

# Unilateral ureteral obstruction mouse model of kidney fibrosis

Fast track your compounds with our mouse model of kidney fibrosis and inflammation induced by surgical obstruction of the ureter.

## Unilateral Ureteral Obstruction (UUO) mouse model

The UUO mouse model is based on unilateral surgical obstruction of the ureter at study start. The UUO mouse exhibits interstitial fibrosis and inflammation within one week after surgery as assessed by morphometric quantification and gene expression analysis.

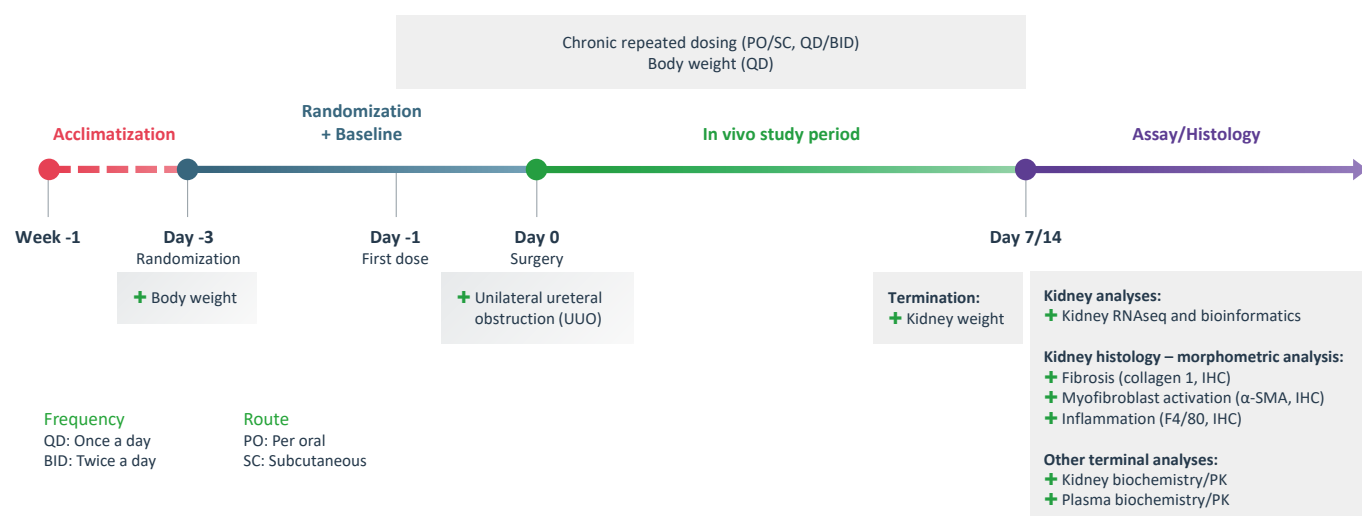
The UUO model is optimal for fast screening of drug candidates and drug efficacy testing.

### Key model traits

- Surgical obstruction of the ureter.
- 7-14 days treatment period.
- Kidney histopathology markers of interstitial fibrosis and inflammation.
- RNA sequencing and kidney disease focused bioinformatics analyses, opportunity for including customized genes and pathways.

<b>Model induction</b>	Permanent surgical unilateral ureteral obstruction
<b>Strain</b>	Male C57BL/6 mouse

## Study outline



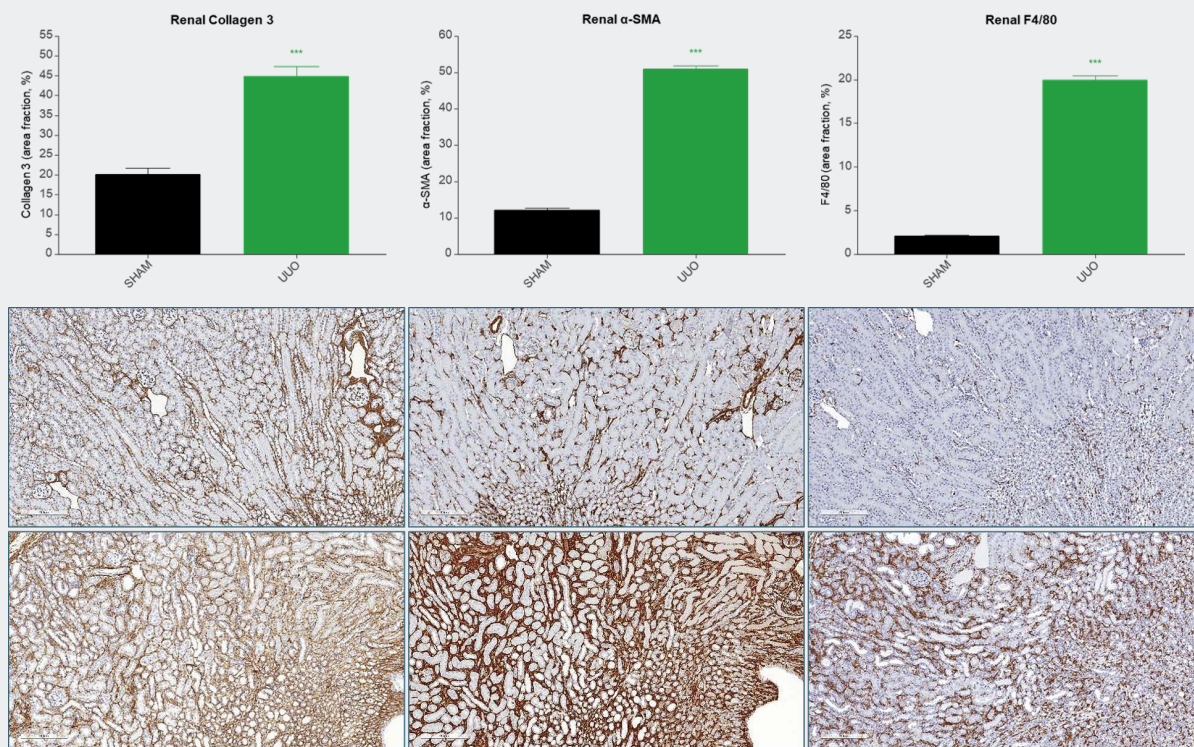
## Metabolic and histopathological characteristics

UUO mice display mild enlargement of the obstructed kidney, while plasma markers of kidney function remain unchanged.

	Sham	UUO
Body weight (g)	23.6 ± 0.6	23.8 ± 0.5
Kidney weight (mg)	154 ± 5	179 ± 6
Plasma urea (mmol/L)	8.9 ± 0.5	9.3 ± 0.7

## Histological quantification of fibrosis and inflammation

The UUO mouse kidney displays kidney fibrosis and inflammation as determined by morphometric quantification.



IHC stained kidney sections: Sham (top) and UUO (bottom).

## Kidney gene expression by RNA sequencing

The UUO mouse kidney exhibits regulation of genes involved in fibrosis and inflammation as assessed by bulk RNA sequencing and bioinformatics analyses.

