



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

Stock Number

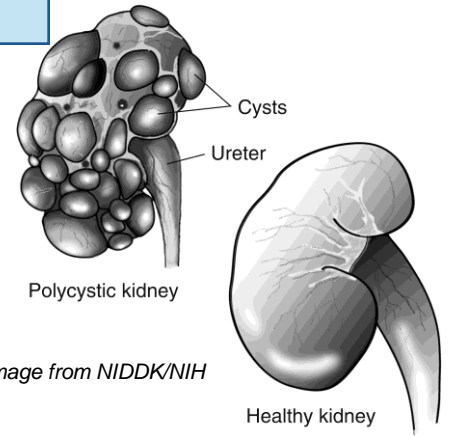
10671

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

Email

pgarcia@som.umaryland.edu, sparnell@kumc.edu



Image from jax.org

Mouse Strain Datasheet

Strain Name

Pax8rtTA

MGI Gene ID

MGI:3709326

Full Allele Name

Tg(Pax8-rtTA2S*M2)1Koes

Type of Allele

Inducible, Recombinase

Human Gene (HGNC)

n/a

Genetic Background

C57BL/6J

Commercial Source

Jax Mice

Stock Number

7176

Link

<https://www.jax.org/strain/007176>

Genotyping Protocol

<https://www.jax.org/Protocol?stockNumber=007176&protocolID=29318>

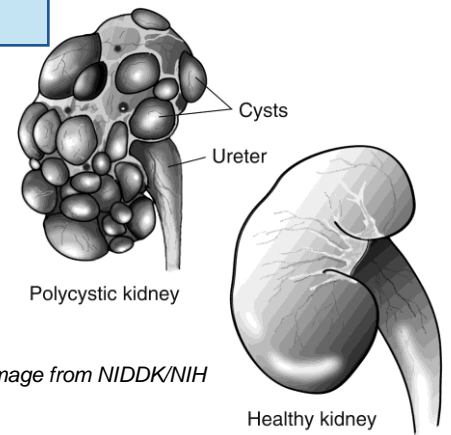


Image from NIDDK/NIH

Strain Details

The Pax8-rtTA construct contains an optimized rtTA variant (rtTA2s-M2) cDNA and SV40 polyA sequence replaced at the endogenous ATG translational start site of a murine Pax8 sequence. The rtTA2S*M2 variant contains 5 amino acid changes in the TetR moiety (S12G, E19G, A56P, D148E, and H179R) and a synthetic optimized transactivating domain, resulting in reduced basal activity and enhanced doxycycline sensitivity compared to wild-type rtTA. These Pax8-rtTA mice provide a Tet-On tool that allows the inducible expression of genes in renal tubular epithelial cells, and may be useful in studying renal disorders such as fibrosis or polycystic kidney disease, renal cancer, and Tuberous Sclerosis

Validation or publication

<https://pubmed.ncbi.nlm.nih.gov/18724376/>

Contact Name

Patricia Outeda

Email

pgarcia@som.umaryland.edu

PCR Protocol for Genotyping:

Pax8rtTA

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			
oIMR7385	5'-	CCA TGT CTA GAC TGG ACA AGA	-3'
oIMR7386	5'-	CTC CAG GCC ACA TAT GAT TAG	-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
			63°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	
Pax8 Band	595 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

(tetO)7-Cre

MGI Gene ID

n/a

Full Allele Name

Tg(tetO-cre)1Jaw/J

Type of Allele

Cre (DOX-inducible; needs rtTA)

Human Gene (HGNC)

n/a

Genetic Background

C57BL/6J

Commercial Source

Jax Mice

Stock Number

006234

Link

<https://www.jax.org/strain/006234>

Genotyping Protocol

<https://www.jax.org/Protocol?stockNumber=006234&protocolID=22392>

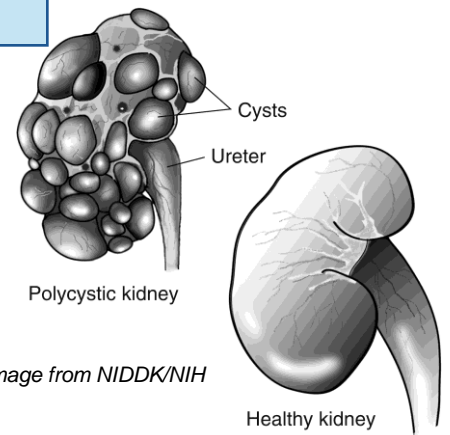


Image from NIDDK/NIH

Strain Details

These transgenic mice express Cre recombinase under the control of a tetracycline-responsive promoter element (TRE or tetO) and are an effective tool for generating inducible, tissue-specific, targeted mutants to study cell lineage during development. When bred with another transgenic mouse expressing reverse tetracycline-controlled transactivator protein (rtTA) or tetracycline-controlled transactivator protein (tTA), Cre mediated recombination in the resulting bitransgenic offspring can be regulated with the tetracycline analog, doxycycline.

Validation or publication

<https://pubmed.ncbi.nlm.nih.gov/12145322/>

Contact Name

Stephen Parnell

Email

sparnell@kumc.edu

PCR Protocol for Genotyping: (tetO)7-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			
Cre Forward	5'-	AGGTTCGTTCACTCATGGA	-3'
Cre Reverse (this is a generic Cre primer)	5'-	TCGACCAGTTTAGTTACCC	-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
			55°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	NA
Cre (generic)	235 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

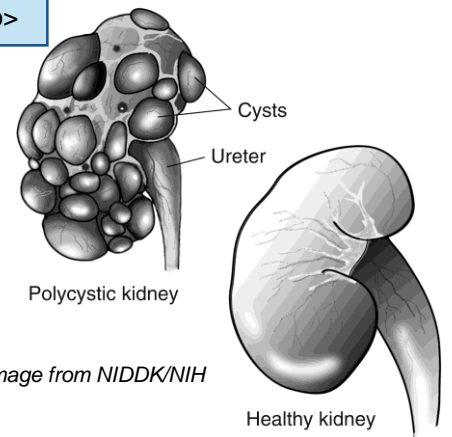
007676

Link

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

Genotyping Protocol

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



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

[Empty box for validation or publication information]

Contact Name

Stephen Parnell

Email

sparnell@kumc.edu

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			
Total Volume	20.0 µL		Final Extension	72°C 10 min
			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		