C57BL/6-Tg(Nes-cre/ERT2)KEisc/J

Stock No: 016261 | Nes-cre/ERT2

Coisogenic, Transgenic

3–6 week average lead time depending on quantity and age requests are not accepted

Also Known As: Nes-cre/ERT2

Nestin-Cre/ERT2 transgenic mice express tamoxifen-inducible Cre recombinase in adult and developing mouse brain, including neuronal and glial cell precursors.

Donating Investigator

Amelia Eisch, University of Texas Southwestern Medical

GENETIC OVERVIEW

Genetic Background: N1×N5F3

Tg(Nes-cre/ERT2)KEisc

Allele Type: Transgenic (Recombinase-expressing, Inducible)

VIEW GENETICS

RESEARCH APPLICATIONS

Research Tools

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

$76.22 Domestic price for female
Details

Detailed Description

Nestin-Cre/ERT2 transgenic mice express a CreERT2 fusion protein under the control of the rat nestin (Nes) promoter. Homozygotes are viable, fertile, and normal in size. Nestin is an intermediate filament protein expressed mainly in radial glia and neural stem cells during development. Cre-ERT2 fusion gene activity is inducible; observed at high levels following tamoxifen administration. When Nestin-Cre/ERT2 transgenic mice are bred with mice containing loxP-flanked sequences, tamoxifen-inducible Cre-mediated recombination will result in deletion of the floxed sequences in cells of the double mutant offspring. Specifically, the Nestin-Cre/ERT2 transgene directs cre expression in the nestin-expressing cells in the brain, which are generally restricted to the subventricular zone (SVZ) and subgranular zone (SGZ). This strain is useful for studying the lineage of nestin expressing cells and the effect of gene deletion from nestin expressing cells in both the adult and developing mouse brain.

The Cre-ERT2 fusion protein consists of Cre recombinase fused to a triple mutant form of the human estrogen receptor which does not bind its natural ligand (17'-estradiol) at physiological concentrations but will bind the synthetic estrogen receptor ligands 4-hydroxytamoxifen (4-OHT or tamoxifen) and, with lesser sensitivity, ICI 182,780. Restricted to the cytoplasm, Cre-ERT2 can only gain access to the nuclear compartment after exposure to tamoxifen. To counteract the mixed estrogen agonist effects of tamoxifen injections, which can result in late fetal abortions in pregnant mice, progesterone may be coadministered.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tg(Nes-cre/ERT2)KEisc

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References
Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols
QPCR: Generic Cre Quantitative PCR
Standard PCR: Generic Cre
QPCR: Generic Cre Quantitative PCR
MELT: Tg(Nes-cre/ERT2)KElisc
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, hemizygous mice may be bred to wildtype (non-carrier) mice from the colony or to C57BL/6J inbred mice (Stock No. 000664).
Additional Breeding and Husbandry Support

Mating System
Noncarrier x Hemizygote
Hemizygote x Noncarrier

Citation
When using Tg(Nes-cre/ERT2) mouse strain in a publication, please cite the originating articles and include JAX stock #016261 in your Materials and Methods section.
Facility Barrier Level Descriptions

AX12 (Maximum)

Pricing & Availability

3–6 week average lead time depending on quantity and age requests are not accepted

Repository Live

<table>
<thead>
<tr>
<th>Live Mouse</th>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<td>Hemizygous for Tg(Nes-cre/ERT2)KElisc</td>
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<td>Approx 4-8 weeks</td>
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<td>Approx 4-8 weeks</td>
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<td>Noncarrier</td>
<td>$76.22</td>
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<tr>
<td>Approx 4-8 weeks</td>
<td>Male</td>
<td>Noncarrier</td>
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Breeder Pair

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<th>SEX</th>
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Domestic
International

Pricing effective for USA, Canada and Mexico shipping destinations
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<tr>
<th>Gender</th>
<th>Genotype</th>
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**Related Products and Services**

- **Frozen Mouse Embryo** $2,595.00 per straw or vial

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Related Strains

- All
- By Allele
- By Gene
- By Collection

All Related Strains