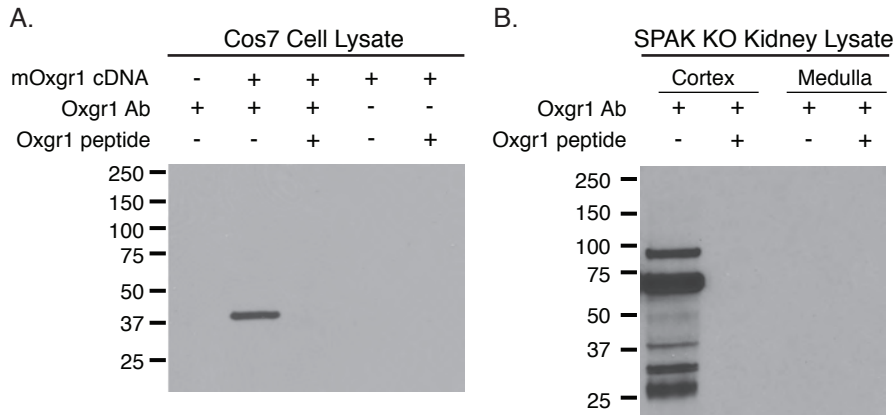
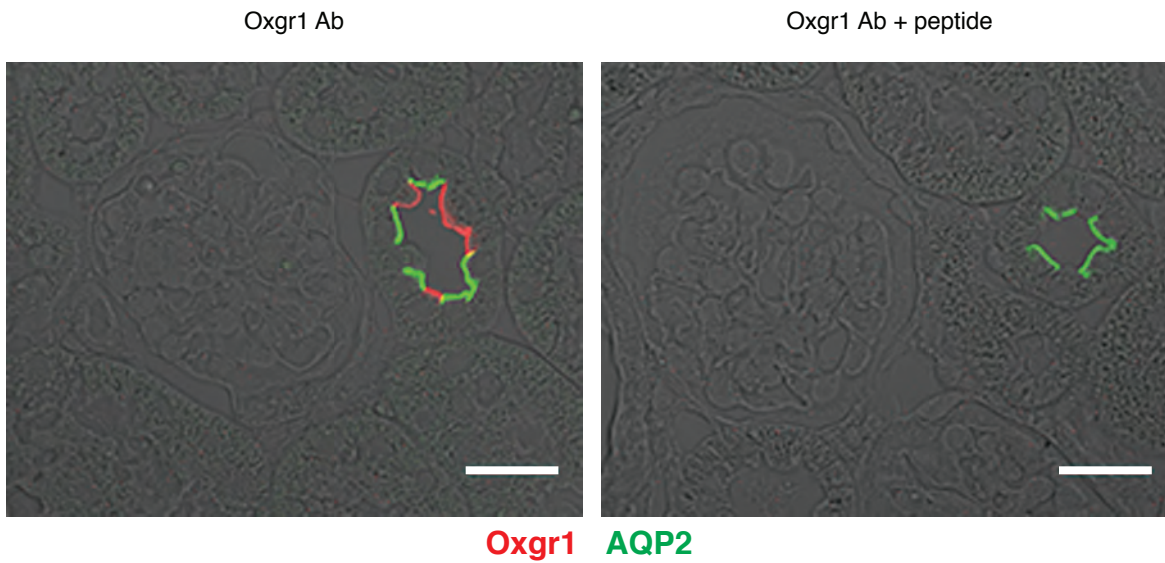


Supplemental Figure 1



C.



Supplemental Figure 1

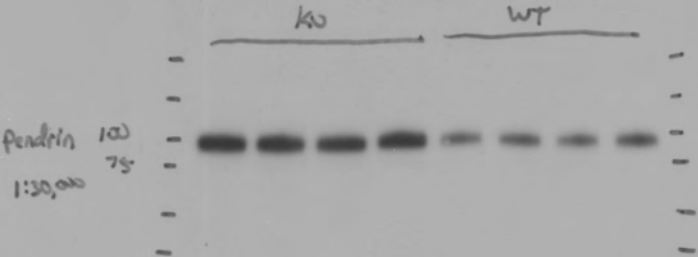
Oxgr1 antibody characterization. (A) Western blot of control and mOxgr1 transfected Cos7 cells showing a single protein of anticipated molecular weight (~38kDa). Preincubation with excess antigen peptide (26 amino acids of the 2nd extracellular loop) blocked antibody binding. (B) Western blot of Oxgr1 from the kidney of SPAK KO mouse. Within the cortex, multiple bands are observed including the anticipated 38kDa product and higher molecular weight forms, consistent with glycosylation and/or receptor oligomerization. All forms are competed by antigen peptide. Lack of Oxgr1 reactivity in the medulla is consistent with exclusive expression in B-ICs, which are restricted to the cortex. (C) Confocal images of Oxgr1 (red) in representative CNT/CCD from SPAK KO mice in the absence and presence of antigen peptide (40X, bar = 20µm). Antigen peptide again blocks immunoreactivity.

Supplemental Table1:
Physiological Characteristics of WT and SPAK KO Littermates

Measurement	WT (n = 4)	SPAK KO (n = 4)
<i>Plasma</i>		
Na (mM)	143.2 ± 0.9	140.2 ± 1.0
K (mM)	3.8 ± 0.2	3.4 ± 0.2
Cl (mM)	110.2 ± 1.3	108.8 ± 1.5
PCO ₂ (mmHg)	39.4 ± 0.8	38.2 ± 0.6
PHCO ₃ (mM)	22.9 ± 0.4	26.6 ± 0.6*
TCO ₂ (mM)	24.8 ± 0.5	27.7 ± 0.7*
pH	7.386 ± 0.024	7.436 ± 0.042*
B.U.N. (mg/dl)	22.8 ± 1.8	28.2 ± 2.4*
HCT (%)	45.7 ± 0.8	49 ± 1.2*
Osmolarity (mOSM)	289.2 ± 2.2	288.7 ± 2.4
a-KG (uM)	13.7 ± 0.9	14.4 ± 0.6
<i>Urine</i>		
Volume (ml/day)	2.4 ± 0.3	2.3 ± 0.3
Na (umol/day)	220.3 ± 30.7	230.9 ± 39.0
K (umol/day)	452.8 ± 46.7	532.8 ± 56.6
Cl (umol/day)	161.5 ± 23.1	168.8 ± 27.3
pH	6.342 ± 0.053	6.902 ± 0.058*
Osmolarity (mOsm)	986 ± 145	1109 ± 162
Apparent GFR (ul/min)	323.1 ± 23.0	327.3 ± 29.4
a-KG/creatinine (mmol/mmol)	0.8 ± 0.1	2.8 ± 0.3
NH ₃ (umol/ml)	94 ± 4	187 ± 6

* P < 0.05; two-tailed t-test, WT vs KO

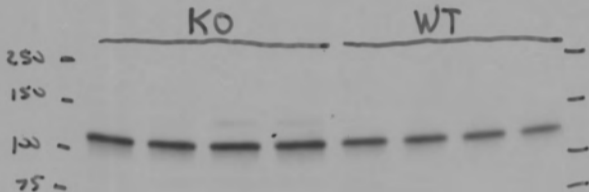
Unedited Blot for Figure 3



10/24/13

Unedited Blot for Figure 3

Pico
1 minute



Slc408

35 μ g

1:100

(122 kDa)

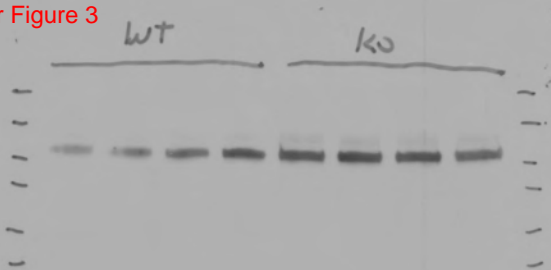
Unedited Blot for Figure 3

AEY
102 kDa

150
100

WT

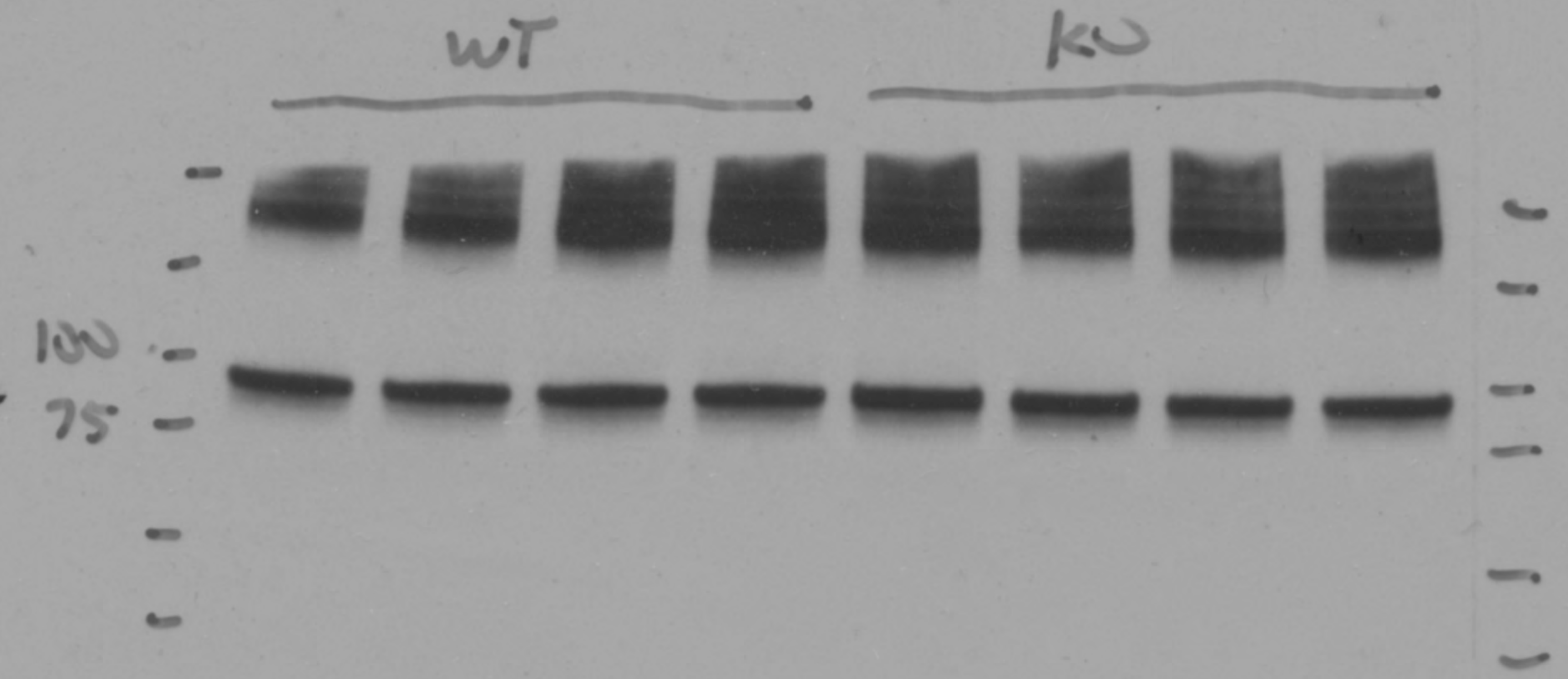
KO



Picu
2 minutes

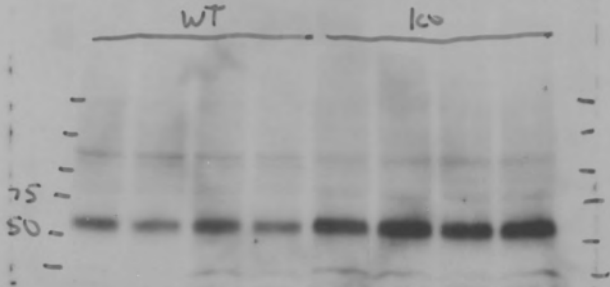
AE1
94kDa

Unedited Blot for Figure 3

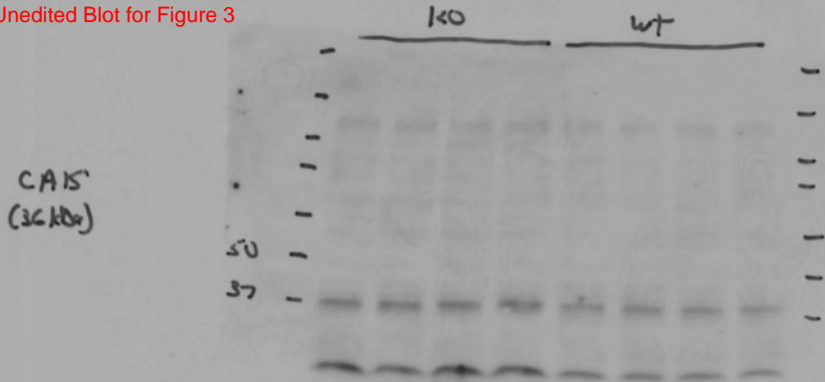


Unedited Blot for Figure 3

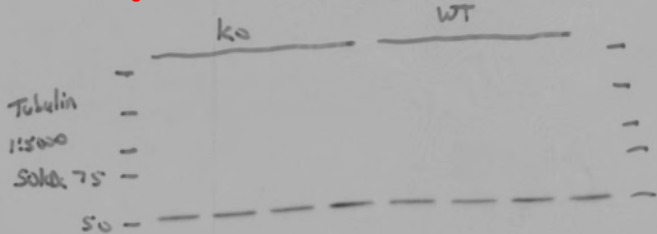
BI
V-ATase
55 kDa



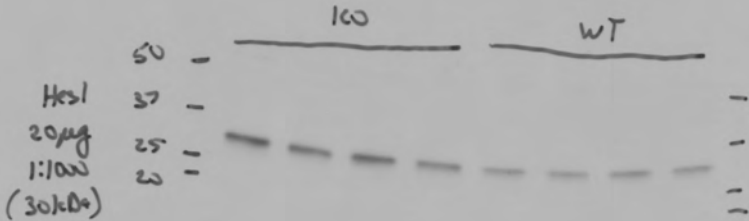
Unedited Blot for Figure 3



Unedited Blot for Figure 3



Unedited Blot for Figure 6



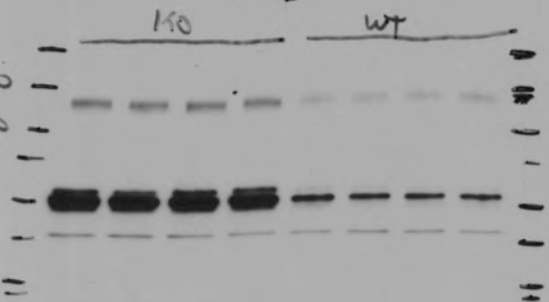
Jag1
(138kb)

150
100

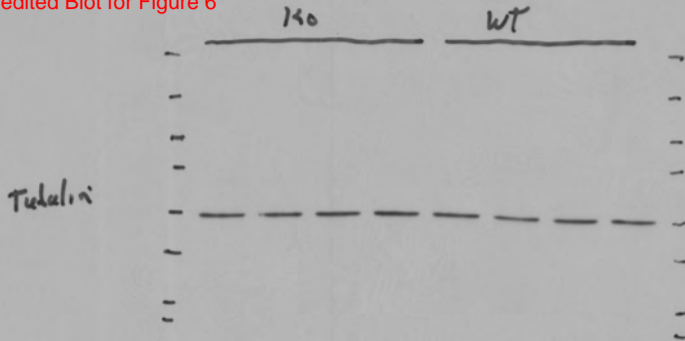
150

WT

Unedited Blot
for Figure 6

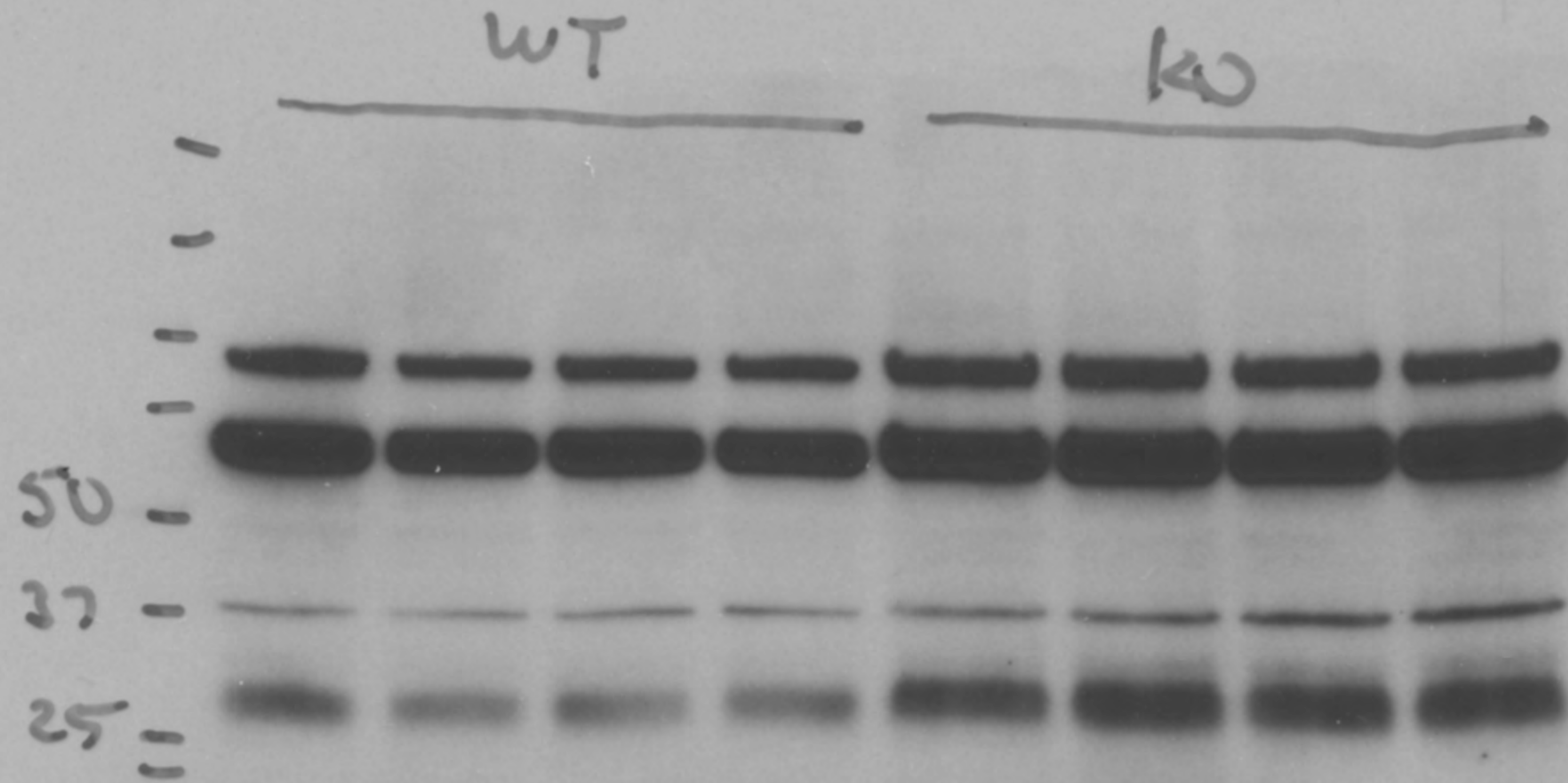


Unedited Blot for Figure 6



Oxgr1
38 kDa

Unedited Blot for Figure 8



Unedited Blot for Figure 8

tubulin
50 kDa

