STOCK Tg(ACTA1-cre/Esr1*)2Kesr/J

Stock No: 025750 | HSA-MCM

Transgenic

PLACE ORDER

3–6 week lead time for most orders depending on quantity and age range requested

Overview

Also Known As: HSA-MerCreMer, HSA-MCM

HSA-MCM mice express tamoxifen-inducible cre in both limb and craniofacial skeletal muscles.

Donating Investigator
GENETIC OVERVIEW

Genetic Background: N8+pN1F7
(2018-08-08 00:00:00)

Tg(ACTA1-cre/Esr1*)2Kesr

Allele Type:
Transgenic (Recombinase-expressing, Inducible)

RESEARCH APPLICATIONS
Research Tools

BASE PRICE
Starting at:

$76.22 Domestic price for female
331.22 Domestic price for breeder pair

Details

Detailed Description

HSA-MCM mice express MerCreMer double fusion protein under the control of the human ACTA1 (actin, alpha 1, skeletal muscle) promoter. Heterozygous mice are viable and fertile. Homozygotes are also viable but exhibit significantly reduced fertility. Of note, the MerCreMer double fusion protein has substantially greater Cre recombinase activity with less promiscuity compared with the CreMer single fusion protein. When HSA-MCM mice are bred with mice containing loxP-flanked sequences, tamoxifen-inducible Cre-mediated recombination is expected to result in deletion of the floxed sequences in skeletal muscles of the limbs, face/tongue, and diaphragm of the offspring.

The MerCreMer double fusion protein consists of Cre recombinase flanked on each end with a mutated murine estrogen receptor (mer) ligand binding domain (amino acids 281-599, G525R), which does not bind its natural ligand (17 -estradiol) at physiological concentrations but will bind the synthetic estrogen receptor ligands 4-hydroxytamoxifen (OHT or tamoxifen) and, with lesser
sensitivity, ICI 182780. Restricted to the cytoplasm, MerCreMer 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(ACTA1-cre/Esr1*)2Kesr

**Disease/Phenotype**

**Disease Terms**

**Research Areas By Genotype**

**Mammalian Phenotype Terms by Genotype**

**References**

**Technical Support**

CONTACT TECHNICAL SUPPORT

**Genotyping Protocols**
Probe: Generic Cre Probe
MELT: Tg(cre/Esr1)
Genotyping resources and troubleshooting

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

**Breeding Considerations**
When maintaining live mice, hemizygotes may be bred together. Homozygous mice are viable but have significantly reduced fertility. Additional Breeding and Husbandry Support

**Mating System**
Noncarrier x Hemizygote
Hemizygote x Noncarrier
Pricing & Availability

3–6 week lead time for most orders depending on quantity and age range requested

Repository Live

## Domestic

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<td>Female</td>
<td>Hemizygous for Tg(ACTA1-cre/Esr1*)2Kesr</td>
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## International

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## Related Products and Services

<table>
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<th>Product</th>
<th>Price</th>
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<tr>
<td>Frozen Mouse Embryo</td>
<td>$2,595.00 per straw or vial</td>
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**Terms Of Use**

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

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All

By Allele

By Gene

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All Related Strains