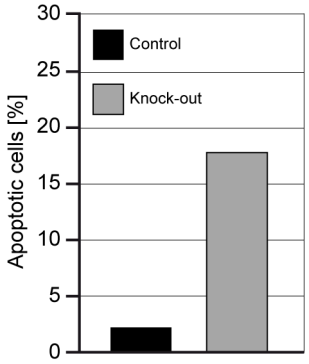
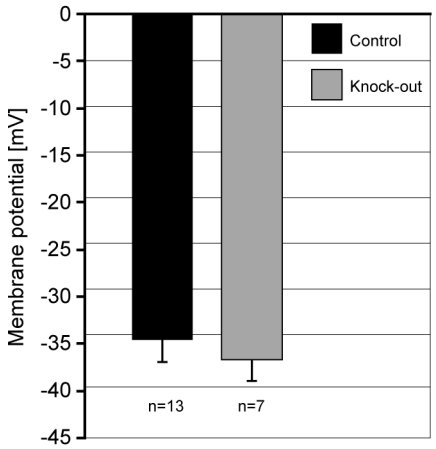
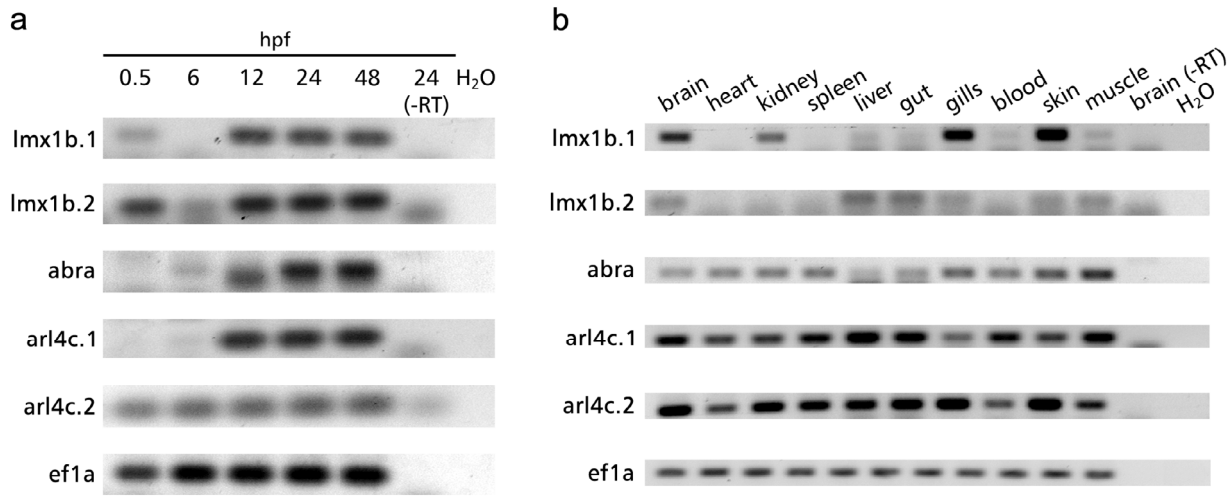


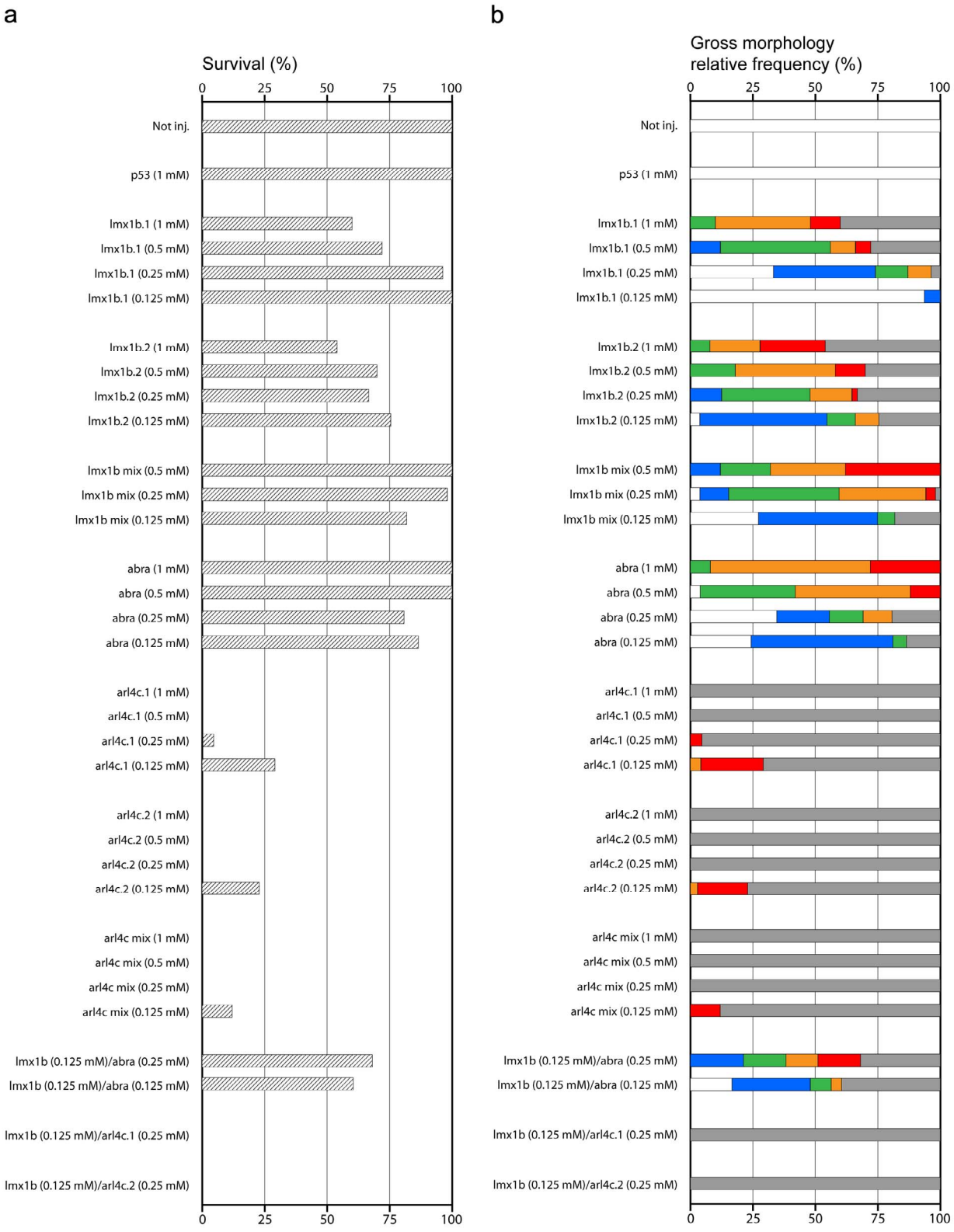
Suppl. Fig. 1. Camptothecin treatment of primary podocytes. Control and triple-transgenic mice were administered 2 mg/ml of doxycycline for 7 days. Glomeruli were isolated and primary podocytes allowed to grow out for 5 days. Incubation with 10 µM of camptothecin for 24 hours resulted in a much higher apoptosis rate in podocytes of knock-out mice as determined by staining for cleaved caspase-3.

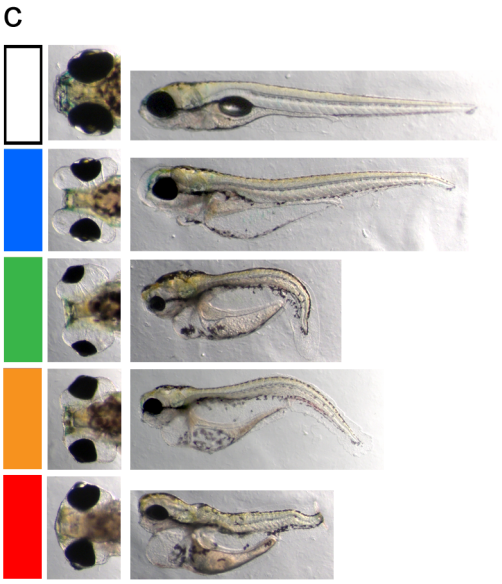


Suppl. Fig. 2. Electrophysiological characterization of primary podocytes. Glomeruli were isolated from triple-transgenic and *Lmx1b*$^{lox/lox}$; *NPHS2*:rtTA mice which had received 2 mg/ml of doxycycline in the drinking water over a period of 7 days. Primary podocytes were used 12 days after the isolation of glomeruli. No difference in the resting membrane potential can be seen between primary podocytes of control and those of knock-out mice. The numbers below the bars indicate the number of podocytes analyzed.



Suppl. Fig. 3. Expression of *lmx1b.1, lmx1b.2, abra, arl4c.1* and *arl4c.2* during zebrafish development and in adult zebrafish organs. Total RNA was isolated from pooled zebrafish embryos at the indicated times (hpf, hours post fertilization) (a) or from the organs of an 18-month old zebrafish (b). Polymerase chain reactions were run with 500 ng of total RNA for 32 cycles. The mRNA for ef1a served as a control for the integrity of the RNA preparation.


a
Survival (%)
0
25
50
75
100
Not inj.
p53 (1 mM)
lmx1b.1 (1 mM)
lmx1b.1 (0.5 mM)
lmx1b.1 (0.25 mM)
lmx1b.1 (0.125 mM)
lmx1b.2 (1 mM)
lmx1b.2 (0.5 mM)
lmx1b.2 (0.25 mM)
lmx1b.2 (0.125 mM)
lmx1b mix (0.5 mM)
lmx1b mix (0.25 mM)
lmx1b mix (0.125 mM)
abra (1 mM)
abra (0.5 mM)
abra (0.25 mM)
abra (0.125 mM)
arl4c.1 (1 mM)
arl4c.1 (0.5 mM)
arl4c.1 (0.25 mM)
arl4c.1 (0.125 mM)
arl4c.2 (1 mM)
arl4c.2 (0.5 mM)
arl4c.2 (0.25 mM)
arl4c.2 (0.125 mM)
arl4c mix (1 mM)
arl4c mix (0.5 mM)
arl4c mix (0.25 mM)
arl4c mix (0.125 mM)
lmx1b (0.125 mM)/abra (0.25 mM)
lmx1b (0.125 mM)/abra (0.125 mM)
lmx1b (0.125 mM)/arl4c.1 (0.25 mM)
lmx1b (0.125 mM)/arl4c.2 (0.25 mM)
b
Gross morphology
relative frequency (%)
0
25
50
75
100
Not inj.
p53 (1 mM)
lmx1b.1 (1 mM)
lmx1b.1 (0.5 mM)
lmx1b.1 (0.25 mM)
lmx1b.1 (0.125 mM)
lmx1b.2 (1 mM)
lmx1b.2 (0.5 mM)
lmx1b.2 (0.25 mM)
lmx1b.2 (0.125 mM)
lmx1b mix (0.5 mM)
lmx1b mix (0.25 mM)
lmx1b mix (0.125 mM)
abra (1 mM)
abra (0.5 mM)
abra (0.25 mM)
abra (0.125 mM)
arl4c.1 (1 mM)
arl4c.1 (0.5 mM)
arl4c.1 (0.25 mM)
arl4c.1 (0.125 mM)
arl4c.2 (1 mM)
arl4c.2 (0.5 mM)
arl4c.2 (0.25 mM)
arl4c.2 (0.125 mM)
arl4c mix (1 mM)
arl4c mix (0.5 mM)
arl4c mix (0.25 mM)
arl4c mix (0.125 mM)
lmx1b (0.125 mM)/abra (0.25 mM)
lmx1b (0.125 mM)/abra (0.125 mM)
lmx1b (0.125 mM)/arl4c.1 (0.25 mM)
lmx1b (0.125 mM)/arl4c.2 (0.25 mM)



Suppl. Fig. 4. Survival and gross morphology after the knock-down of *lmx1b*, *abra* and *arl4c* in zebrafish. Survival rates (a) and phenotypes of surviving zebrafish (b) 6 days after the injection of morpholinos. When combinations of morpholinos were injected (lmx1b mix and arl4c mix), equal amounts of each morpholino were used which added up to the indicated concentrations. The number of dead zebrafish is indicated by the grey bars. Prototypical pictures of each phenotype are shown in panel c.