Support**

### Mating System

Homozygote x Heterozygote

### Citation

When using the ROSA26-eGFP-DTA mouse strain in a publication, please cite the originating article(s) and include JAX stock #032087 in your Materials and Methods section.

**AX10 (Standard)**
Pricing & Availability

Estimated to begin distribution on Sep 30, 2019

Domestic | International
---|---

**Live Mouse**

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Homozygous for Gt(Rosa)265or^{m1DTA1}</td>
<td>$255.00</td>
</tr>
<tr>
<td>Approx 4-8 weeks</td>
<td>Male</td>
<td>Heterozygous for Gt(Rosa)265or^{m1DTA1}</td>
<td>$255.00</td>
</tr>
</tbody>
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