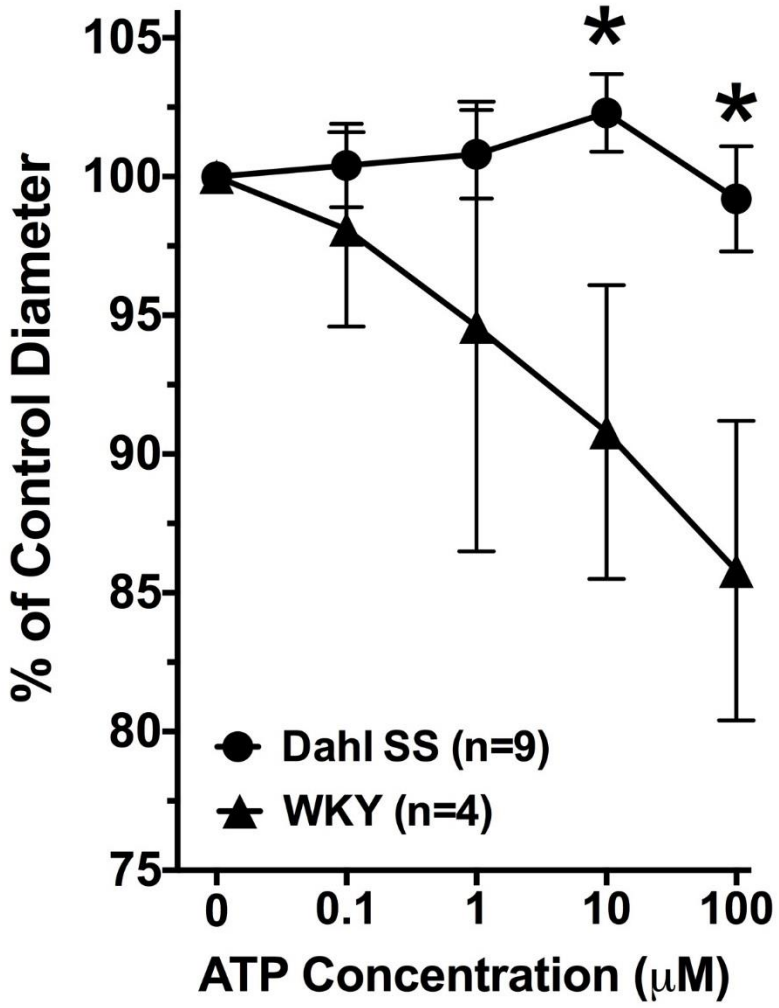
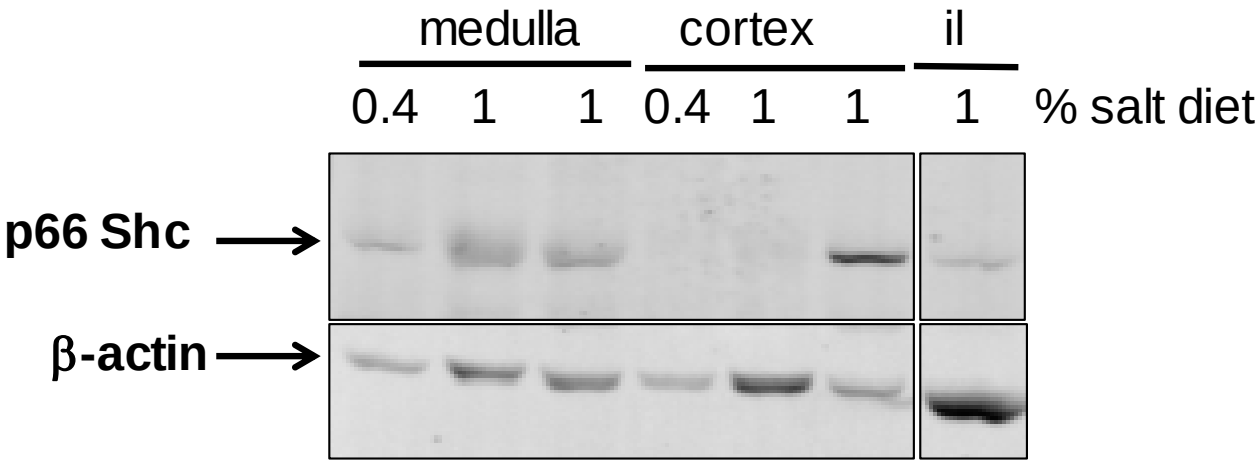
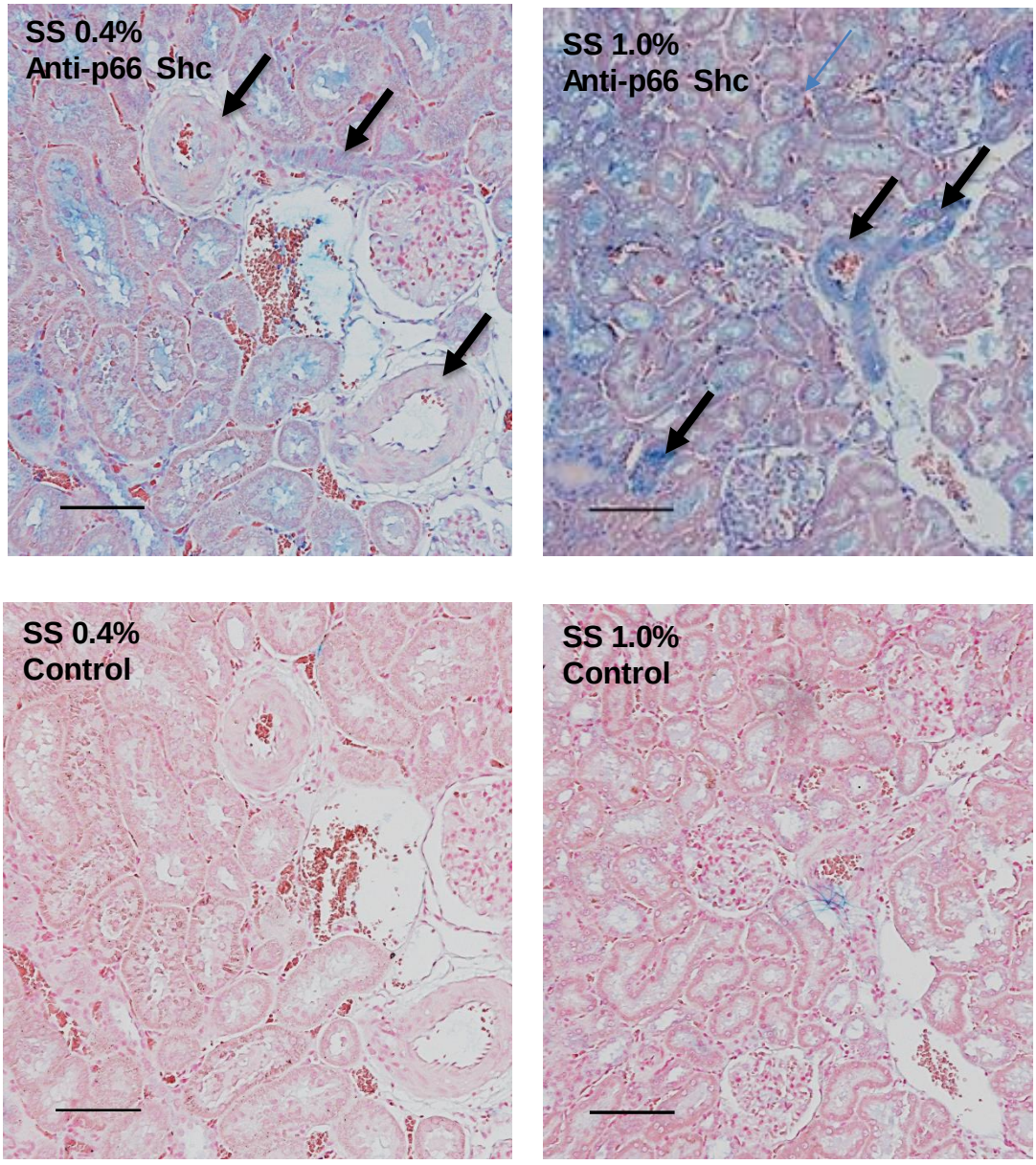


Supplemental Figure 1. Vasoconstrictor responses of renal interlobular arteries to ATP. Responses of interlobular renal arterioles to ATP were compared in SS rats fed 1% salt diet (black circles) and WKY rats (black triangles). Comparisons between groups were made using a one-way analysis of variance with the Newman–Keuls multiple range test. A probability value of $P < 0.05$ (*) was considered statistically significant. All data are reported as the mean ± SEM. Statistical findings: WKY group is significantly different from Dahl SS group at ATP concentrations 10 and 100 μM.

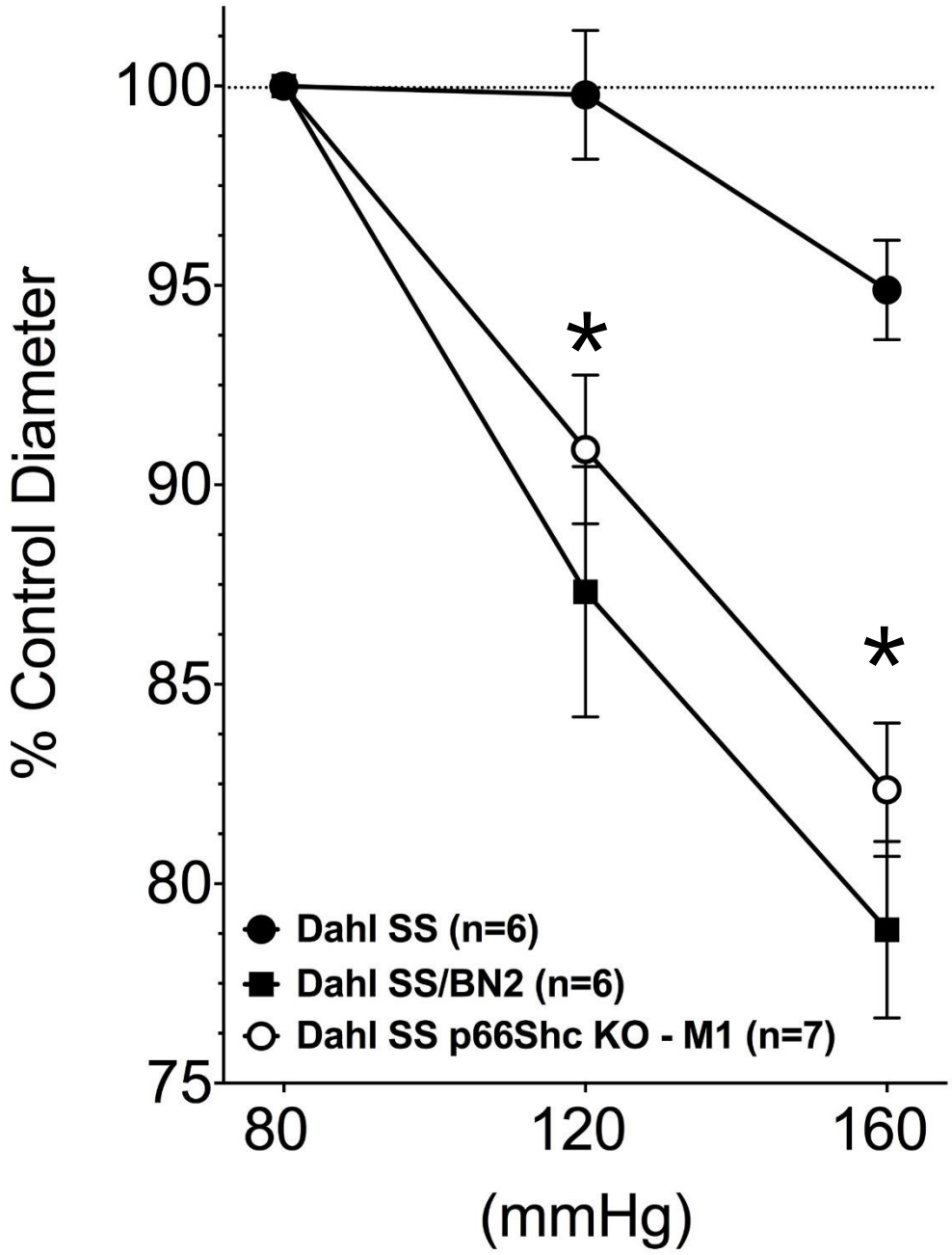
A



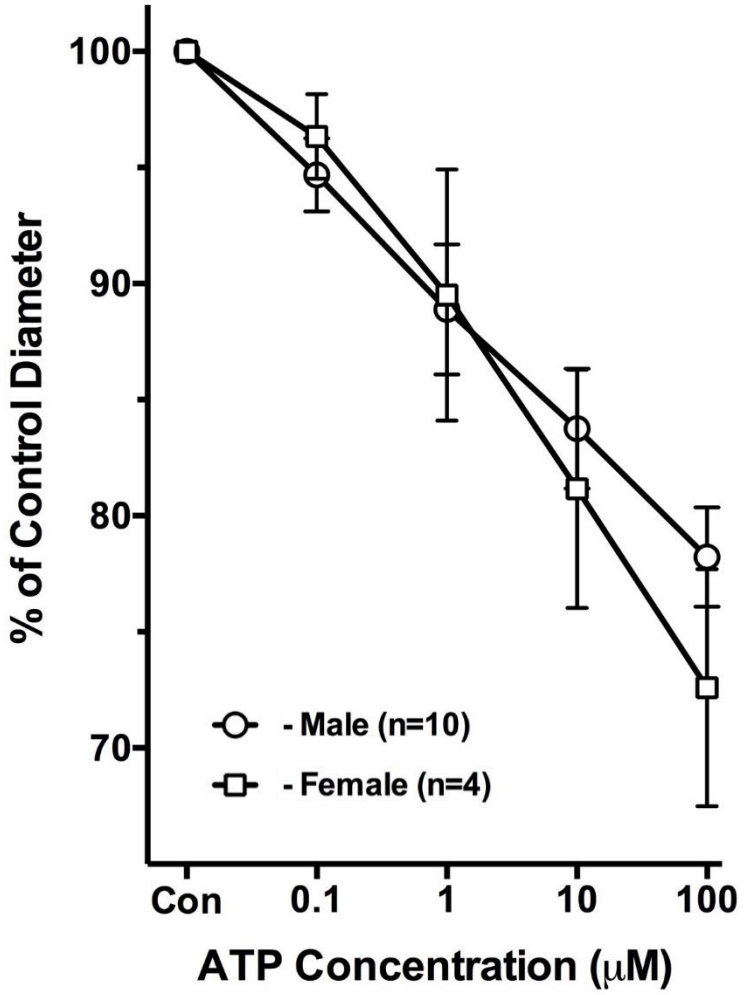
Supplemental Figure 2A. p66 Shc protein expression in SS rats on low and high salt diets. Differential renal expression of p66 Shc protein in SS rats fed either 0.4 or 1% salt diet detected by Western blot. The lane corresponding to interlobular arteries (il) was run on the same blot, but was noncontiguous. Expression of β-actin is shown as an equal loading control. Every lane corresponds to a separate animal. Shown is a greyscale version of blot developed using the LiCor Odyssey infrared imaging system.



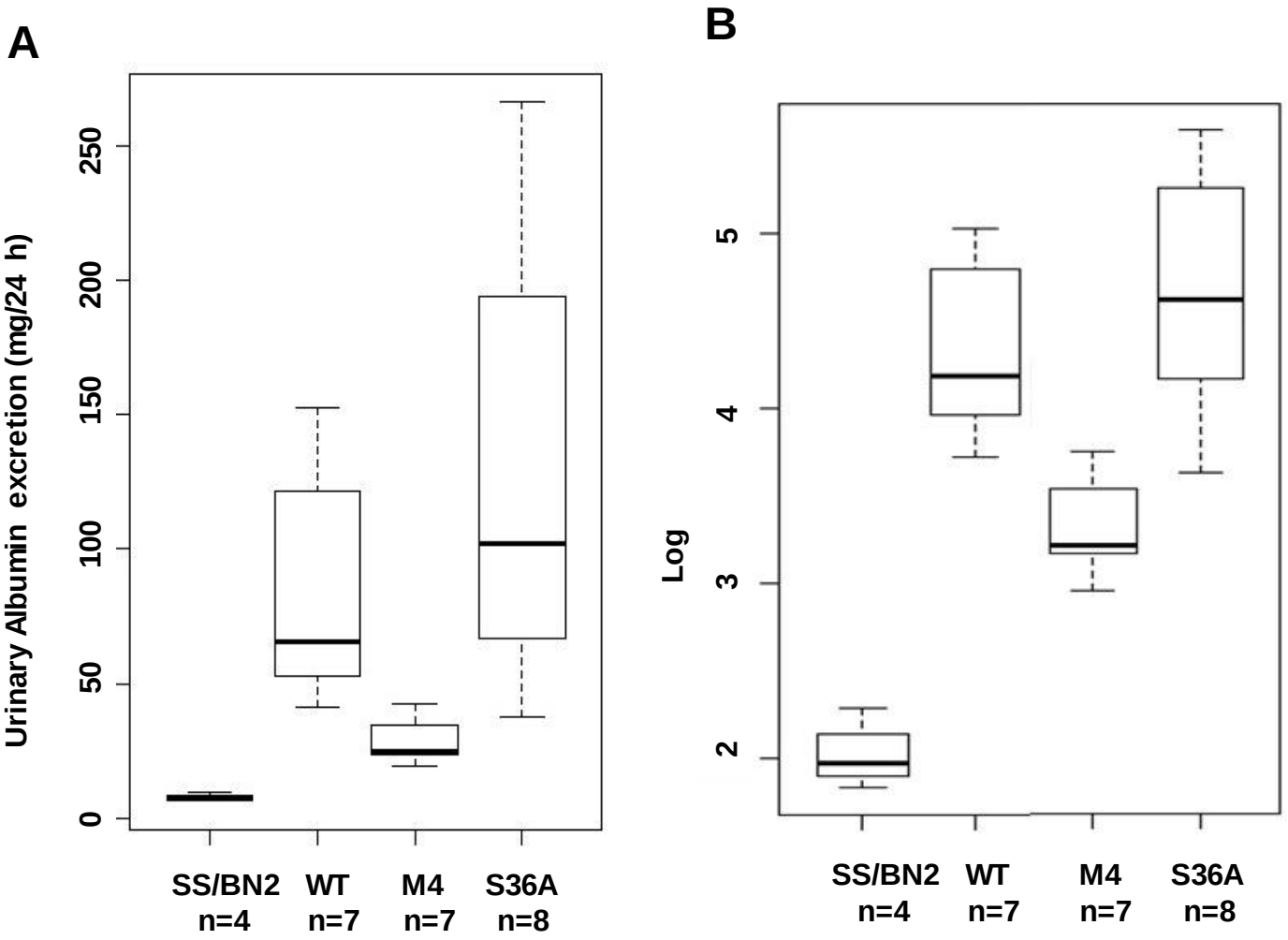
Supplemental Figure 2B. p66 Shc protein expression in SS rats on low and high salt diet. The level of p66 Shc expression in 15-week old Dahl SS rats detected by immunohistochemistry using an antibody specific for p66 Shc was higher in rats fed 1% salt diet than in rats fed 0.4% salt diet. Arrows show renal vessels. No staining was seen in negative control either at 0.4% or 1% salt diet (lower panels). Scale bars represent 100 μm.



Supplemental Figure 3. p66 Shc knockout restored renal microvascular responses to increased perfused pressure in rats. Microvascular responses of renal afferent preglomerular arterioles to perfused pressure increased up to 160 mmHg were compared in p66 Shc knockout SS rats M1 (white circles), WT SS rats (black circles) and SS/BN2 consomic rats (black squares) maintained on 1% salt diet for 14 weeks. Statistical comparisons within each series were made using a one-way analysis of variance for repeated measures combined with the Newman–Keuls multiple range test. Comparisons between groups were made using a one-way analysis of variance with the Newman–Keuls multiple range test. A probability value of $P < 0.05$ was considered statistically significant. All data are reported as the mean ± SEM. Statistical findings: M1 group and SS/BN2 groups are significantly different from WT SS group at both 120 and 160 mmHg.



Supplemental Figure 4. p66 Shc knockout restored renal microvascular responses to ATP in both male and female rats. Microvascular responses of renal afferent preglomerular arterioles to increased concentration of ATP were compared in p66 Shc knockout M1 male and female rats maintained on 1% salt diet for 14 weeks. Statistical comparisons within each series were made using a one-way analysis of variance for repeated measures combined with the Newman–Keuls multiple range test. Comparisons between groups were made using a one-way analysis of variance with the Newman–Keuls multiple range test. A probability value of $P < 0.05$ was considered statistically significant. All data are reported as the mean ± SEM. Statistical findings: Male and female M1 groups are not statistically different.



Supplemental Figure 5. Microalbuminuria in rats maintained on 0.4% salt diet for 17 weeks. The albuminuria (**A**) and logarithmic variance stabilizing transformation (**B**) was used to satisfy the applicability of Welch t-tests. SS/BN2 and Dahl SS M4 were significantly different from WT.

Coefficients	Estimate	Std. Error	t value	P-value
(Intercept)	1.983	0.108	18.356	<0.001
Diet=1%	0.222	0.099	2.251	0.037
Strain = M4	0.241	0.136	1.777	0.092
Strain=S36A	0.567	0.143	3.972	0.001
Strain = WT	0.455	0.136	3.346	0.004

Supplemental Table 1. Table of regression coefficients of a two way analysis of variance. The table of regression coefficients of a two way analysis of variance shows that there exists a significant effect of Diet on LN(ET-1 production) controlling for the effect of Genotype. On average LN(ET-1 production) increases by 0.22 with diet change from 0.4% to 1%, which approximately corresponds to 24% increase. The interaction between Diet and Genotype was not significant, p=0.48, indicating no differential effect of salt for different genotypes. Intercept corresponds to an expected LN(ET-1 production) for a SS/BN2 rat on low salt diet (0.4%). A variance stabilizing logarithmic transformation was applied to ET-1 production. Statistical significance is declared with P-values < 0.05.