B6.Cg-7630403G23Rik \textsuperscript{Tg(Th-cre)1Tmd/J}

Stock No: 008601 | TH-Cre 1, TH-1 Cre

Congenic, Transgenic

AVAILABLE

PLACE ORDER

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

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Overview

Also Known As: TH-Cre 1, TH-1 Cre

TH-Cre transgenic mice have the rat tyrosine hydroxylase (TH) promoter directing expression of Cre recombinase to
catecholaminergic cells, and may be useful for generating conditional mutations in these cells for studying dopaminergic cell function, Parkinson’s disease, and other neurodegenerative disorders.

In Goodwin et al. 2017 bioRxiv, it was discovered that the transgene integrated into chromosome 9 causing a 624 kbp deletion in the 7630403G23Rik locus.

Donating Investigator
Ted M Dawson, Johns Hopkins Univ School of Medicine

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>N6+F23</td>
<td>(2018-12-21 00:00:00)</td>
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</table>

7630403G23Rik\(^{Tg(Th-cre)}\)1Tmd

Allele Type
Transgenic (Recombinase-expressing)

RESEARCH APPLICATIONS
Neurobiology Research
Research Tools

BASE PRICE
Starting at:

- $255.00 Domestic price for female
- $333.51 Domestic price for breeder pair

Details

Detailed Description
These transgenic mice express Cre recombinase under the control of the rat tyrosine hydroxylase (TH) promoter. The transgene integrated into chromosome 9 causing a 624 kbp deletion in 7630403G23Rik locus. Mice hemizygous for the TH-Cre transgene are
viable and fertile, with the rat tyrosine hydroxylase (TH) promoter directing expression of Cre recombinase to catecholaminergic cells. Using crosses to reporter strains, cre activity is confirmed in catecholaminergic cells and is present in many of the projection areas of these neuronal populations. A mosaic of cre activity is noted in TH-positive neurons. Several other areas that are not typically thought to have active TH expression, including the lateral septal nucleus, accessory olfactory bulb, suprachiasmatic nucleus, and pretectal area, also exhibit Cre recombinase activity (possibly as a result of TH promoter activity in precursor cell populations or ectopic expression from the exogenous TH promoter). Some TH-negative cells closely clustered around and within TH-positive nuclei demonstrate cre activity. When bred with mice containing a loxP-flanked sequence of interest, Cre-mediated recombination will result in deletion of the floxed sequence(s) in the offspring. These TH-Cre transgenic mice are a tool for generating conditional mutations in catecholaminergic cells and may be useful for studying dopaminergic cell function, Parkinson’s disease, and other neurodegenerative disorders.

If the recombinase activity pattern of this allele is further characterized by the Genetic Resource Science group at The Jackson Laboratory, such findings will be reported on the Mouse Genome Informatics (MGI) Allele Detail entry (7630403G23Rik \textsuperscript{\text{Tg(Th-cre)1Tmd}}). This same information would also be found searching the MGI Recombinase Activity database.

**Development**

**Expression Data**

**Control Suggestions**

**Selected References**

**Genetics**

7630403G23Rik \textsuperscript{\text{Tg(Th-cre)1Tmd}}

**Disease/Phenotype**

**Disease Terms**

**Research Areas By Genotype**

**Mammalian Phenotype Terms by Genotype**

**References**

**Technical Support**

CHAT OFFLINE

CONTACT TECHNICAL SUPPORT
Genotyping Protocols
MELT: Tg(Th-cre)1Tmd
Standard PCR: Generic Cre
Probe: 7630403G23Rik Tg(Th-cre)1Tmd
Genotyping resources and troubleshooting

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

Breeding Considerations
When maintaining a live colony, hemizygous mice may be bred to wildtype (noncarrier) mice from the colony or to C57BL/6J inbred mice (Stock No. 005304). The donating investigator reports that homozygous mice are viable.

Additional Breeding and Husbandry Support

Mating System
Noncarrier x Hemizygote

Citation
When using the Tg(Th-cre)1, Th-1.Cre mouse strain in a publication, please cite the originating article(s) and include JAX stock #008601 in your Materials and Methods section.

Animal Health Reports

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

Available

Domestic International
Pricing effective for USA, Canada and Mexico shipping destinations

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>Hemizygous for 7630403G23Rik Tg(Th-cre)1Tmd</td>
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Breeder Pair

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Related Products and Services

Frozen Mouse Embryo $2,595.00 per straw or vial
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Email: TechTran@jax.org

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All

By Allele

By Gene

By Collection

All Related Strains

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