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# Mouse Strain Datasheet

## Strain Name

Pkd1 deltaL

MGI Gene ID

n/a

Full Allele Name

Pkd1<tm1.1Jcal>

Type of Allele

null allele (single amino acid deletion)

Human Gene (HGNC)

PKD1

Genetic Background

C57BL/6J

Commercial Source

n/a

Stock Number

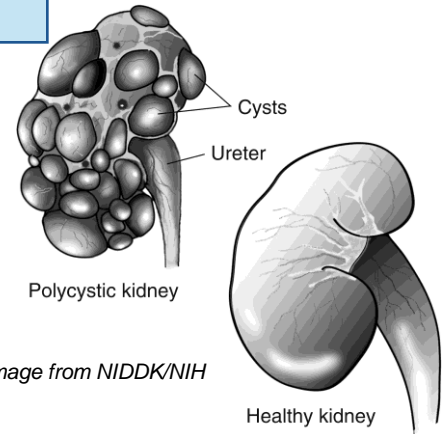
n/a

Link

n/a

Genotyping Protocol

attached



### Strain Details

The codon for leucine 4122 in exon 45 was deleted and a loxP site flanked neomycin resistance gene cassette was inserted into intron 45. The Neo gene was removed by cre-mediated excision leaving a single loxP sequence in intron 45. The deletion mimics the p.Leu4132Del mutation in some human autosomal dominant polycystic kidney disease (ADPKD) patients. The mutation is in the crucial G protein binding domain and creates a functional knock-out.

### Validation or publication

<https://pubmed.ncbi.nlm.nih.gov/29931260/>

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## PCR Protocol for Genotyping: Pkd1 deltaL

### 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			
dL forward	5'-	GTGCCCTGAGGTTAGGGGCTATCCTCC	-3'
dL reverse	5'-	GAGCACAACTGGGGATGACTTGGAGCC	-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
			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	330 bp
dL	406 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		