

This line expresses the reverse tetracycline-TransActivator (rtTA) under control of the somatostatin gene locus. The mice can be used to drive Tet-responsive gene expression in somatostatin expressing cells. In addition, during gene targeting Lox66 and Lox2272 sites were inserted, enabling the cells to be used for RMCE. These mice remain unpublished but are being used in at least two ongoing studies.

Keywords: [Sst^{rTTA.LCA.Mgn}](#) [Sst.rTTA.LCA](#) [Mgn](#)

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Mouse Information

Common Name	Sst.rTTA.LCA
VCMR ID	SD
Date Cryopreserved	2014-05-13
Method of Cryopreservation	Sperm
Trial IVF % Fertilization	74.63%

Genetic Alteration

Mutation #1: Targeted Mutagenesis	
Allele	Name: Sst{rTTA.LCA.Mgn} Symbol: Sst ^{rTTA.LCA.Mgn}
Zygoty at cryopreservation	Heterozygote
PCR Genotyping Protocol	Sst.rTA_PCR_genotyping_protocol.docx
Citations	<i>Not provided</i>

Background Strain Information

Strain Type	Congenic Strain
Chimera/Founder Genetic Background	129S6/SvEvTac
Cryopreservation Strain Background (VCMR)	C57BL/6J

Viability and Fertility Data

Strain background: 96.8% C57Bl6/J at cryopreservation.

Expected to be homozygous viable and fertile.

Heterozygous viable and fertile.

Publications / Citations

1. [Pancreatic islet-autonomous insulin and smoothed-mediated signalling modulate identity changes of glucagon \$\alpha\$ -cells.](#)
Cigliola V, Ghila L, Thorel F, van Gorp L, Baronnier D, Oropeza D, Gupta S, Miyatsuka T, Kaneto H, Magnuson MA, Osipovich AB, Sander M, Wright CEV, Thomas MK, Furuyama K, Chera S, Herrera PL (2018) *Nat Cell Biol* **20(11)**: 1267-1277
> Primary publication · [30361701](#) (PubMed) · [PMC6215453](#) (PubMed Central) · Added on 11/6/2018


MeSH Terms

Animals Cell Differentiation Cell Plasticity Cell Proliferation Female Glucagon-Secreting Cells Insulin Insulin-Secreting Cells
Islets of Langerhans Male Mice, Inbred C57BL Mice, Knockout Mice, SCID Mice, Transgenic Signal Transduction
Smoothened Receptor

Additional Information

The targeting vector contains 7.3 Kb 5' and a 3.6 kb 3' homology arms. Lox66 and Lox2272 sites were inserted around a 500 bp region of the of Sst promoter and exons I and II of the somatostatin gene. rTTA coding sequences with a beta-globin polyA replaced exons I and II of the Sst. The vector also contains FRT-flanked puTK-EM7 Neo selection double selection cassette. PU(delta)TK was used for positive selection for targeting events with puromycin and negative selection for RMCE events with ganciclovir. EM7-Neo was used for positive selection in bacteria during BAC recombineering process.

Attachment

 [SstrTTA.LCA_GT_-Puro.png](#) - Added on July 7, 2015 at 10:26 AM by [Mark Magnuson](#)

Gene targeting strategy.

