



Image from jax.org

Mouse Strain Datasheet

Strain Name

Pkd2^{fl/fl}

MGI Gene ID

MGI:4843126

Full Allele Name

Pkd2^{<tm1.1Tjw>}

Type of Allele

conditional allele

Human Gene (HGNC)

PKD2

Genetic Background

C57BL/6J

Commercial Source

Jax mice

Stock Number

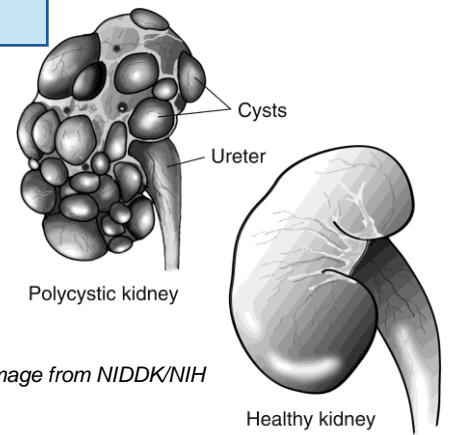
17292

Link

<https://www.jax.org/strain/017292>

Genotyping Protocol

<https://www.jax.org/Protocol?stockNumber=017292&protocolID=24847>



Strain Details

A loxP site was inserted upstream of exon 11 and an FRT-flanked neo cassette with a 5' loxP site was inserted downstream of exon 13. Flp-mediated recombination removed the neo cassette leaving exons 11 through 13 floxed. These Pkd2 conditional mutant mice possess loxP sites flanking exons 11-13 of the polycystic kidney disease 2 (Pkd2) gene. Expression of Cre recombinase results in removal of the intervening exons generating a null allele. This strain may be useful for studying renal development in autosomal dominant polycystic kidney disease or the function of pkd2 in various tissues and throughout adult life.

Validation or publication

<https://pubmed.ncbi.nlm.nih.gov/20862291/>

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PCR Protocol for Genotyping:

Pkd2fl/fl

A. Digestion of mouse tail or ear notch, and **embryo tail (in red)**:

1. Add 100µL of Tissue Digestion Buffer and 2µL of Proteinase K per tail (~1-2mm length). For embryos tail add **50µL of Tissue Digestion Buffer and 1µL of Proteinase K**. Make sure tail is immersed in the buffer.
2. In a thermocycler incubate at 55°C for 1 h followed by 95°C for 8 min to inactivate the enzyme and hold at 10°C. For embryos incubate at 55°C for 30 min followed by 95°C for 8 min and hold at 10°C.
3. Vortex and store at 4°C (-20°C for long storage) or use immediately to set up the PCR.

B. PCR Genotyping Protocol

Primers			
flox11-13(A)-F	5'-	CCT TTC CTC TGT GTT CTG GGG AG	-3'
"flox11-13(B)-R	5'-	GTT TGA TGC TTA GCA GAT GAT GGC	-3'
	5'-		-3'
	5'-		-3'

PCR Reaction		PCR Conditions		
BioMix (Bioline)	10.0 µL		Heated Lid	105°C
Primers (@10 µM each)	0.8 µL		Initial Denaturation	94°C 5 min
			Number of Cycles	x35
ddH ₂ O	7.2 µL		94°C	20 sec
			56°C	35 sec
			72°C	35 sec
DNA template	2.0 µL		Final Extension	72°C 10 min
Total Volume	20.0 µL		Final Hold	10°C

PCR Product Size (bp)	
Wild type band	232 bp
Pkd2fl band	318 bp

C. Reagents

Reagent	Cat #	Final Concentration	Working Concentration
Tissue Digestion Buffer for ear notch or tail			
Tris pH8.5		50mM	
EDTA		1mM	
Tween20		0.5%	
Proteinase K (Invitrogen)	25530-015	20mg/mL	
BioMix (Bioline)	BIO-25012		