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Nkx2.2$^{T2A.cCre}$ - Mouse Strain RES4556

Mouse Information

Common Name:	Nkx2.2$^{T2A.cCre}$
MGI Official Name:	Nkx2.2$^{T2A.cCreGgu}$
Description:	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.
Categories:	Cre-lox floxed alleles

Genetic Alterations

1) RMCE Targeted Mutagenesis	
Type of Allele	Cassette Acceptor
Targeted Gene	NK2 transcription factor related, locus 2 (Nkx2-2 - NCBI GeneID:18088)
Targeted Allele	targeted mutation 1 (Nkx2.2$^{tm1(LCA)}$)
Description of Targeting Vector	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-thymmidine kinase fusion gene driven by the mouse phosphoglycerol kinase promoter (pU'TK) 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	
Type of Allele:	Gene Replacement
Exchanged Cassette Gene	NK2 transcription factor related, locus 2 (Drosophila) [Mus musculus] (Nkx2-2 - NCBI GeneID:18088)
Exchanged Cassette Allele Name	Nkx2.2$^{T2A.cCre}$
Description of Exchange Vector	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 flrted (flanked by FRT) Pgk-Hygro cassette that is used for positive selection of ES cells after RMCE. T2A peptide and cCre coding sequence are inserted dowstream of native Nkx2.2 coding sequence in exon 2.
Exchange Vector Genbank File:	Nkx2.2.T2A.cCre.gb
Citations	Not Available

Strain Information

Strain Type:	Mixed
Chimera/Founder Genetic Background:	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$^{T2A.cCre}$, Nkx2.2$^{T2A.cCreGgu}$

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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

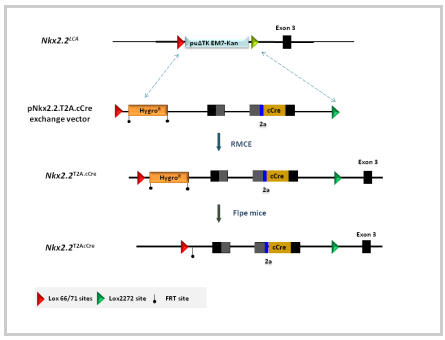
No matching resources

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$^{T2A.cCre}$ was exchanged into the Nkx2.2^{LCA} via Recombinase Mediated Cassette Exchange (RMCE) in mESCs. These targeted mESCs were then injected into mouse balstocysts. The injected blastocysts were transplanted into psuedopregnant female mice and the resutling gene targeted offspring were subsequently bred to Flpe mice in order to remove the Hygro^{R} cassette.

Reference:
Not provided

Repositories

Gu Lab

Request this resource

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.

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