



Image from jax.org

Mouse Strain Datasheet

Strain Name

GCaMP6F

MGI Gene ID

n/a

Full Allele Name

Gt(ROSA)26Sor<tm95.1(CAG-GCaMP6f)Hze>

Type of Allele

reporter

Human Gene (HGNC)

n/a

Genetic Background

C57BL/6J

Commercial Source

Jax mice

Stock Number

028865

Link

<https://www.jax.org/strain/028865>

Genotyping Protocol

<https://www.jax.org/Protocol?stockNumber=028865&protocolID=27076>

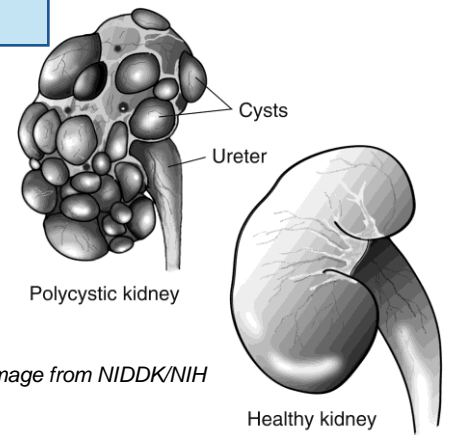


Image from NIDDK/NIH

Strain Details

Ai95(RCL-GCaMP6f)-D mice (also called Ai95^{neo} or Ai95D) harbor the Rosa-CAG-LSL-GCaMP6f::deltaNeo conditional allele, designed with a floxed-STOP cassette upstream of the GCaMP6 fast variant calcium indicator (GCaMP6f; see detailed description below). Although under control of the endogenous Gt(ROSA)26Sor promoter/enhancer regions and the CAG hybrid promoter, widespread expression of GCaMP6f is prevented by the floxed-STOP cassettes. After exposure to Cre recombinase, bright EGFP fluorescence is observed following calcium binding to the reporter.

Validation or publication

<https://pubmed.ncbi.nlm.nih.gov/25741722/>

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PCR Protocol for Genotyping:

GCaMP6F

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'-	AAGGGAGCTGCAGTGGAGTA	-3'
common reverse	5'-	CCGAAAATCTGTGGGAAGTC	-3'
mutant forward	5'-	ACGAGTCGGATCTCCCTTTG	-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	297 bp
off	450 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		