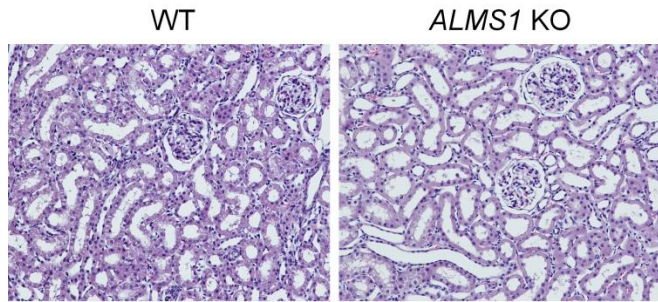
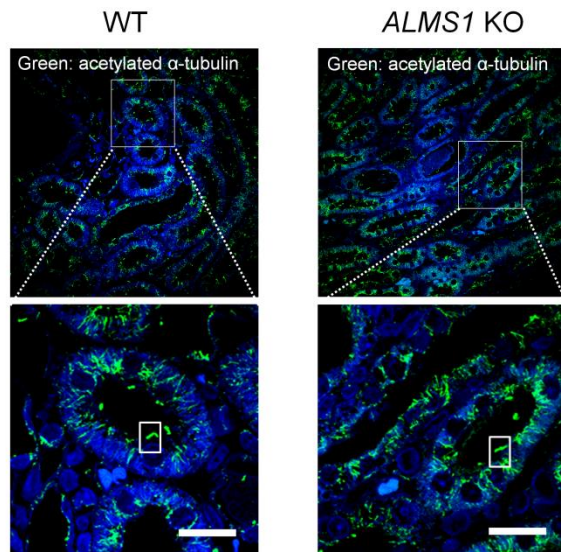


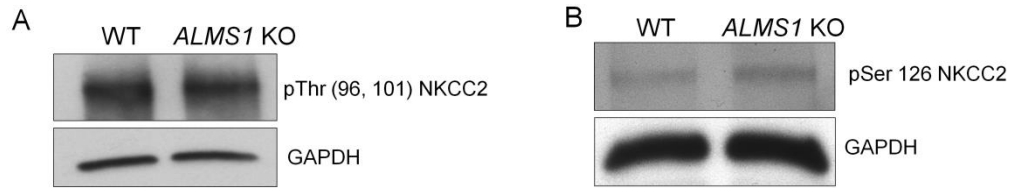
**Supplementary Figure 1: Immuno-blot for ALMS1 in rat thick ascending limb (TAL) with three different antibodies A,B and C.** Representative Western blot for ALMS1 with antibody A: as published (5); B: generated against similar epitope as published (5; EARLEEDSDVTSSEEKAKE); C: generated against amino acids (2174 - 2296) of mouse ALMS1.



**Supplementary Figure 2: Representative light micrographs of kidney sections from WT and *ALMS1* KO rats.** Representative Hematoxylin and eosin (H&E) staining indicating normal renal histology, n = 3, 20X magnification.



**Supplementary Figure 3: Renal tubular cilia are similar in length from WT and *ALMS1* KO rats.** Representative kidney sections stained for acetylated  $\alpha$ -tubulin and quantified,  $n = 30 - 50$  cilia from 5 sections each, Scale bars =  $15 \mu\text{m}$ .



**Supplementary Figure 4: *ALMS1* does not regulate phosphorylation of NKCC2.** A) Representative immunoblot of phosphorylated threonine (96/101) NKCC2 levels showing they are similar in thick ascending limbs (TALs) from WT and *ALMS1* KO rats, n = 3. B) Representative immunoblot of phosphorylated serine (126) NKCC2 levels showing they are similar in TALs from WT and *ALMS1* KO rats, n = 3.

C-ALMS1 interacting proteins	Role in regulating endocytosis
RAC1: Ras-related C3 botulinum toxin substrate 1	See Ref (20)
FLOT 1: Flotillin 1	See Ref (21)
FLOT 2: Flotillin 2	See Ref (22)
ANXA 2: Annexin A2	See Ref (23)
ANXA 1: Annexin A1	See Ref (24)
PICALM: Phosphatidyl inositol binding clathrin assembly protein	See Ref (25)
ARPC5L: Actin related protein 2/3 complex, subunit 5-like	See Ref (26)
RALA: Ras like proto-oncogene A	See Ref (27)
ARF 1: ADP ribosylation factor 1	See Ref (28)
ILK: Integrin linked kinase	See Ref (29)
PHB: Prohibitin	See Ref (30)
ACTN 4: $\alpha$ -actinin 4	See Ref (31)
MYO5B: Myosin 5b	See Ref (12)

**Supplementary Table 1: Carboxyl-terminus ALMS1 (C-ALMS1) interacting proteins and their role in regulating endocytosis.**