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

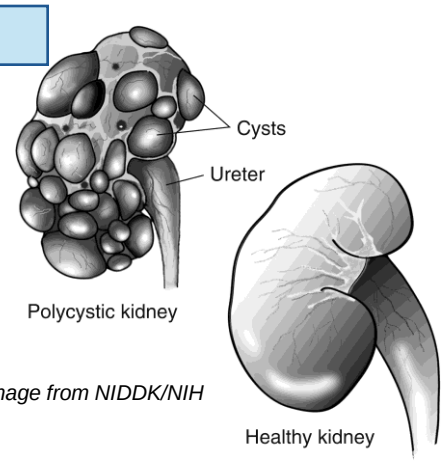

Image from NIDDK/NIH

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/

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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

Ksp-Cre

MGI Gene ID MGI:2665300

Full Allele Name Tg(Cdh16-cre)91Igr

Type of Allele Transgenic (Recombinase)

Human Gene (HGNC) n/a

Genetic Background C57BL/6J

Commercial Source Jax Mice

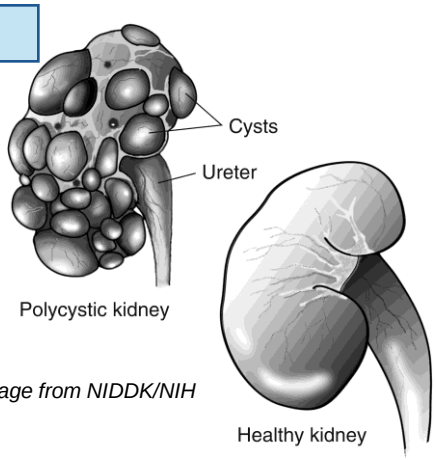

Image from NIDDK/NIH

Stock Number 12237

Link https://www.jax.org/strain/012237

Genotyping Protocol https://www.jax.org/Protocol?stockNumber=012237&protocolID=25023

Strain Details

These Ksp1.3/Cre transgenic mice express Cre recombinase under the control of the mouse cadherin 16 (Cdh16 or Ksp1.3) promoter. Cre recombinase expression is detected in epithelial cells of the developing kidney and genitourinary tract and in the renal tubules of adult mice. This mutant mouse strain may be useful in kidney-specific gene targeting and cell lineage studies

Validation or publication

https://pubmed.ncbi.nlm.nih.gov/12089379/

Contact Name Patricia Outeda

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PCR Protocol for Genotyping: Ksp-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			
Forward	5'-	ATT GCT GTC ACT TGG TCG TGG C	-3'
Reverse	5'-	GGA AAA TGC TTC TGT CCG TTT GC	-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	
Cre Band	200 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		