



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>

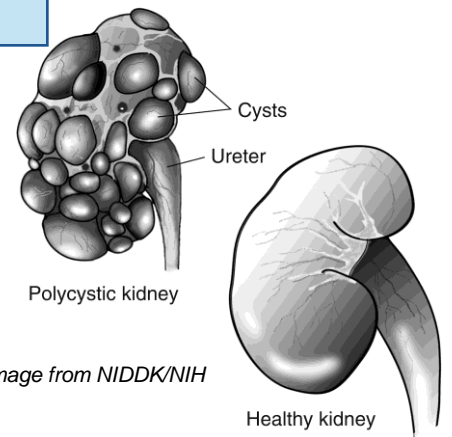


Image from NIDDK/NIH

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/>

Contact Name

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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			
Total Volume	20.0 µL	Final Extension	72°C	10 min
		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		



Image from jax.org

Mouse Strain Datasheet

Strain Name

Ift88 flox

MGI Gene ID

MGI:3710185

Full Allele Name

Ift88<tm1Bky>

Type of Allele

conditional allele

Human Gene (HGNC)

IFT88

Genetic Background

C57BL/6J

Commercial Source

Jax Mice

Stock Number

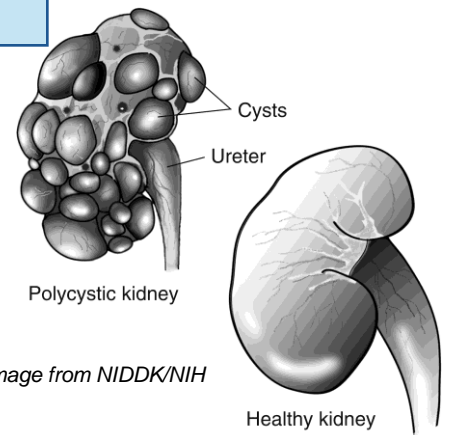
022409

Link

<https://www.jax.org/strain/022409>

Genotyping Protocol

<https://www.jax.org/Protocol?stockNumber=022409&protocolID=24348>



Strain Details

These Ift88<fl> mice possess loxP sites flanking exons 4-6 of the intraflagellar transport 88 (Ift88) gene. Expression of Cre recombinase results in excision of these exons and generation of a null allele. This strain may be useful for studying ciliopathic human genetic diseases. Homozygous fl/fl mice are viable and fertile.

Validation or publication

<https://pubmed.ncbi.nlm.nih.gov/17166921/>

Contact Name

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PCR Protocol for Genotyping:

Ift88 flox

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			
Common forward	5'-	GCCTCCTGTTTCTTGACAACAGTG	-3'
delta reverse	5'-	CTGCACCAGCCATTTCTCTAAGTCATGTA	-3'
flox/WT reverse	5'-	GGTCCTAACAAAGTAAGCCCAGTGTT	-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
			60°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	350 bp
flox	370 bp
delta	270 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		



Image from jax.org

Mouse Strain Datasheet

Strain Name

mTmG

MGI Gene ID

n/a

Full Allele Name

Gt(ROSA)26Sor<tm4(ACTB-tdTomato,-EGFP)Luo>

Type of Allele

reporter

Human Gene (HGNC)

n/a

Genetic Background

C57BL/6J

Commercial Source

Jax mice

Stock Number

007676

Link

<https://www.jax.org/strain/007676>

Genotyping Protocol

<https://www.jax.org/Protocol?stockNumber=007676&protocolID=20368>

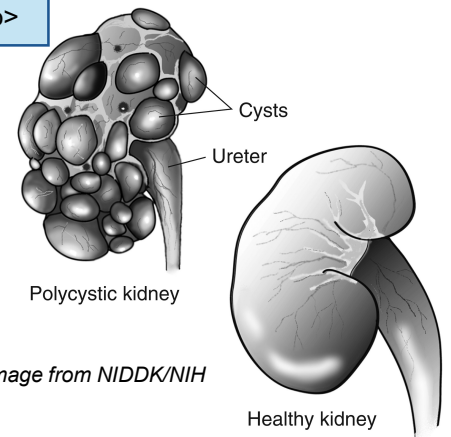


Image from NIDDK/NIH

Strain Details

ROSA^{mT/mG} is a cell membrane-targeted, two-color fluorescent Cre-reporter allele. Prior to Cre recombination, cell membrane-localized tdTomato (mT) fluorescence expression is widespread in cells/tissues. Cre recombinase expressing cells (and future cell lineages derived from these cells) have cell membrane-localized EGFP (mG) fluorescence expression replacing the red fluorescence.

Validation or publication

Contact Name

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PCR Protocol for Genotyping:

mTmG

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			
wildtype forward	5'-	CTC TGC TGC CTC CTG GCT TCT	-3'
wildtype reverse	5'-	CGA GGC GGA TCA CAA GCA ATA	-3'
mutant reverse	5'-	TCA ATG GGC GGG GGT CGT T	-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
			60°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	330 bp
transgene	250 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		