Overview

Also Known As: K14CreERT, K14-CreER<sup>tam</sup>

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.
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, occuring 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.

Genotyping Protocols
QPCR: Generic Cre Quantitative PCR
Standard PCR: Tg(KRT14-cre/ERT)20Ef-u-Alternate 1
MELT: Tg(KRT14-cre/ERT)20Ef-u 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 using the K14-CreERT<sup>tm</sup> 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

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

<table>
<thead>
<tr>
<th>Live Mouse</th>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<td>Approx 4–8 weeks</td>
<td>Female</td>
<td>Homozygous for Tg(KRT14-cre/Esr1)20Ef</td>
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<tr>
<td>Male</td>
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### Related Strains

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