sure in DOCA-salt-induced hypertensive rats and WKY normotensive rats at different stages. The systemic blood pressure in DOCA-salt-induced hypertensive rats was significantly higher ($p < 0.001$) than that in WKY rats.

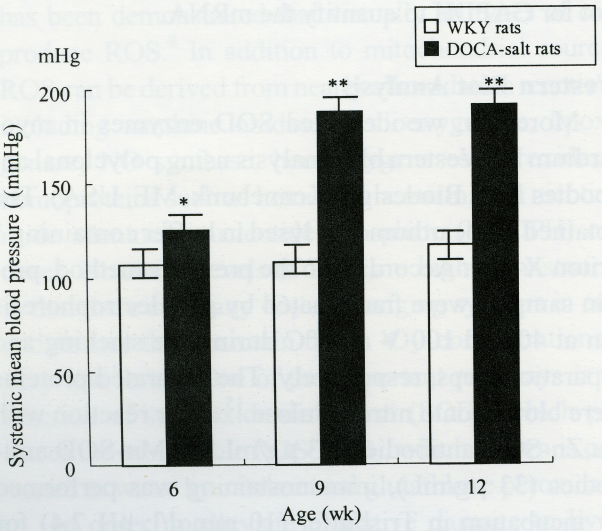

Fig. 1. Systemic mean blood pressure of DOCA-salt-induced hypertensive rats and WKY normotensive rats at different ages (*$p < 0.05$, **$p <$ 0.001, between DOCA- salt -induced hypertensive rats and WKY normotensive rats).

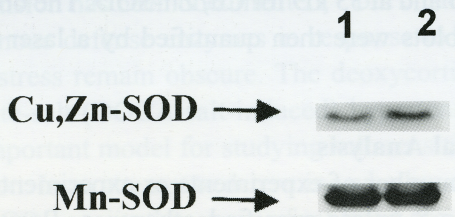

Fig. 2. Northern blot of total RNA (30 g/lane) from normotensive WKY rat and DOCA-salt-induced hypertensive rat hearts, with GAPDH as an internal standard. Lane 1 shows data for WKY rats, lane 2 shows these for DOCA-salt rats.

mRNA and DNA Levels of SOD in Adult DOCA-salt-induced Hypertensive Rats

The mRNA of SOD was characterized by Northern blot analysis using cDNA probes for both subtypes (Fig. 2). DOCA-salt-induced hypertensive rats and WKY normotensive rats showed no significant changes (Table 1). The presence of SOD enzymes, of both Mn-SOD and Cu, Zn-SOD subtypes, was identified by Western blot analysis using specific antibodies (Fig. 3). Recognition sites of SOD enzymes, obtained by comparison of the antibody binding ability, showed a similar pattern in cardiomyocytes, and

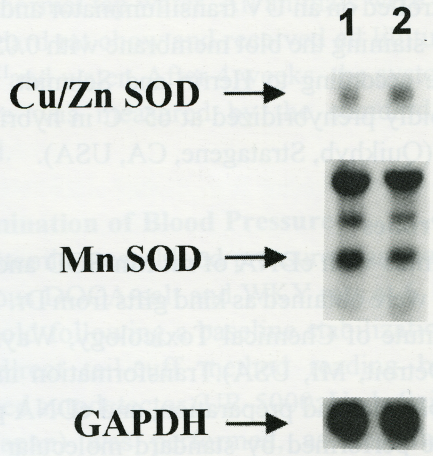

Fig. 3. Western blot of rat heart protein using antibody against Cu,Zn-SOD (upper) and Mn-SOD (lower). Each lane was loaded with 0.1 mg protein from normotensive WKY rats (lane 1) and DOCA-salt-induced hypertensive rats (lane 2). No change in the level of responses was observed between these 2 strains of rat.

Table 1. Gene Expression of SOD Using Northern Blot Analysis in Hearts from DOCA-salt-induced Hypertensive Rats and WKY Rats at Different Ages

	WKY rats (n = 8)			DOCA-salt rats (n = 8)		
Age	6 wks	9 wks	12 wks	6 wks	9 wks	12 wks
Mn-SOD (%)	100	108 ± 6	99 ± 7	101 ± 6	109 ± 8	105 ± 5
Cu, Zn-SOD (%)	100	104 ± 3	102 ± 2	99 ± 6	102 ± 3	108 ± 8

Values are the mean ± SEM of the mRNA level. Mn = manganese; Cu = copper; Zn = zinc; SOD = superoxide dismutase; DOCA = deoxycorticosterone acetate; WKY = Wistar-Kyoto.