

Supplementary information

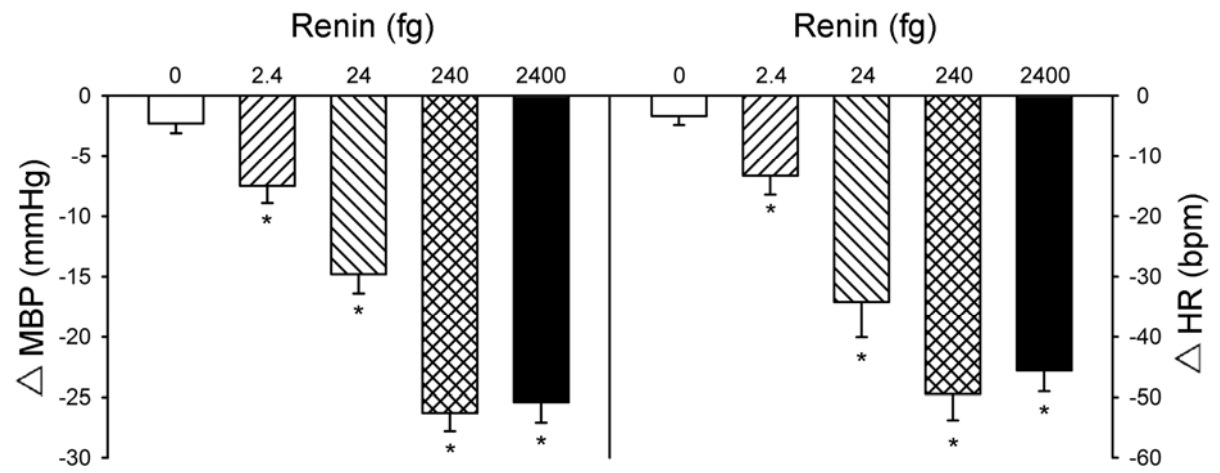


Figure S1. The bar graphs reveal hypotensive and bradycardic effects of unilateral administration of different doses of renin in the nucleus tractus solitarii. Both the MBP and HR effects were significantly changed by renin. * $p < 0.05$, vs. the 0 group.

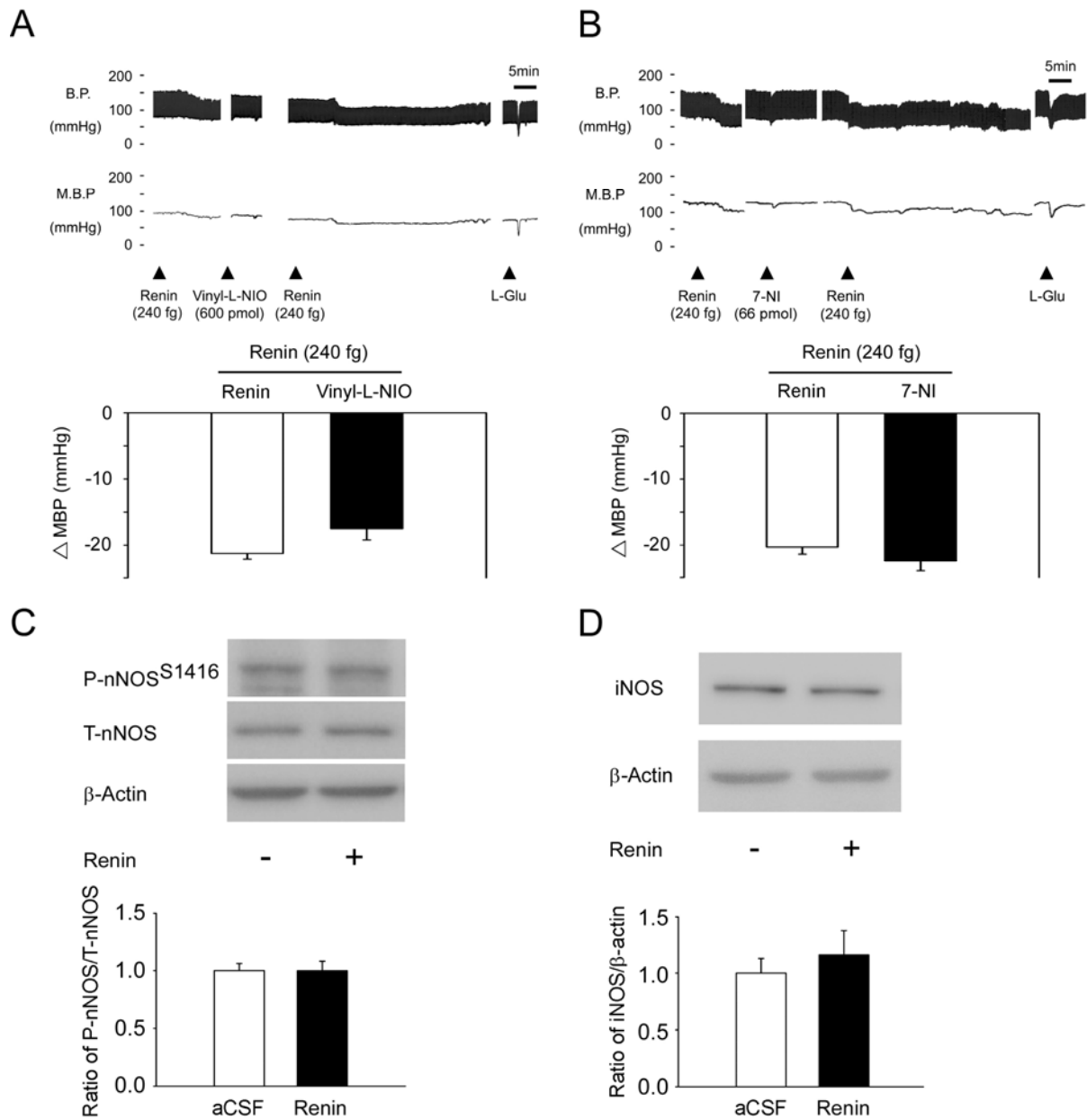


Figure S2 A. The cardiovascular effect of injection of renin (240 fg) into the NTS after administration of the selective nNOS inhibitor, vinyl-L-NIO (600 pmol). Representative tracings demonstrate that vinyl-L-NIO did not diminish the depressor effect of renin in the NTS. **Graph reveals the effects of BP by microinjection renin into the NTS pretreated with vinyl-L-NIO.** Bar values are shown as the means \pm SEM, n=6. **B.** The cardiovascular effect of injection of renin (240 fg) into the NTS after administration of the potent nNOS inhibitor,

7-NI (66 pmol). Representative tracings demonstrate that 7-NI did not diminish the depressor effect of renin in the NTS. **Graph reveals the effects of BP by microinjection renin into the NTS pretreated with 7-NI.** Bar values are shown as the means \pm SEM, n=6. **C.** Immunoblot depicts the levels of P-nNOS^{S1416} protein in the NTS. Densitometric analysis of P-nNOS^{S1416} protein levels before and after treatment with renin. Note that there are no significant differences in nNOS^{S1416} phosphorylation levels in the NTS between the **aCSFs** and renin-treated groups. Bar values are shown as the means \pm SEM, n=6. **D.** Immunoblot shows iNOS protein levels in the NTS. Note that there are no significant differences in iNOS protein levels in the NTS between **aCSFs** and the renin-treated groups. Bar values are shown as the means \pm SEM, n=6.

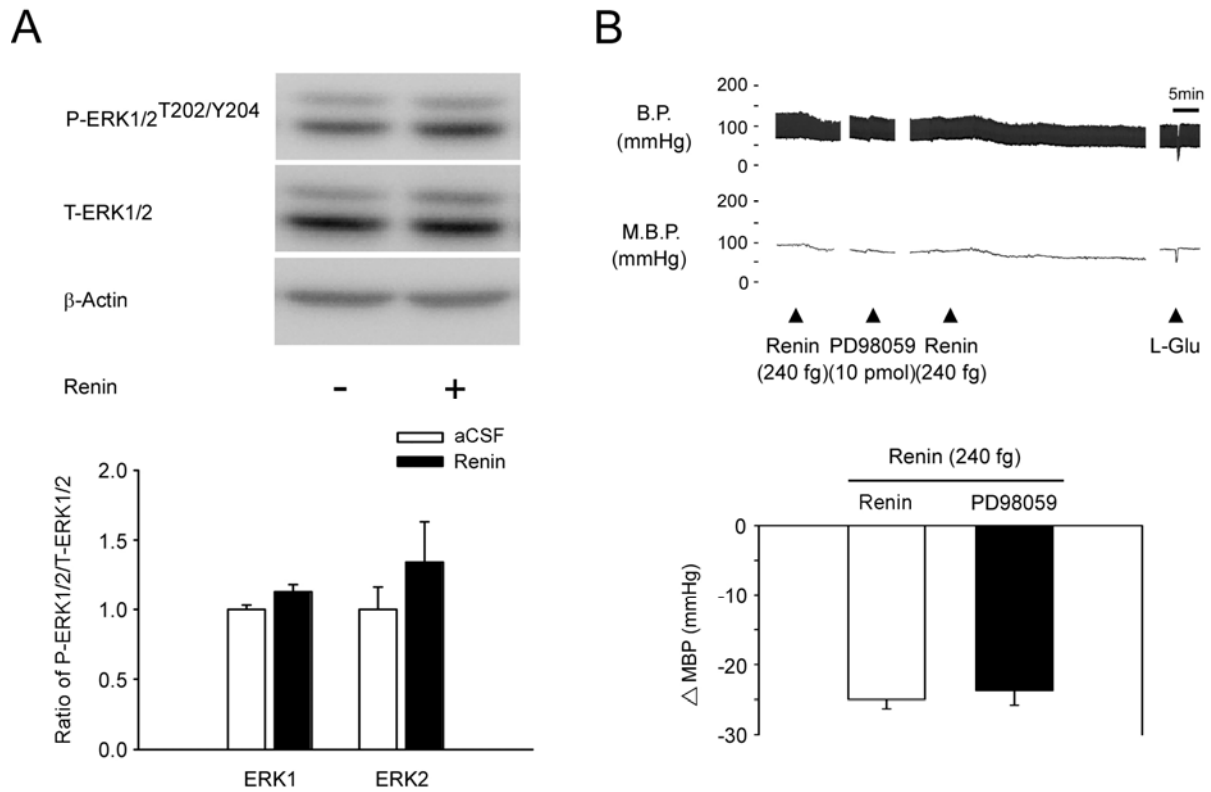


Figure S3 A. Immunoblots depicting the levels of P-ERK1/2^{T202/Y204} protein in the NTS. There were no significant differences in ERK1/2 phosphorylation levels in the NTS between the aCSF and renin-treated groups. Densitometric analysis shows P-ERK1/2^{T202/Y204} protein levels after treatment with renin. Bar values are shown as the means \pm SEM, n=6. **B.** The cardiovascular effect of injection of renin (240 fg) into the NTS after administration of the MEK inhibitor, PD98059 (10 pmol). Representative tracings demonstrate that PD98059 did not diminish the depressor effect of renin in the NTS. Graph reveals the effects of BP by microinjection renin into the NTS pretreated with PD98059. Bar values are shown as the means \pm SEM, n=6.

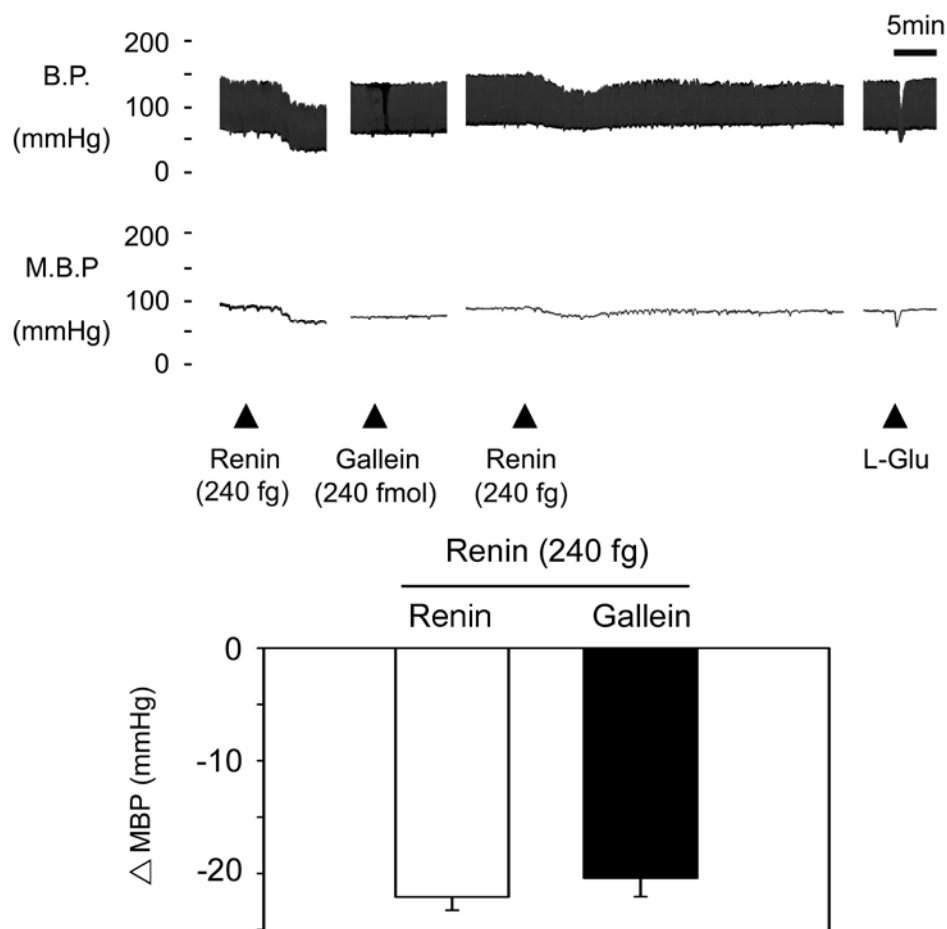


Figure S4. The blood pressure (BP) of injection of renin (240 fg) into the NTS after administration of the $G\beta\gamma$ inhibitor, gallein (240 fmol). Representative tracings demonstrate that the depressor effect of renin was not attenuated by gallein. Graph reveals the effects of BP by microinjection renin into the NTS pretreated with gallein.

Table S1

Cardiovascular response to microinjection of renin (240 fg) into the NTS in rats before and after microinjection of the pharmacological inhibitors

Renin (240 fg)										
Parameter	Renin	L-NAME	Renin	L-NIO	Renin	LY294002	Renin	Akt inhibitor IV	Renin	lisinopril
Δ MBP, mmHg	-21 \pm 2	-2 \pm 1	-18 \pm 2	-7 \pm 1	-22 \pm 2	-2 \pm 1	-18 \pm 2	-3 \pm 1	-20 \pm 1	-5 \pm 1
Δ HR, bpm	-31 \pm 2	-3 \pm 1	-30 \pm 1	-12 \pm 1	-31 \pm 2	-2 \pm 2	-33 \pm 2	-6 \pm 2	-35 \pm 2	-5 \pm 1

Renin (240 fg)								
Parameter	Renin	losartan	Renin	valsartan	Renin	D-Ala7-Ang-(1-7)	Renin	GPA-2A
Δ MBP, mmHg	-22 \pm 2	-7 \pm 2	-20 \pm 1	-3 \pm 1	-22 \pm 1	-6 \pm 2	-22 \pm 1	-6 \pm 2
Δ HR, bpm	-43 \pm 3	-10 \pm 1	-33 \pm 3	-5 \pm 2	-35 \pm 2	-8 \pm 3	-35 \pm 3	-8 \pm 2

Results are expressed as means \pm SEM (n = 6)

MBP = mean blood pressure

HR = heart rate