Table 2. Binding of Wild-Type and Mutant Repressors to λO_R1 DNA

	K_{obs} (M)	Relative to Wild Type	$\frac{d \log (K_{obs})}{d \log [KCl]}$	m'
Wild type	$7.9 (\pm 4.3) \times 10^{-10}$	1	4.2 ($\pm$ 0.4)	4.8
Lys^{34}	$1.3 (\pm 0.7) \times 10^{-12}$	608	6.9 ($\pm$ 0.5)	7.8
Asn^{48}	$2.7 (\pm 0.9) \times 10^{-10}$	3	4.8	5.5
Ser^{48}	$3.2 (\pm 1.3) \times 10^{-11}$	25	5.3	6.0
Lys^{83}	$1.0 (\pm 0.2) \times 10^{-11}$	79	4.9 ($\pm$ 0.2)	5.6

K_{obs} is the equilibrium dissociation constant for binding of the repressor dimer to O_R1 DNA at 22°C in buffer containing 10 mM Tris (pH 7.3), 200 mM KCl, 2 mM $CaCl_2$, 0.1 mM EDTA, 100 μg/ml BSA, and 5% DMSO. The values of K_{obs} represent averages from four separate experiments like those in Figure 2; the numbers in parentheses are standard deviations. K_{obs} was calculated as described in Experimental Procedures assuming that the dimerization constant, K_1, was the same (2×10^{-8} M) for wild type and the revertants. In column 2, K_{obs} is normalized to the wild-type value. The values in column 3 are linear least squares fits of the slopes from salt dependence experiments like those in Figure 3; the numbers in parentheses are standard deviations from multiple determinations. The values of these slopes are proportional to the number of ions displaced from operator DNA by repressor binding (Record et al., 1976). The proportionality constant for double-stranded DNA is 0.88, and column 4 shows the values for the number of ions released. The presence of $CaCl_2$ in the buffer may affect the slopes and m' values obtained (Record et al., 1977).