

This mouse line was made by gene targeting and designed to express an HA-tagged version of the transcription factor Neurog3 (Ngn3). The Lox71 and Lox2272 sites were inserted flanking the Ngn3 coding sequence. Within the flanked region an HA-tag was placed at the N-terminus of the Ngn3 protein. This allele can be used to study chromatin and protein-protein interactions of Ngn3. Additionally, the Lox71 and Lox2272 sites allow for manipulations of the flanked region by Recombinase-Mediated Cassete Exchange (RMCE) in ES cells.

Keywords: [neurogenin 3](#) [Neurog3](#) [HA tag](#) [Neurog3^{\(HA.LCA\)}](#) [Ngn3](#) [Ggu](#)

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Mouse Information

Common Name	Neurog3 ^(HA.LCA)
Research Applications	<i>Not provided</i>
MMRRC ID	NA
Jackson Laboratories Stock No	NA
VCMR ID	XG
Additional Strain Information	<p>Cryopreserved in homozygous state Neurog3{(HA/HA)}.</p> <p>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).</p>

Genetic Alteration

Mutation #1: Targeted Mutagenesis	
Type of Allele	Cassette Acceptor
Targeted Gene	Name: Neurogenin 3 Symbol: Neurog3 NCBI: 11925
Allele	Name: neurogenin 3; targeted mutation, Guoqiang Gu Symbol: Neurog3 ^(HA.LCA) Ggu

Description of Targeting Vector	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).
Vector Genbank File	Ngn3HALCA.gb
Allele Map	<i>Not Provided</i>
PCR Genotyping Protocol	Neurog3.HA_PCR_genotyping_protocol.docx
Citations	<i>Not provided</i>

Background Strain Information

Strain Type	Congenic Strain
Chimera/Founder Genetic Background	129S6/SvEvTac
Current Genetic Background	CD-1
Number of Generations Backcrossed	<i>Not provided</i>
Strain Description	Strain Background: 90% CD-1 at cryopreservation

Attachments

 [Magnuson_Gu_Ngn3.HA.LCA_targeting.pptx](#) - Added on February 15, 2018 at 10:47 AM by Jennifer Skelton

 [Ngn3_HA_staining.png](#) - Added on July 27, 2017 at 12:02 PM by Anna Osipovich



Immunofluorescent staining of embryonic pancreatic tissues at E15.5 from