Image from criver.com

Rat Strain Datasheet

Strain Name

PCK

RGD Gene ID	11535943
Full Allele Name	Pkhd1<pck>
Type of Allele	spontaneous; null
Human Gene (HGNC)	PKHD1
Genetic Background	CD
Commercial Source	Charles River Laboratories
Stock Number	PCK rat
Link	https://www.criver.com/industry
Genotyping Protocol	See attached - requires sequencing

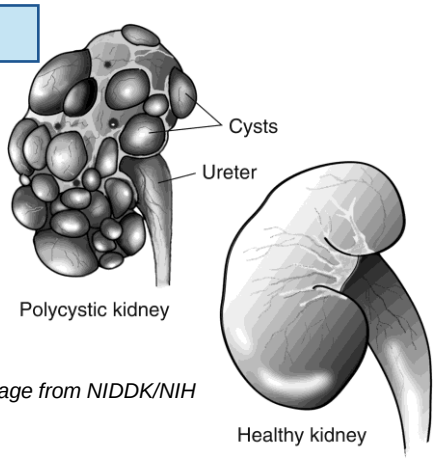

Image from NIDDK/NIH

Strain Details

This allele is a spontaneously deletion mutant developed in a female rat with polycysts on both kidney and liver in the colony of Crj:CD (SD) rats. The mutation was a splicing change, IVS35-2A>T that caused skipping of the 157-bp exon36, leading to a frame shift.

Samples must be sequenced for genotyping

Validation or publication

https://pubmed.ncbi.nlm.nih.gov/10803363/

Contact Name	**Email**
Mandy Croyle	pydnam@uab.edu

PCR Protocol for Genotyping: PCK

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 primer	5'-	GGATTCAGCTCTGCCTGTTAG	-3'
Reverse primer	5'-	TGTTCCTTGCTGTCCGAATAC	-3'
Sequencing primer	5'-	GGGAGTTCAGGAGACTTGTATTC	-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	

Sequence of alleles	
Wild type allele	CCC[T]GGAAAA
PCK sequence	CCC[A]GGAAAA

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		