

This mouse contains a cyan fluorescent protein (CFP, Cerulean), tagged with 3 copies of an SV40 NLS knocked into the endogenous Pdx1 gene. This mouse strain enables prepancreatic endoderm to be easily identified in the developing mouse embryo and the isolation of Pdx1(+) cells by FACS.

Keywords: [Pdx1](#) [CFP](#) [fluorescent reporter](#) [RMCE](#)

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Mouse Information

Common Name	Pdx1 ^{CFP}
Research Applications	Fluorescent proteins
MMRRC ID	036462-UNC
Jackson Laboratories Stock No	<i>Not provided</i>
VCMR ID	KX, LE
Additional Strain Information	<i>Not provided</i>

Genetic Alteration

Mutation #1: RMCE Targeted Mutagenesis	
Type of Allele	Gene Replacement
Targeted Gene	Name: pancreatic and duodenal homeobox 1 Symbol: Pdx1 NCBI: 18609
Allele	Name: targeted mutation 1.2 Symbol: Pdx1 ^{tm1.2(CFP)} MGI: MGI:5438568
Description of Targeting Vector	Coding sequences for a nuclear localized Cerulean followed by the beta globin splice/polyA sequence were inserted into exon 1 of the Pdx1 locus. Using recombinase-mediated cassette exchange (RMCE), the cassette was inserted into the Pdx1 ^{LCA} . The exchange cassette also contains a flrtd (flanked by FRT) pgk-Hygro sequence for positive selection after RMCE. The pgk-Hygro cassette is removed after germline transmission.
Vector Genbank File	pPdx1.TV.gb
Allele Map	<i>Not Provided</i>

PCR Genotyping Protocol	Not provided
Type of Allele	
Exchanged Cassette Gene Name	(18609)
Exchanged Cassette Allele Name	Pdx1{LCA}
Description of Exchange Vector	None Provided
Exchanged Cassette Genbank File	Pdx1.CFP.BpA_.gb
PCR Genotyping Protocol	Not provided
Citations	<p>Publication</p> <hr/> <p><u>A recombinase-mediated cassette exchange-derived cyan fluorescent protein reporter allele for Pdx1.</u> (2012) <i>Genesis</i> 50: 384-92 (Added 12/5/2013) PMID: 21913313</p>

Background Strain Information

Strain Type	Inbred Strain
Chimera/Founder Genetic Background	129S6/SvEvTac
Current Genetic Background	CD-1
Number of Generations Backcrossed	9
Strain Description	Mice containing the Pdx1 ^{CFP} allele were bred to FlpE-expressing transgenic mice to remove the hygR selection cassette. Animals with this allele are currently being maintained in a CD1 (outbred) genetic background.

Publications / Citations

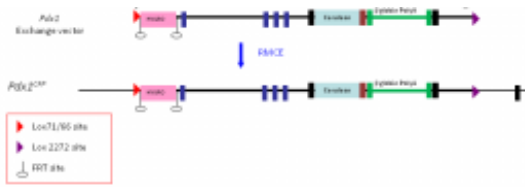
1. [A recombinase-mediated cassette exchange-derived cyan fluorescent protein reporter allele for Pdx1.](#) Potter LA, Choi E, Hipkens SB, Wright CV, Magnuson MA (2012) *Genesis* **50(4)**: 384-92
 › Primary publication · [21913313](#) (PubMed) · [PMC3870909](#) (PubMed Central) · Added on 12/5/2013

MeSH Terms

Alleles	Animals	Cell Differentiation	Embryonic Stem Cells	Endoderm	Female	Flow Cytometry
Gene Expression Regulation, Developmental	Gene Regulatory Networks	Genes, Reporter	Gene Targeting	Green Fluorescent Proteins		
Homeodomain Proteins	Mice	Mice, Inbred C57BL	Mice, Knockout	Microscopy, Fluorescence	Mutagenesis, Insertional	Pancreas
				Recombinases	Trans-Activators	

Attachments

 [pdx1_cfp_for_bcbc.png](#) - Added on July 19, 2010 at 10:17 AM by [Mark Magnuson](#)



 [pdx1.cfp_hygro_pcr_protocol.doc](#) - Added on July 29, 2010 at 1:31 PM by [Jill Lindner](#)

PCR protocol for genotyping mice