

**My Account**

Login  
Create Account

**Resources**

View All (813)  
Adenoviruses (137)  
Antibodies (175)  
Bioimages (67)  
Genomics Studies (145)  
mESC Lines (68)  
Mouse Strains (120)  
Miscellaneous (46)  
Protocols (55)  
Research Data (4)  
Resource Tags (389)  
Visualization (9)

**Research & Cores**

Core Facilities (5)  
Research Highlights (5)  
Research Networks  
Research Objectives

**Information**

About the BCBC  
BCBC Events  
Branding & Logos  
Career Opportunities  
Health  
NIH hESC Registry  
Policies & Guidelines  
Member Publications  
Research Programs  
Research Investigators  
Member Directory  
Tutorials

**Ngn3<sup>T2A.nCre</sup> - Mouse Strain RES4538****Mouse Information**

<b>Common Name:</b>	Ngn3 <sup>T2A.nCre</sup>
<b>MGI Official Name:</b>	Ngn3 <sup>T2A.nCreGgu</sup>
<b>Description:</b>	In this mouse line, one of the two bi-partite Cre molecules, nCre, was knocked in upstream of Ngn3 coding sequence by RMCE in Ngn3 <sup>HALCA</sup> ES cell line. nCre sequence is expressed from polycistronic mRNA linked by 2a peptide to Ngn3 coding sequence allowing for simultaneous expression of both proteins from the Ngn3 promoter. This mouse line, in combination with Nkx2.2 <sup>cCre</sup> mouse line, allows for 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**

<b>1) RMCE Targeted Mutagenesis</b>	
<b>Type of Allele</b>	Cassette Acceptor
<b>Targeted Gene</b>	Neurogenin 3 (Neurog3 - <a href="#">NCBI GeneID:11925</a> )
<b>Targeted Allele</b>	<i>Not provided</i>
<b>Description of Targeting Vector</b>	The targeting vector contains a 5.5 kb 5' arm and a 3.5 kb 3' arm. Lox71 and Lox2272 sites were inserted flanking the Ngn3 gene, where Ngn3 cDNA was replaced with that encoding for an HA-tagged Ngn3 protein. The vector also contains a FRT-flanked Pgk-Puro-deltaTK cassette for positive selection by puromycin (targeting events) and negative selection by ganciclovir (RMCE events).
<b>Targeting Vector Genbank File</b>	<a href="#">Ngn3HALCA.gb</a>
<b>Recombinase-Mediated Cassette Exchange Stage</b>	
<b>Type of Allele:</b>	Gene Replacement
<b>Exchanged Cassette Gene</b>	Neurogenin 3 (Neurog3 - <a href="#">NCBI GeneID:11925</a> )
<b>Exchanged Cassette Allele Name</b>	Ngn3 <sup>T2A.nCre</sup>
<b>Description of Exchange Vector</b>	The pEx.Ngn3.nCre exchange vector was made on a backbone of a basal exchange vector which contains Lox71/Lox2272 sites and a flrtd (flanked by FRT) Pgk-Hygro selection cassette for positive selection of ES cells after RMCE. nCre sequence linked by 2a peptide to Ngn3 coding sequence was inserted between Pgk-Hygro and Lox2272 site.
<b>Exchange Vector Genbank File:</b>	<a href="#">pEx.Ngn3.nCre.gb</a>
<b>Citations</b>	Not Available


**Strain Information**

<b>Strain Type:</b>	Mixed
<b>Chimera/Founder Genetic Background:</b>	129S6/SvEvTac
<b>Current Genetic Background:</b>	C57BL/6J (date recorded: 09/13/2012)
<b>Strain Description:</b>	Not provided

**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, Ngn3<sup>T2A.nCre</sup>, Ngn3<sup>T2A.nCreGgu</sup>

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**Resource History & Actions**

Approved on Oct 09, 2012  
Last modified on Nov 12, 2012

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**Related resources****BCBC**

*No matching resources*

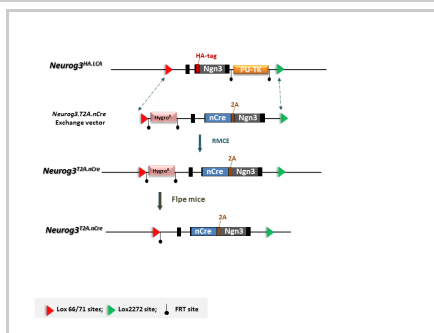
**Other Consortia**

*No matching resources*

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

## Associated Images

### Image 1



#### Description:

The Neurog3.T2A.nCre vector was exchanged into Neurog3<sup>HA,LCR</sup> mESCs and mice were generated from the correctly exchanged cells. These mice were subsequently mated to Flpe mice to remove the Hygro<sup>R</sup> cassette.

#### Reference:

*Not provided*

## Repositories

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## Contact Information

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## Associated Publications

*No publications associated*

## Comments

*There are no comments for this entry.*

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