Image from jax.org

Mouse Strain Datasheet

Strain Name

Pkd1fl/fl

MGI Gene ID MGI:3612341

Full Allele Name Pkd1<tm2Ggg>

Type of Allele conditional allele

Human Gene (HGNC) PKD1

Genetic Background C57BL/6J

Commercial Source Jax Mice

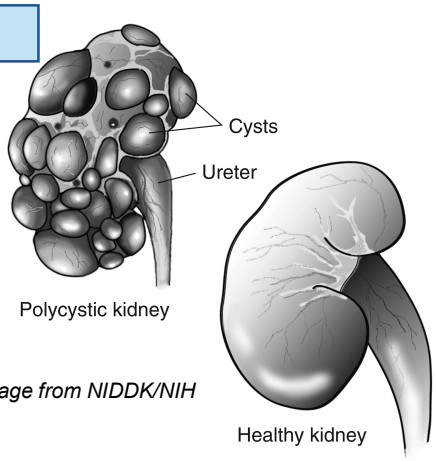

Image from NIDDK/NIH

Stock Number 10671

Link https://www.jax.org/strain/010671

Genotyping Protocol https://www.jax.org/Protocol?stockNumber=010671&protocolID=23613

Strain Details

These mice possess loxP sites on either side of exons 2 through 4 of the targeted gene. Mice that are homozygous for this allele are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. When these mutant mice are bred to mice that express Cre recombinase, resulting offspring will have exons 2 through 4 deleted in the cre-expressing tissue(s)

Validation or publication

https://pubmed.ncbi.nlm.nih.gov/15579506/

Contact Name Patricia Outeda, Stephen Parnell

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PCR Protocol for Genotyping: Pkd1fl/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			
F4 forward	5'-	CCT GCC TTG CTC TAC TTT CC	-3'
R5 back	5'-	AGG GCT TTT CTT GCT GGT CT	-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	
$_{dd}H_2O$	7.2 µL			94°C	20 sec
				56 °C	35 sec
DNA template	2.0 µL			72°C	35 sec
Total Volume	20.0 µL		Final Extension	72°C	10 min
			Final Hold	10°C	

PCR Product Size (bp)	
Wild type band	180 bp
LoxP band	250bp

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		

Image from jax.org

Mouse Strain Datasheet

Strain Name

HoxB7/Cre

MGI Gene ID n/a

Full Allele Name Tg(Hoxb7-cre)13Amc/J

Type of Allele Cre

Human Gene (HGNC) n/a

Genetic Background C57BL/6J

Commercial Source Jax Mice

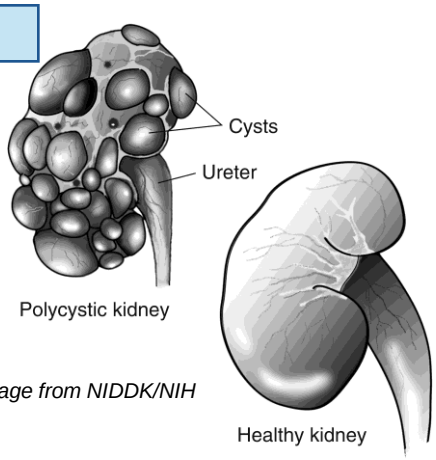

Image from NIDDK/NIH

Stock Number 004692

Link https://www.jax.org/strain/004692

Genotyping Protocol https://www.jax.org/Protocol?stockNumber=004692&protocolID=22886

Strain Details

Mice hemizygous for the transgenic insert are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. Homozygotes are not viable. These transgenic mice express the Cre recombinase under the control of the mouse homeobox B7 enhancer and promoter. Recombination closely patterns the endogenous gene expression. Cre recombinase expression is detected in the mesonephric duct as early as embryonic day 9.5, in the ureteric bud by embryonic day 10.25 and in all ureteric bud epithelial cells by embryonic day 12.5. Low levels of expression are detected in the dorsal root ganglia and the spinal cord. When crossed with a strain containing a loxP site flanked sequence of interest, Cre-mediated recombination results in deletion of the flanked sequence in the mesonephric duct and its developmental derivatives (the Wolffian duct, the collecting duct

Validation or publication

https://pubmed.ncbi.nlm.nih.gov/12399320/

Contact Name Stephen Parnell

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PCR Protocol for Genotyping: HoxB7/Cre

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			
oIMR2098	5'-	GGTCACGTGGTCAGAAGAGG	-3'
oIMR2099	5'-	CTCATCACTCGTTGCATCGA	-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	
$_{dd}H_2O$	7.2 µL			94°C	20 sec
				°C	35 sec
DNA template	2.0 µL			72°C	35 sec
Total Volume	20.0 µL		Final Extension	72°C	10 min
			Final Hold	10°C	

PCR Product Size (bp)	
Wild type band	NA
Cre (specific for Hoxb7-Cre)	~300 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		