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**Nkx2.2<sup>T2A.cCre</sup> - Mouse Strain RES4556****Mouse Information**

<b>Common Name:</b>	Nkx2.2 <sup>T2A.cCre</sup>
<b>MGI Official Name:</b>	Nkx2.2 <sup>T2A.cCreGgu</sup>
<b>Description:</b>	In this line, one of the two bi-partite Cre molecules, cCre, is placed downstream of Nkx2.2 coding sequence fused with 2a peptide using RMCE in the Nkx2.2[LCA] allele. The presence of the T2A sequence allows for transcription of Nkx2.2 and cCre from the native Nkx2.2 locus at the same time. This mouse line allows the labeling of pancreatic epithelium cells that co-express high levels of Ngn3 and Nkx2.2 during mouse embryonic development.
<b>Categories:</b>	Cre-lox floxed alleles

**Genetic Alterations****1) RMCE Targeted Mutagenesis**

<b>Type of Allele</b>	Cassette Acceptor
<b>Targeted Gene</b>	NK2 transcription factor related, locus 2 (Nkx2-2 - <a href="#">NCBI GeneID:18088</a> )
<b>Targeted Allele</b>	targeted mutation 1 (Nkx2.2 <sup>tm1(LCA)</sup> )
<b>Description of Targeting Vector</b>	Through homologous recombination in ES cells, a 5.115 kb region of the Nkx2.2 gene is replaced by a floxed tk-neo cassette, a puromycin-thymidine kinase fusion gene driven by the mouse phosphoglycerol kinase promoter (pUTK) and a neomycin resistant gene driven by the bacterial EM7 promoter (EM7neo) flanked by minimal (34 bp) tandemly oriented lox71 and lox2272 sites (Cre-recombinase recognition sequences).

**Targeting Vector Genbank File** [pNkx2.2.TV.gb](#)


**Recombinase-Mediated Cassette Exchange Stage**

<b>Type of Allele:</b>	Gene Replacement
<b>Exchanged Cassette Gene</b>	NK2 transcription factor related, locus 2 (Drosophila) [Mus musculus] (Nkx2-2 - <a href="#">NCBI GeneID:18088</a> )
<b>Exchanged Cassette Allele Name</b>	Nkx2.2 <sup>T2A.cCre</sup>
<b>Description of Exchange Vector</b>	The Nkx2.2.T2A.cCre vector was made on a backbone of a basal exchange vector which contains a 5.115 kb sequence from the Nkx2.2 locus, Lox71/Lox2272 sites, and a flrtd (flanked by FRT) Pkg-Hygro cassette that is used for positive selection of ES cells after RMCE. T2A peptide and cCre coding sequence are inserted downstream of native Nkx2.2 coding sequence in exon 2.
<b>Exchange Vector Genbank File:</b>	<a href="#">Nkx2.2.T2A.cCre.gb</a>
<b>Citations</b>	Not Available


**Strain Information**

<b>Strain Type:</b>	Mixed
<b>Chimera/Founder Genetic Background:</b>	129S6/SvEvTac

**Access Status**

 This resource is publicly viewable.

**Request this Resource**

 Request from a repository

Primary contributor: [Gu Lab](#)  
Co-contributed by:  
• [BCBC Mouse / ES Cell Core](#)

**Resource Tags**


mouse, mouse strain, Nkx2.2<sup>T2A.cCre</sup>, Nkx2.2<sup>T2A.cCreGgu</sup>

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**Resource History & Actions**

Approved on Feb 21, 2013  
Last modified on Oct 29, 2012

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**Related resources****BCBC**

No matching resources

**Other Consortia**

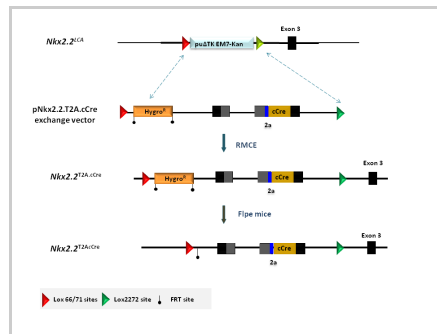
No matching resources

Data courtesy of [dkCOIN](#). Only public resources are displayed.

**Current Genetic Background:** C57BL/6J (date recorded: 10/18/2012)  
**Strain Description:** Not provided

## Associated Images

### Image 1



### Description:

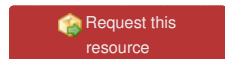
Nkx2.2<sup>T2A.cCre</sup> was exchanged into the Nkx2.2<sup>LCA</sup> via Recombinase Mediated Cassette Exchange (RMCE) in mESCs. These targeted mESCs were then injected into mouse blastocysts. The injected blastocysts were transplanted into pseudopregnant female mice and the resulting gene targeted offspring were subsequently bred to F1pe mice in order to remove the Hygro<sup>R</sup> cassette.

### Reference:

*Not provided*

## Repositories

### Gu Lab



**Stock #:** *Not provided*

**Availability Notes:** *Not provided*

## Contact Information

### Preferred Contact

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## Associated Publications

*No publications associated*

## Comments

*There are no comments for this entry.*

