STOCK Tg(KRT14-cre/ERT)20Ef/J

Stock No: 005107 | K14-CreER \textsuperscript{tam}

Transgenic

REPOSITORY LIVE

PLACE ORDER

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

Also Known As: K14CreERT, K14–CreER\textsuperscript{tam}

These transgenic mice have a tamoxifen inducible Cre-mediated recombination system driven by the human keratin 14 (KRT14) promoter, which is active in dividing cells of epidermis and some other stratified squamous epithelia. When crossed with a strain containing a loxP site flanked sequence of interest, the offspring can be used to generate tamoxifen-induced, Cre-mediated targeted keratinocyte-specific deletions. This strain may be useful for studying somatic mutations of the skin, including squamous and basal cell carcinomas.

Donating Investigator

Elaine Fuchs, The Rockefeller University

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GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td>\textbf{Tg(KRT14-cre/ERT)20Ef/J}</td>
<td>\textbf{F7+2pF12}</td>
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<td>(2018-04-16 00:00:00)</td>
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<table>
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<th>Allele Type</th>
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Transgenic (Recombinase-expressing, Inducible)

VIEW GENETICS

RESEARCH APPLICATIONS

Dermatology Research
Research Tools
Developmental Biology Research

VIEW ALL RESEARCH APPLICATIONS
Details

Detailed Description

These transgenic mice have a tamoxifen inducible Cre-mediated recombination system driven by the human keratin 14 (KRT14) promoter. The transgene insert contains a fusion product involving Cre recombinase and a mutant form of the mouse estrogen receptor ligand binding domain. The mutant mouse estrogen receptor does not bind natural ligand at physiological concentrations but will bind the synthetic ligand, 4-hydroxytamoxifen (tamoxifen). Restricted to the cytoplasm, the cre/Esr1 protein can only gain access to the nuclear compartment after exposure to tamoxifen. When crossed with a strain containing a loxP site flanked sequence of interest, the offspring are useful for generating tamoxifen-induced, Cre-mediated targeted keratinocyte-specific deletions. Oral tamoxifen administration induces Cre recombination in toe, back skin and tongue. Topically administered tamoxifen induces Cre-mediated recombination in a specific localized area of the skin, occurring in 50 to 60% of the cells in the epidermis. Hemizygous mutant mice are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities.

View cre expression characterization.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tg(KRT14-cre/ERT2)0Ef

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References
Technical Support

Genotyping Protocols
QPCR: Generic Cre Quantitative PCR
Standard PCR: Tg(KRT14-cre/ERT)20Efu-Alternate 1
MELT: Tg(KRT14-cre/ERT)20Efu Alt 3
Genotyping resources and troubleshooting

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

Breeding Considerations
When maintaining a live colony, homozygous mice may be bred.
Additional Breeding and Husbandry Support

Mating System
Homozygote x Homozygote

Citation
When describing the K14-CreERT2™ mouse strain in a publication, please cite the originating article(s) and include JAX stock #005107 in your Materials and Methods section.
Facility Barrier Level Descriptions
- AX11 (Maximum)

Pricing & Availability

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

Repository Live

<table>
<thead>
<tr>
<th>Domestic</th>
<th>International</th>
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<table>
<thead>
<tr>
<th>Live Mouse</th>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tr>
<td></td>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Homozygous for Tg(KRT14-cre/Esr1)20Efu</td>
<td>$271.00</td>
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<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Homozygous for Tg(KRT14-cre/Esr1)20Efu</td>
<td>$271.00</td>
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