

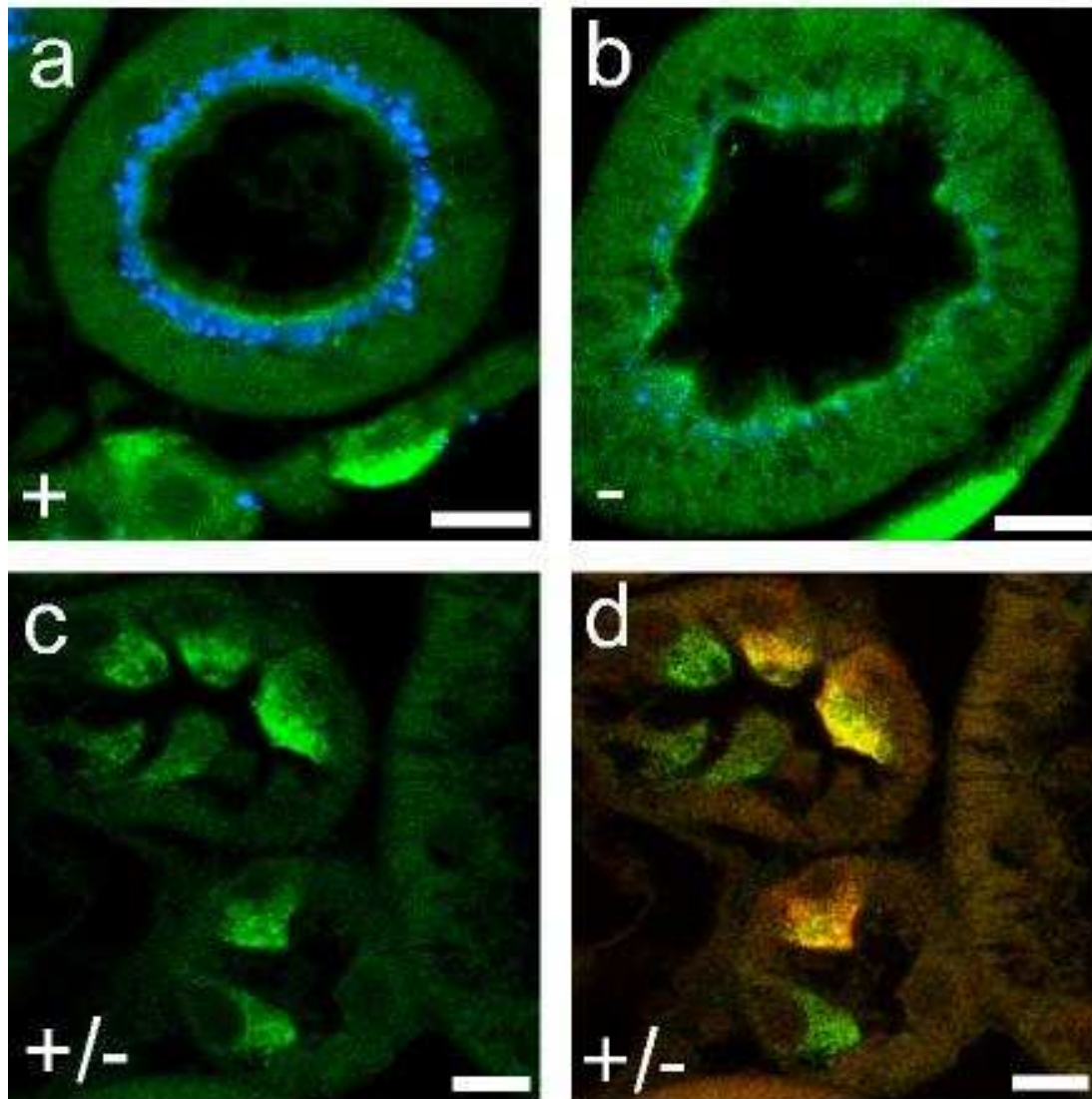
TABLE: Serum and urinary parameters

	male		female	
	<i>clcn5</i> ^{+/-y}	<i>clcn5</i> ^{-/y}	<i>clcn5</i> ^{+/+}	<i>clcn5</i> ^{-/-}
serum concentrations (mmol/l)				
Ca	2.26 ± 0.16 (12)	2.12 ± 0.20 (13)	2.39 ± 0.04 (7)	2.26 ± 0.17 (6)
Pi	1.78 ± 0.2 (5)	1.81 ± 0.08 (5)	1.82 ± 0.14 (5)	1.84 ± 0.17 (5)
Na	152.8 ± 0.6 (12)	151.8 ± 0.7 (13)	149.9 ± 0.8 (7)	149.6 ± 1.8 (7)
Cl	108.9 ± 0.9 (12)	111.5 ± 0.7 (13)	114.1 ± 1.2 (7)	109.5 ± 1.2 (7)
K	3.94 ± 0.12 (12)	3.98 ± 0.16 (12)	4.21 ± 0.4 (7)	3.48 ± 0.34 (7)
Mg	1.16 ± 0.04 (12)	1.08 ± 0.08 (12)	1.18 ± 0.04 (7)	1.19 ± 0.04 (7)
creatinine (mg/dl)	0.068 ± 0.01 (10)	0.077 ± 0.01 (11)	0.09 ± 0.01 (7)	0.11 ± 0.008 (7)
PTH (pmol/l)	38.4 ± 3.7 (15)	55.2 ± 8.2 (15)	42.0 ± 2.9 (16)	51.93 ± 6.7 (15)
calcitonin (pg/ml)	16.64 ± 3.9 (11)	14.0 ± 2.9 (9)	14.36 ± 2.21 (11)	19.5 ± 3.63 (11)
25(OH) Vit D (nmol/l)	207.0 ± 3.7 (5)	58.2 ± 4.5 ^{††} (5)	208.3 ± 7.2 (4)	71.25 ± 7.8 ^{††} (4)
1,25(OH) ₂ Vit D (pg/ml)	80.9 ± 8.4 (9)	34.4 ± 3.6 ^{††} (9)	56.8 ± 5.97 (6)	26.0 ± 4.65 ^{**} (6)
urine concentrations (mmol/mmol creatinine)				
Ca/creatinine	0.84 ± 0.07 (35)	0.97 ± 0.06 (39)	0.73 ± 0.07 (17)	0.59 ± 0.09 (10)
Pi/creatinine	17.4 ± 1.0 (36)	23.5 ± 1.6 ^{**} (41)	15.8 ± 1.8 (19)	26.1 ± 1.7 [†] (10)
Na/creatinine	42.1 ± 2.2 (32)	45.5 ± 1.8 (38)	38.9 ± 3.6 (19)	36.1 ± 6.9 (7)
Cl/creatinine	64.2 ± 2.9 (36)	65.3 ± 3.9 (42)	53.2 ± 3.8 (17)	45.5 ± 16.2 (9)
K/creatinine	122.3 ± 3.3 (35)	113.2 ± 5.4 (39)	95.4 ± 7.5 (17)	84.4 ± 12.1 (10)
Mg/creatinine	6.83 ± 0.29 (36)	6.67 ± 0.25 (42)	5.90 ± 0.39 (18)	6.73 ± 0.84 (10)
creatinine (mmol/l)	2.96 ± 0.14 (41)	2.99 ± 0.16 (47)	3.23 ± 0.19 (19)	3.26 ± 0.25 (10)
PTH/creatinine (pmol/mmol)	43.9 ± 3.7 (9)	73.8 ± 9.5 [*] (9)	n.d.	n.d.
25(OH) Vit D/creatinine (nmol/g)	10.3 ± 1.1 (10)	146.6 ± 14.1 ^{††} (10)	n.d.	n.d.
PH	6.55 ± 0.05 (55)	6.06 ± 0.04 ^{††} (60)	6.47 ± 0.09 (19)	5.97 ± 0.16 [*] (9)
urinary volume (ml/day)	1.43 ± 0.1 (38)	1.93 ± 0.1 [†] (46)	1.16 ± 0.2 (6)	1.75 ± 0.1 (6)

The number of determinations is indicated in brackets. Data are mean values ± SEM.

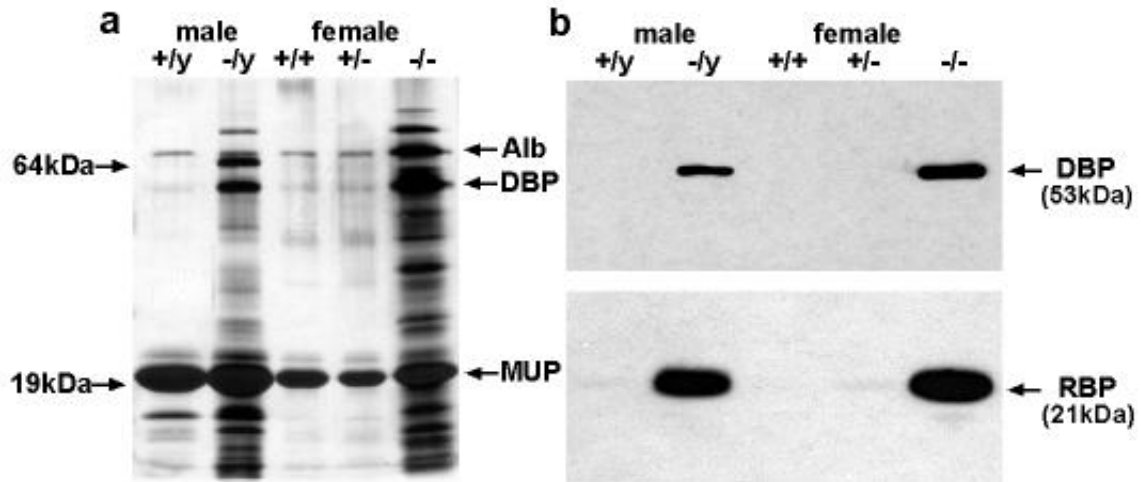
* P vs. wildtype < 0.01; ** P vs. wildtype < 0.005; † P vs. wildtype < 0.001; †† P vs. wildtype < 0.0001

Figure S1



The disruption of CIC-5 does not significantly affect the expression of the V-type H⁺-ATPase in the proximal tubule or in intercalated cells. a, b, cross-sections of proximal tubules from *clcn5*⁺ and *clcn5*⁻ mice, respectively. They were stained for the H⁺-ATPase, which stains a rim below the brush border (green), and for endocytosed lactoglobulin (shown in blue). There is no discernible effect of CIC-5 expression on the proton pump. **c, d**, cross-section of a distal *clcn5*^{+/-} tubule. The H⁺-ATPase (green) is highly expressed in α -intercalated cells. Co-staining for CIC-5 (d; resulting in yellow color) shows that the expression of the proton pump is not significantly affected by CIC-5 expression.

Figure S2



Urinary abnormalities in mice lacking CIC-5. **a**, SDS PAGE analysis of urine from male and female WT and *clcn5*⁻ mice, and female *clcn5*^{+/-} mice. Note that several proteins, including the Major Urinary Protein (MUP), are normally present in mouse urine. Several bands, including albumin (Alb) and vitamin D binding protein (DBP), are drastically increased by *clcn5* disruption. **b**, western analysis using antibodies against vitamin D binding protein (top) and retinol binding protein (RBP; bottom).