

## **METHODS**

### Surgical procedures and nerve activity recording

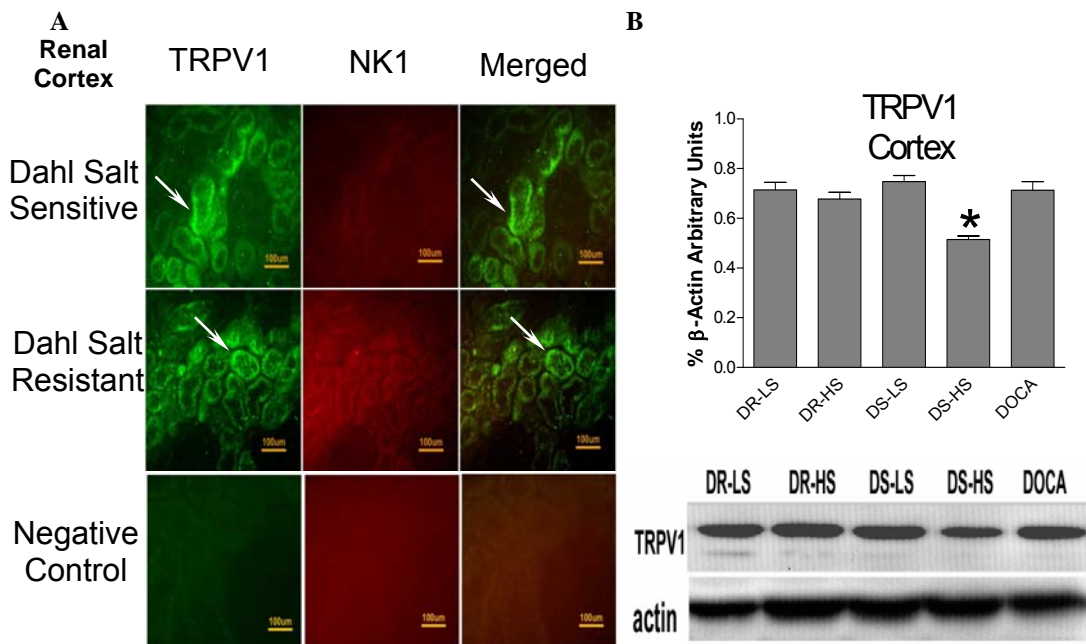
50 mg·kg<sup>-1</sup> pentobarbital sodium was administered intraperitoneally for anesthesia, which was maintained with an intravenous infusion of 10 mg·kg<sup>-1</sup>hr<sup>-1</sup> at 50 μl·min<sup>-1</sup>. Polyethylene catheters (PE-50) were inserted into the left jugular vein for administration of pentobarbital sodium and into the left carotid artery for monitoring mean arterial pressure (MAP) with a Statham 231D pressure transducer coupled to a Gould 2400s recorder (Gould Instrument Systems, Valley View, Ohio, USA). Catheters (PE-50) were placed in both of the ureters with their tips in the renal pelvis via midline incisions, one for drug perfusion and the other for urine collection. A microdialysis tube (ID 0.18/OD 0.22 mm, BASi, West Lafayette, IN) was placed inside the left PE-50 catheter with its tip extending about 2mm into the renal pelvis for drug perfusion at 20 μl·min<sup>-1</sup>, a rate that did not change renal pelvis pressure.

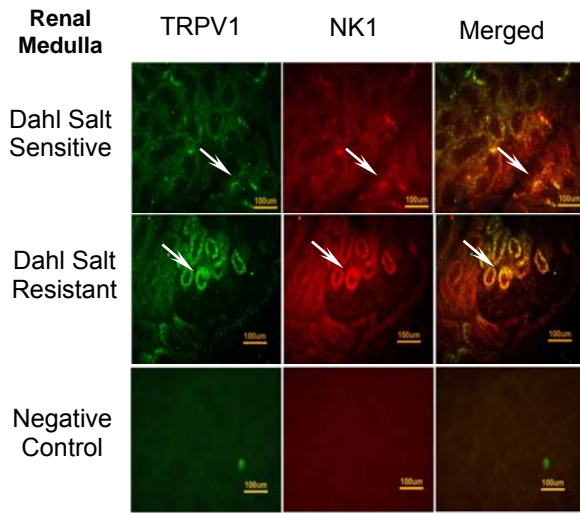
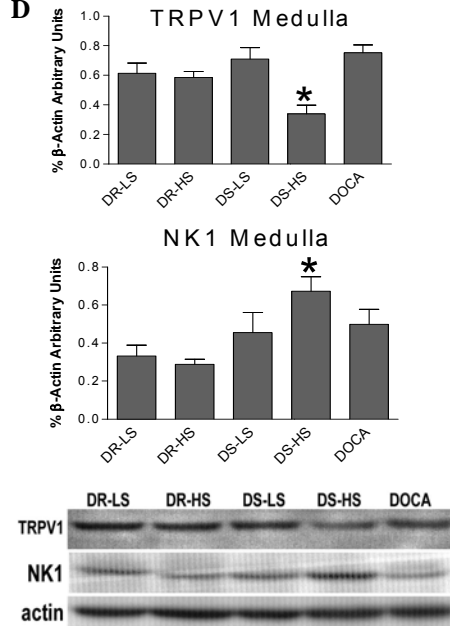
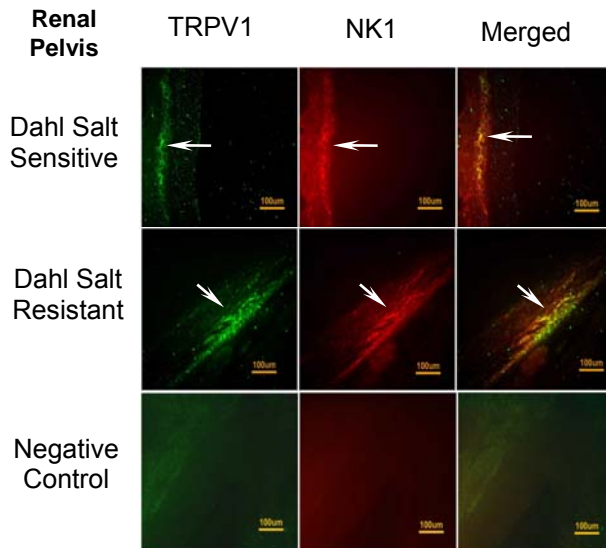
For the recording of multifiber nerve activity, the signals from renal nerves were amplified x20,000, filtered with a high-frequency cutoff at 1,000Hz and a low-frequency cutoff at 100Hz by a Grass model P511 AC Amplifier, and recorded by a Gould 2400s recorder (Gould Instrument System, Valley View, Ohio). After the renal nerve activity was verified using its pulse synchronous rhythmicity with the heartbeat, the nerves were sectioned and the distal part was placed on the electrode for ARNA recording. The renal nerve was fixed to the electrode with Kwik-Cast & Kwik-Sil (World Precision Instruments, Sarasota, Florida). The renal nerve activity was transformed into voltage integration for analysis. The post-mortem renal nerve activity recorded as background of renal nerve activity was subtracted from all values.

**FIGURE LEGENDS:**

Fig. 7. TRPV1 and NK1 receptors distribution in the kidneys of DS and DR rats. Panels A, C, E: immunofluorescence staining of TRPV1 and/or NK1 in the renal cortex (A), medulla (C), or pelvis (E) in DS and DR rats. Panels B, D, F: TRPV1 or NK1 expression in the renal cortex (B), medulla (D), or pelvis (F) in DR-LS, DS-LS, DR-HS, and DS-HS rats. n=5-6 in each group, \* p<0.05 compared with DR-LS, DS-LS, DR-HS and DOCA-salt rats. Scale bar: 100µm.

Fig. 7



**C****D****E****F**