

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

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

[Expand](#)

Mouse Information

Common Name	Pdx1 ^{deltall}
Research Applications	<i>Not provided</i>
MMRRC ID	<i>Not provided</i>
Jackson Laboratories Stock No	<i>Not provided</i>
VCMR ID	XY
Additional Strain Information	An 8.62 kb region of this gene has been replaced by tandemly oriented Lox66 and Lox2272 sites flanking positive (puromycin) and negative (HSV-TK) selectable markers.

Genetic Alteration

Mutation #1: RMCE Targeted Mutagenesis	
Type of Allele	RMCE Pdx1 Areall Deletion
Targeted Gene	Name: pancreatic and duodenal homeobox 1 Symbol: Pdx1 NCBI: 18609
Allele	Name: pancreatic and duodenal homeobox 1; targeted mutation 1.1, Christopher VE Wright Symbol: Pdx1 ^{tm1.1Cvw} MGI: MGI:5823773
Description of Targeting Vector	An 8.62 kb region of this gene has been replaced by tandemly oriented Lox66 and Lox2272 sites flanking positive (puromycin) and negative (HSV-TK) selectable markers.
Vector Genbank File	<i>Not provided</i>
Allele Map	<i>Not Provided</i>
PCR Genotyping Protocol	Pdx1tm1.1Cvw_PCR_Genotyping_Protocol_020818.docx
Type of Allele	Gene Replacement

Exchanged Cassette Gene Name	()
Exchanged Cassette Allele Name	Pdx1{AllId}
Description of Exchange Vector	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). 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: ctcatcctgt/gaaggaaggt
Exchanged Cassette Genbank File	pdx1AllId.gb
PCR Genotyping Protocol	<i>Not provided</i>
Citations	<p>Publication</p> <p><u>The mammal-specific Pdx1 Area II enhancer has multiple essential functions in early endocrine cell specification and postnatal β-cell maturation.</u> (2017) <i>Development</i> 144: 248-257 (Added 12/29/2016) PMID: 27993987</p> <p><u>Pancreatic beta cell-specific transcription of the pdx-1 gene. The role of conserved upstream control regions and their hepatic nuclear factor 3beta sites.</u> (2000) <i>J Biol Chem</i> 275: 3485-92 (Added 1/6/2014) PMID: 10652343</p>

Background Strain Information

Strain Type	Mixed
Chimera/Founder Genetic Background	129S6/SvEvTac
Current Genetic Background	C57BL/6J
Number of Generations Backcrossed	<i>Not provided</i>
Strain Description	<i>Not provided</i>

Attachment

 [Pdx1AllId.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: ctcatcctgt/gaaggaaggt

