

These mice, which contain a targeted deletion of Area II of Pdx1, provide a model for the central role of AreaII in the Pdx1 transcription in pancreatic organogenesis and beta cell differentiation.

Keywords: [Pdx1^{deltall}](#) [RMCE](#) [Pdx1](#) [Cvw](#)

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Mouse Information

Common Name	Pdx1 ^{deltall}
VCMR ID	XY
Date Cryopreserved	2018-02-06
Method of Cryopreservation	Sperm
Trial IVF % Fertilization	98.39%

Genetic Alteration

Mutation #1: RMCE Targeted Mutagenesis

Allele	Name: pancreatic and duodenal homeobox 1; targeted mutation 1.1, Christopher VE Wright Symbol: Pdx1 ^{tm1.1Cvw} MGI: MGI:5823773
Zyosity at cryopreservation	Heterozygote
PCR Genotyping Protocol	Pdx1tm1.1Cvw_PCR_Genotyping_Protocol_020818.docx

Citations

Publication

[The mammal-specific Pdx1 Area II enhancer has multiple essential functions in early endocrine cell specification and postnatal \$\beta\$ -cell maturation.](#) (2017) *Development* **144**: 248-257 (Added 12/29/2016)
PMID: [27993987](#)

[Pancreatic beta cell-specific transcription of the pdx-1 gene. The role of conserved upstream control regions and their hepatic nuclear factor 3beta sites.](#) (2000) *J Biol Chem* **275**: 3485-92 (Added 1/6/2014)
PMID: [10652343](#)


Background Strain Information

Strain Type	Mixed
Chimera/Founder Genetic Background	129S6/SvEvTac
Cryopreservation Strain Background (VCMR)	C57BL/6J
Viability and Fertility Data	Normal litters (8-9 pups per litter). This line is viable other than the mice become diabetic when they are approximately 6-8 months old.

Additional Information

An 8.62 kb region of this gene has been replaced by tandemly oriented Lox66 and Lox2272 sites flanking positive (puromycin) and negative (HSV-TK) selectable markers.

Attachment

 [Pdx1A1ld.png](#) - Added on July 7, 2015 at 10:27 AM by [Mark Magnuson](#)

The pdx1 Area II enhancer region was deleted from the pPdx1.Ex1 basal exchange vector (255 bp from -2168/-1913 relative to the primary transcription start site reported by Gerrish, K.et.al., JBC 2000, PMID:10652343). This will replace endogenous pdx1 sequences, and allow for assessment of the role of this enhancer region in pdx1 expression in vivo. Sequences flanking Area II deletion: ctcacctctgt/gaaggaaggt

