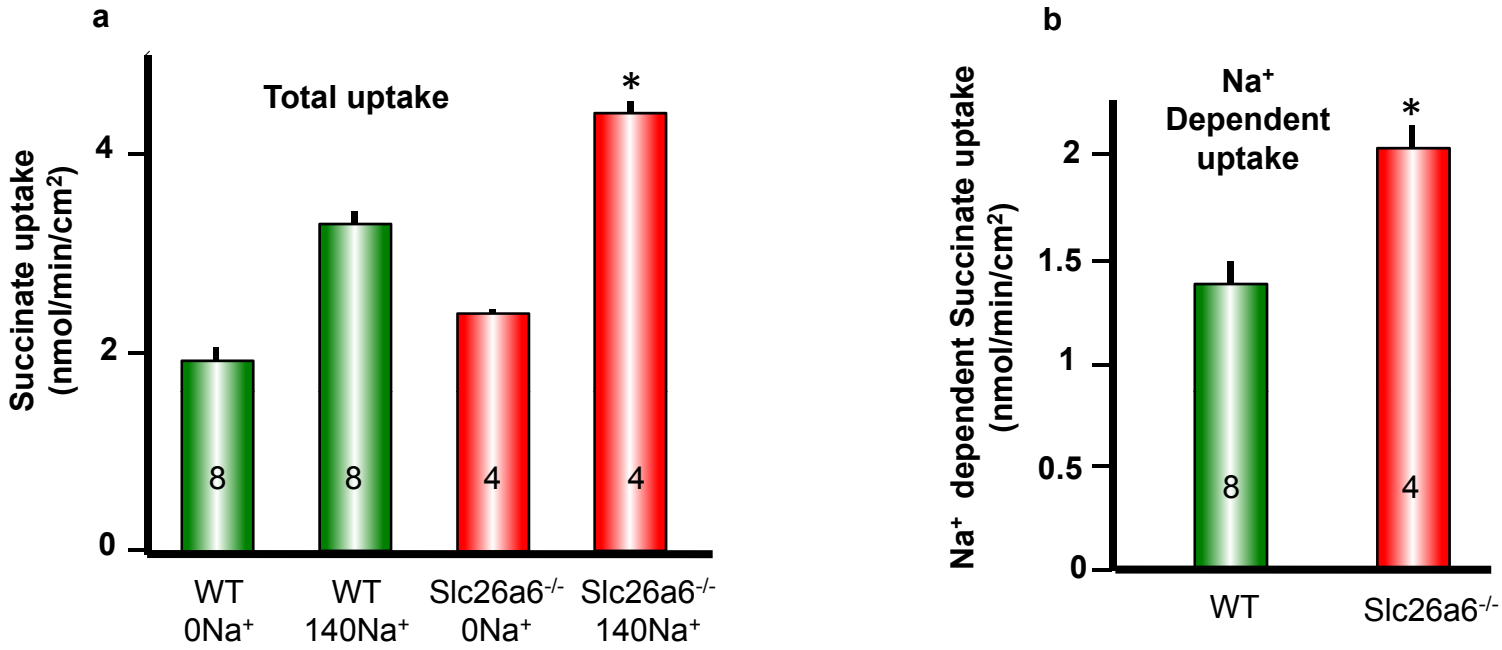
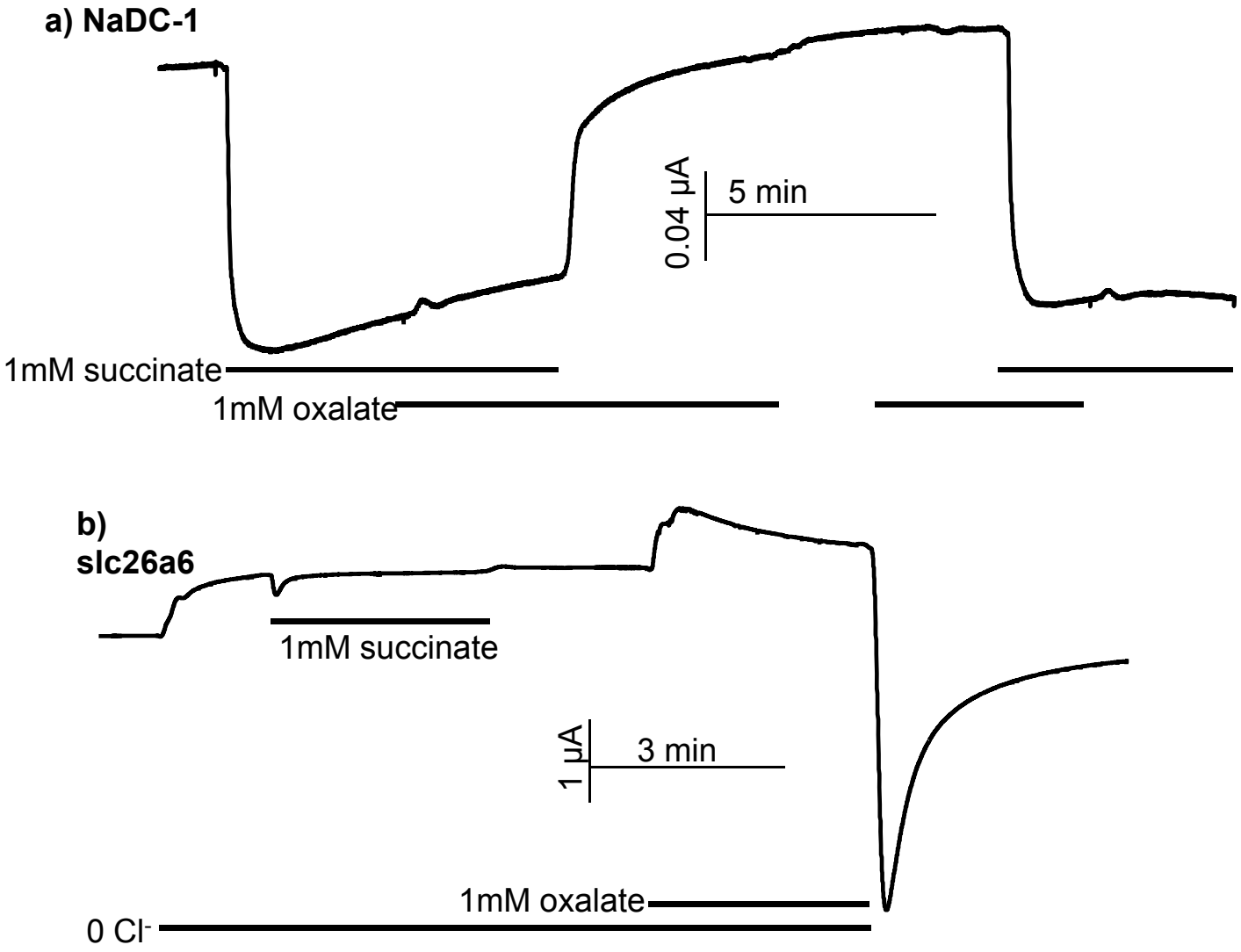
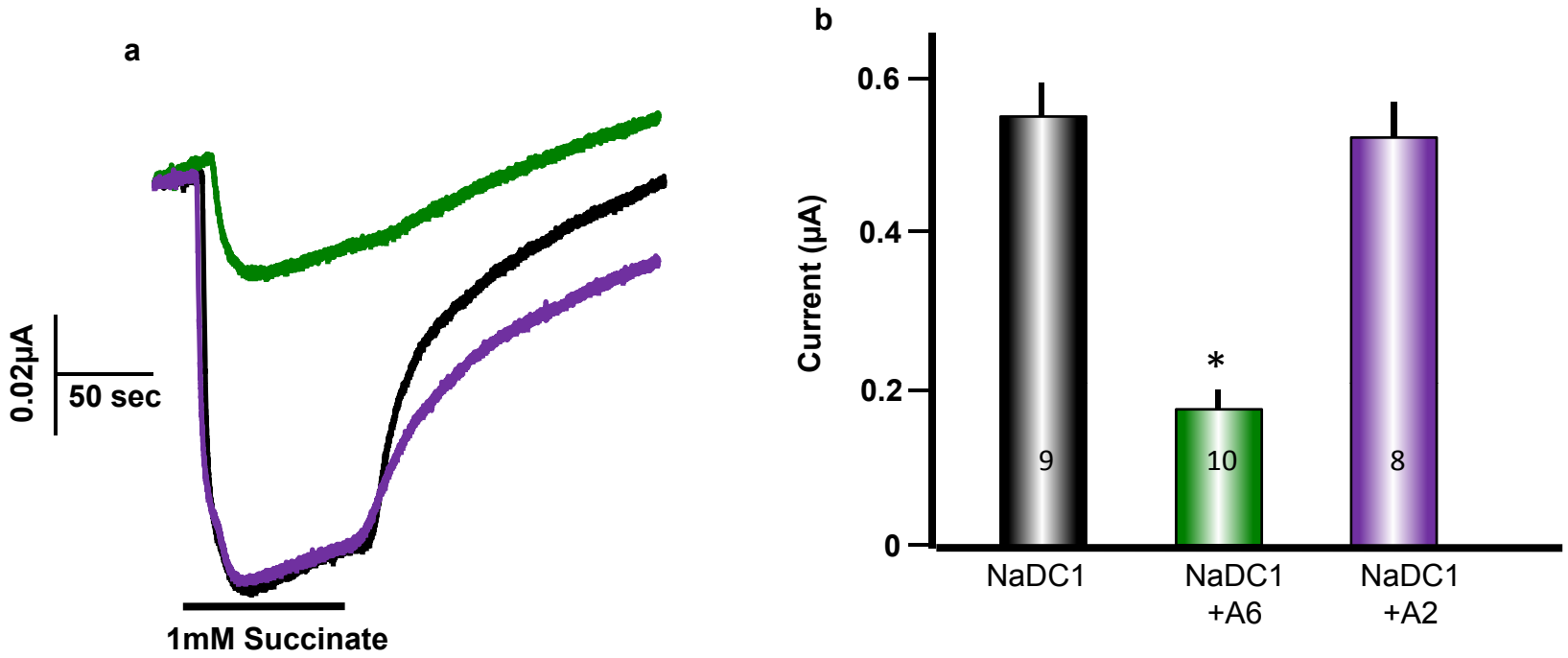


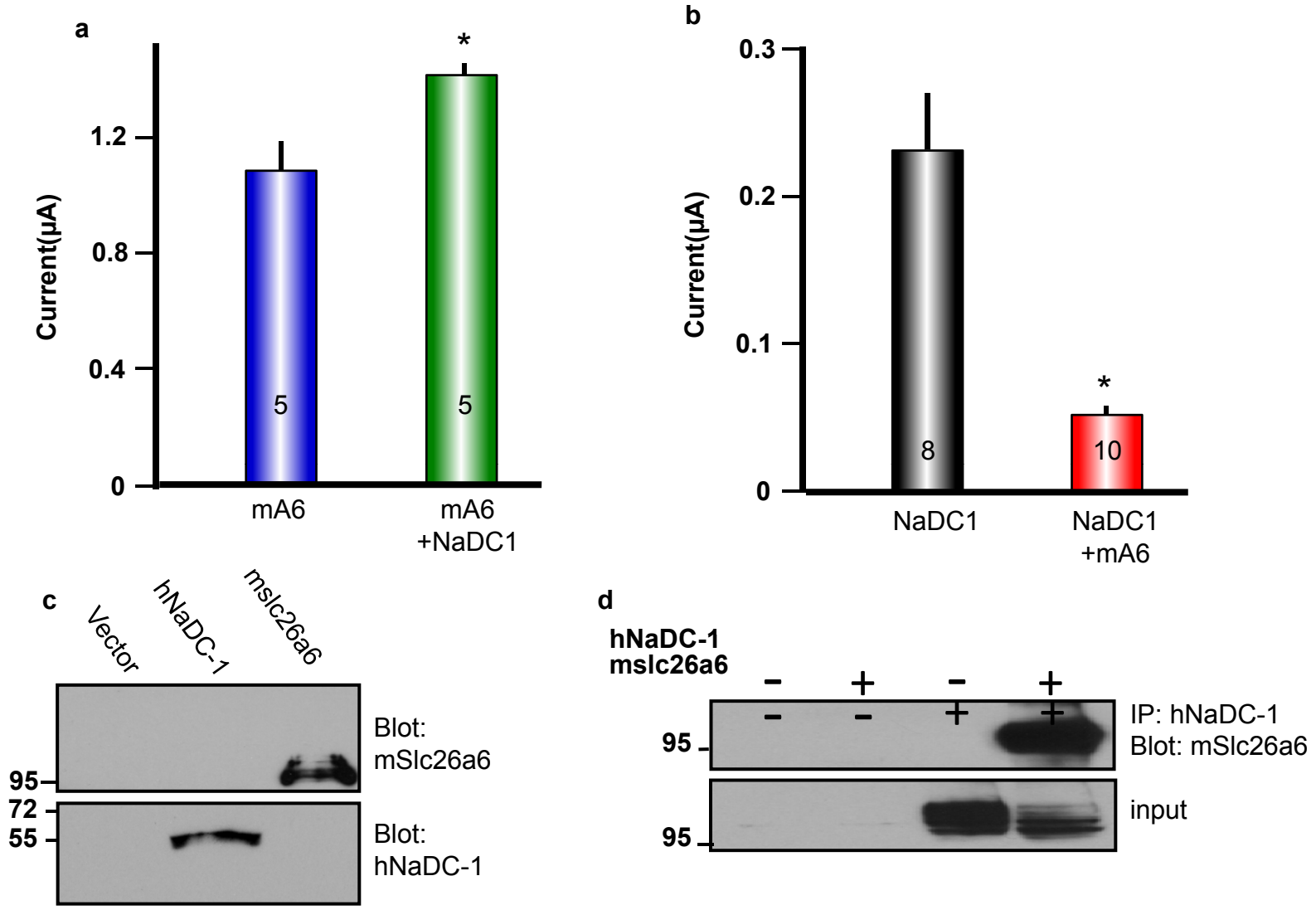
Supp Figure S1. Deletion of slc26a6 upregulates intestinal Na^+-dependent dicarboxylate uptake. The figure shows succinate uptake by intestinal epithelium obtained from wild-type and slc26a6$^{-/-}$ mice incubated either in the absence or presence of 140 mM Na^+. Total uptake (a) was used to calculate the Na^+-dependent uptake (b).



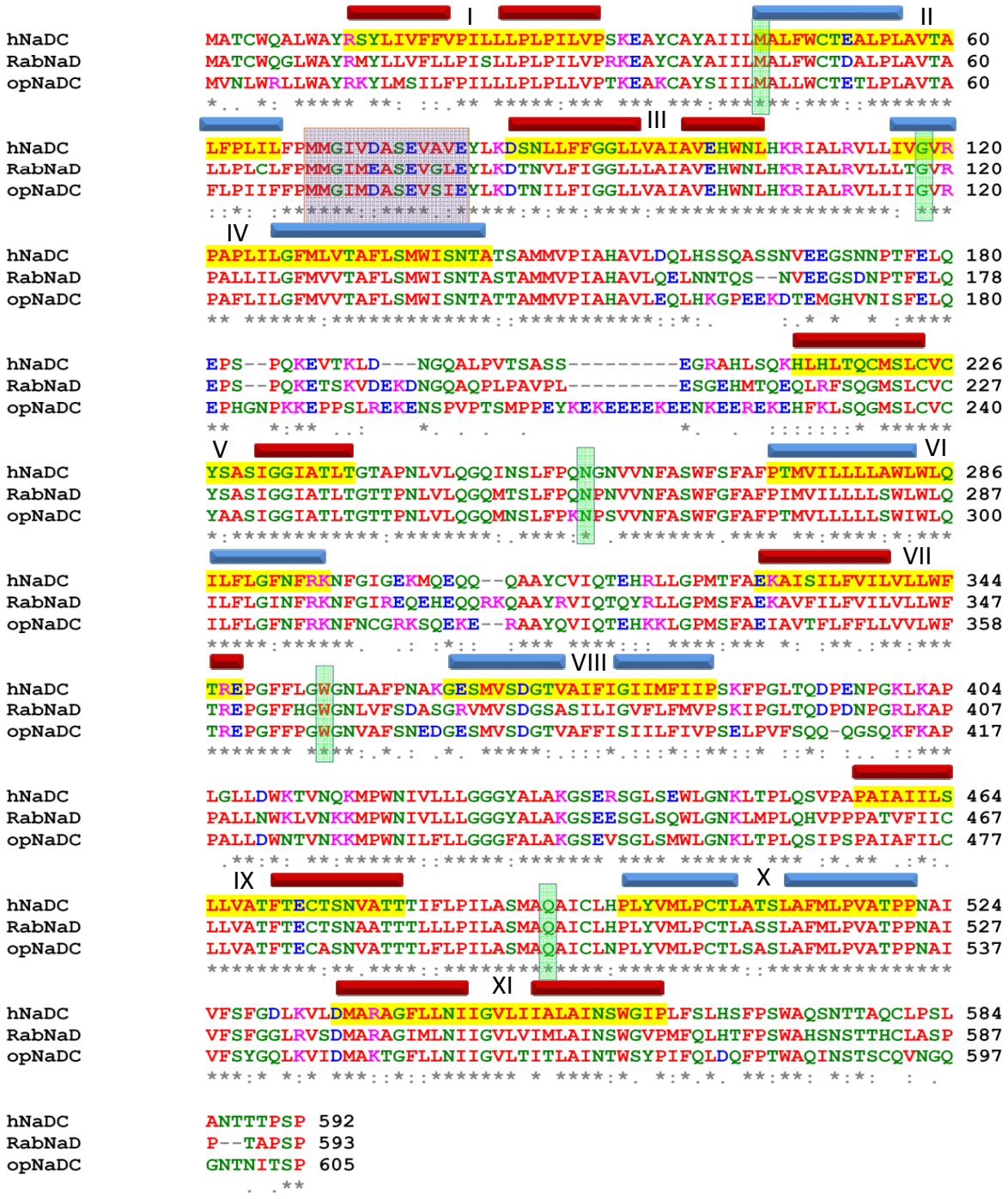
Supp. Fig. S2. NaDC-1 does not transport oxalate and slc26a6 does not transport succinate. Panel (a) shows the current recorded in oocytes expressing NaDC-1 and panel (b) shows the current recorded in oocytes expressing slc26a6 exposed to 1mM succinate and 1mM oxalate, as indicated by the bars.

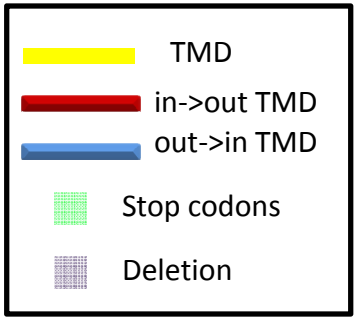


Supp. Fig. S3. Slc26a2 does not inhibit NaDC-1. Panel (a) shows example traces and panel (b) is the mean±S.E.M of the NaDC-1 current measured in the presence of absence of Slc26a2 and slc26a6, as indicated. In comparable conditions slc26a6 inhibits while Slc26a2 on NaDC-1 activity.



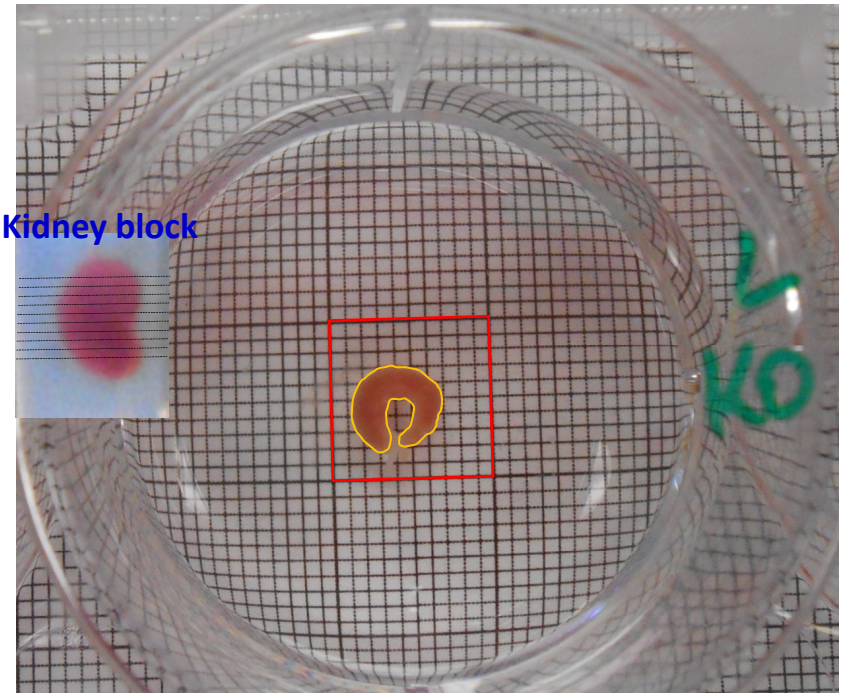
Supp. Fig. S4. Reciprocal activation of human NaDC-1 and slc26a6 activity and expression and Co-IP of slc26a6 with human NaDC-1. Panel (a) shows activation of slc26a6 by hNaDC-1 and panel (b) shows inhibition of hNaDC-1 activity by slc26a6. Results are shown mean±S.E.M of the indicated number of experiments. Panel (c) shows a western blot analysis of expression of slc26a6(mKate) and hNaDC-1(His-myc) in *Xenopus* oocytes. Panel (d) shows Co-IP of slc26a6(mKate) and hNaDC-1(His-myc) expressed in HEK cells.



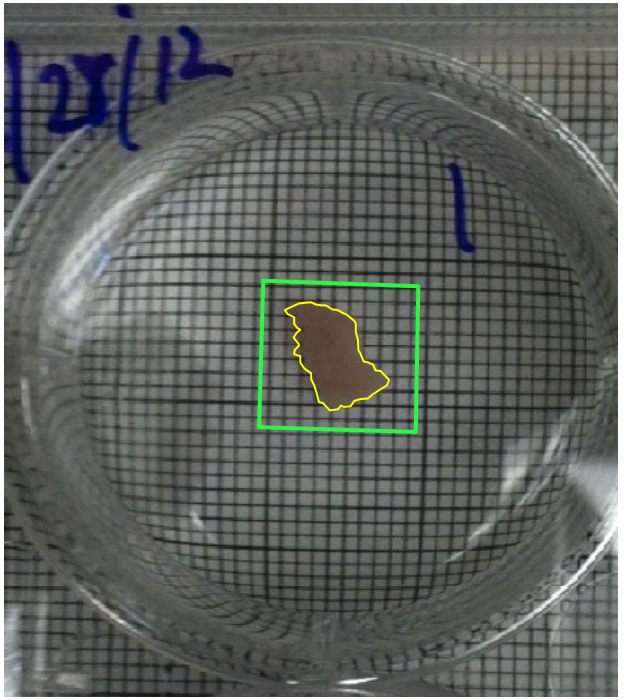


Supp. Fig. S5. Multiple sequence alignment and secondary structure of NaDC-1. The secondary structure of rabbit NaDC-1 was used to map the topology of human and opossum NaDC-1. The alignment was generated by T-coffee program. Relevant domains are indicated, including the site where stop codons were inserted (light green).

a) Kidney slice



b) Intestine slice



Supp. Fig. S6. Images of kidney and intestinal jejunum epithelium pieces used for measurement of Succinate uptake. The kidneys were placed in an agarose gel (insert) and 1mm slices were cut. The cortex was isolated by cutting out the medulla and the cortical slices were used to measure succinate uptake. The size of kidney and intestinal slices was determined from the images as shown.