



Image from jax.org

# Mouse Strain Datasheet

## Strain Name

Pkd2<sup>fl/fl</sup>

**MGI Gene ID**

MGI:4843126

**Full Allele Name**

Pkd2<sup><tm1.1Tjw></sup>

**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>

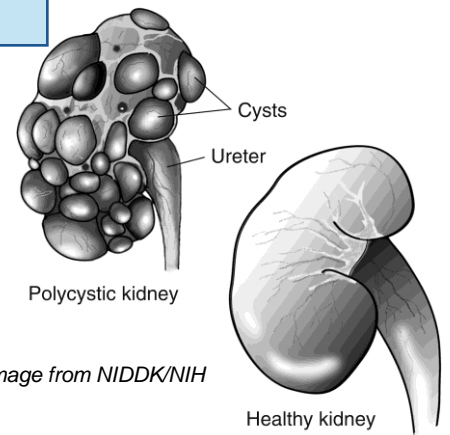


Image from NIDDK/NIH

## 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 <sub>2</sub> 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
<b>Tissue Digestion Buffer for ear notch or tail</b>			
Tris pH8.5		50mM	
EDTA		1mM	
Tween20		0.5%	
<b>Proteinase K (Invitrogen)</b>	25530-015	20mg/mL	
<b>BioMix (Bioline)</b>	BIO-25012		



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# Mouse Strain Datasheet

## Strain Name

Tam-Cre; CAGGCre-ER

MGI Gene ID

MGI:2182767

Full Allele Name

Tg(CAG-cre/Esr1\*)5Amc

Type of Allele

Inducible (Recombinase)

Human Gene (HGNC)

n/a

Genetic Background

C57BL/6J

Commercial Source

Jax Mice

Stock Number

4682

Link

<https://www.jax.org/strain/004682>

Genotyping Protocol

<https://www.jax.org/Protocol?stockNumber=004682&protocolID=19114>

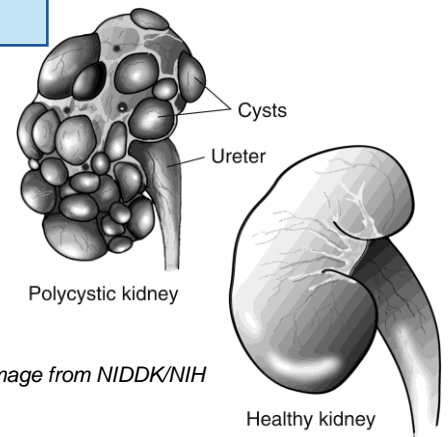


Image from NIDDK/NIH

### Strain Details

These CAGGCre-ERTM transgenic mice have a tamoxifen-inducible cre-mediated recombination system driven by the chicken beta actin promoter/enhancer coupled with the cytomegalovirus (CMV) immediate-early enhancer. When bred with mice containing loxP-flanked sequences, tamoxifen-inducible Cre-mediated recombination results in deletion of the floxed sequences in widespread cells/tissues of the offspring. Tamoxifen administration will also induce Cre recombination in developing embryos of treated mothers and in cultured cells derived from transgenic mice. Homozygous mice are not viable or fertile. Hemizygous mutant mice are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities

### Validation or publication

<https://pubmed.ncbi.nlm.nih.gov/11944939/>

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## PCR Protocol for Genotyping: Tam-Cre; CAGGCre-ER

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

1. Add 100 $\mu$ L of Tissue Digestion Buffer and 2 $\mu$ L of Proteinase K per tail (~1-2mm length). For embryos tail add **50 $\mu$ L of Tissue Digestion Buffer and 1 $\mu$ L 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 $\mu$ L	Heated Lid		105°C
Primers (@10 $\mu$ M each)	0.8 $\mu$ L	Initial Denaturation	94°C	5 min
		Number of Cycles	x35	
ddH <sub>2</sub> O	7.2 $\mu$ L		94°C	20 sec
			56°C	35 sec
			72°C	35 sec
DNA template	2.0 $\mu$ L			
Total Volume	20.0 $\mu$ L	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
<b>Tissue Digestion Buffer for ear notch or tail</b>			
Tris pH8.5		50mM	
EDTA		1mM	
Tween20		0.5%	
<b>Proteinase K (Invitrogen)</b>	25530-015	20mg/mL	
<b>BioMix (Bioline)</b>	BIO-25012		



Image from jax.org

# Mouse Strain Datasheet

## Strain Name

Rosa

**MGI Gene ID**

MGI:104735

**Full Allele Name**

Gt(ROSA)26Sor<tm1Sor>

**Type of Allele**

Conditional, Reporter

**Human Gene (HGNC)**

n/a

**Genetic Background**

C57BL/6J

**Commercial Source**

Jax Mice

**Stock Number**

3474

**Link**

<https://www.jax.org/strain/003474>

**Genotyping Protocol**

<https://www.jax.org/Protocol?stockNumber=003474&protocolID=29915>

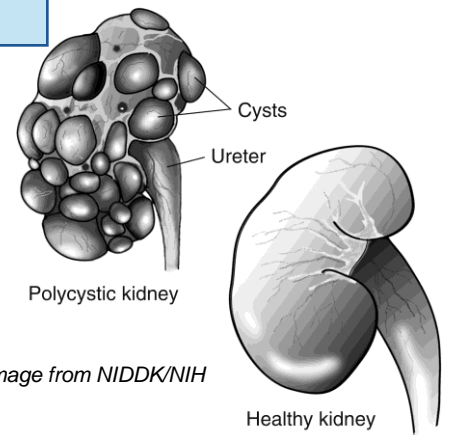


Image from NIDDK/NIH

## Strain Details

These Gt(ROSA)26Sortm1Sor targeted mutant mice carry a loxP flanked neo cassette upstream of a  $\beta$ -galactosidase (lacZ) sequence. Removal of the neo cassette by cre recombination results in lacZ expression in cre-expressing tissues of the offspring. These mutant mice may be used as a Cre-reporter strain to test the tissue/cellular expression pattern of cre expressing mice.

## Validation or publication

<https://pubmed.ncbi.nlm.nih.gov/9916792/>

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## PCR Protocol for Genotyping:

Rosa

### 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			
IMR0883	5'-	AAA GTC GCT CTG AGT TGT TAT	-3'
IMR0315	5'-	GCG AAG AGT TTG TCC TCA ACC	-3'
IMR0316	5'-	GGA GCG GGA GAA ATG GAT ATG	-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 <sub>2</sub> O	7.2 µL		94°C	20 sec
			67°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	550 bp
Rosa band	300 bp

### C. Reagents

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