Supplementary Figures

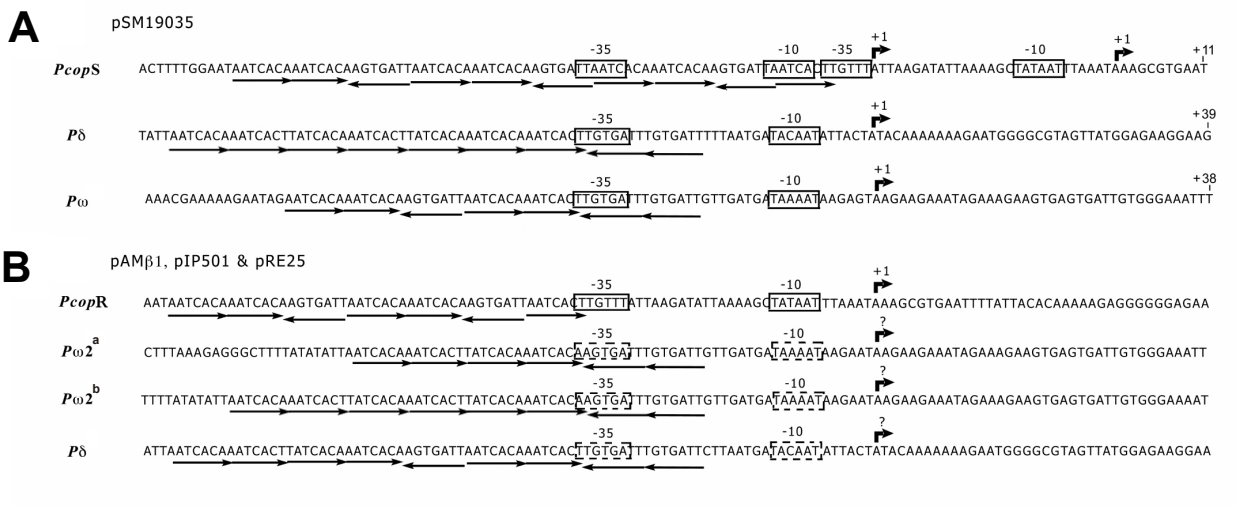

Figure 9 Comparison of the nucleotide sequences of ω_2 targets sites in *inc18* plamisds. The experimentally defined conserved -35 and -10 consensus regions of the *Pcop*S, *Pδ* and *P*ω promoters are boxed with a continuous line and with broken lines the putative region. Bent arrows and +1 denote known transcription start sites and bend arrows with a ?, putative start sites. Heptad repeats and their relative orientations indicated by arrows below the nucleotide sequences. In **(A)**, the prototype of ω_2 targets sites in pSM19035. In **(B)**, ω_2 target sites of *inc18* plasmids with different heptad organization. *Pcop*R of pIP501; *P*ω2^a of pAMβ1; *P*ω2^b of pIP501 and the sequence of *Pδ* of pRE25.

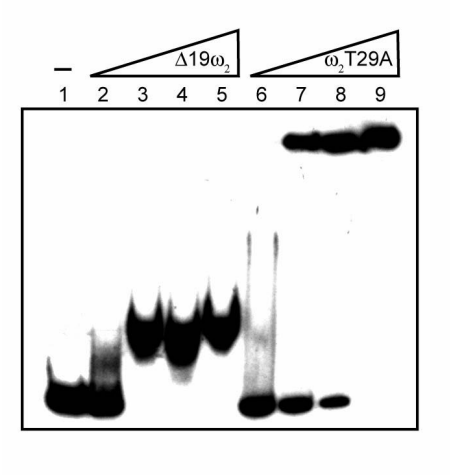

Figure 10 Electrophoretic mobility shift assay (EMSA). 300-bp [α^{32}P]-*Hin*dIII-*Kpn*I *PcopS* DNA (labelled at the 3´-end of the bottom strand) (0.2 nM) and 1 μg of poly[d(I-C)], as non-specific competitor DNA, were incubated with increasing concentrations of $\Delta19\omega_2$ or ω_2T29A for 15 min at 37ºC. The formed ω_2-DNA complexes were analysed by EMSA. The $\Delta19\omega_2$ concentrations were 10, 20, 40, and 60 nM (lanes 2 to 5, respectively), and ω_2T29A concentrations were 1, 2, 4.5 and 9 μM (lanes 6 to 9 indicating unspecific binding of ω_2T29A to DNA). The symbol – (lane 1) denotes the absence of protein.

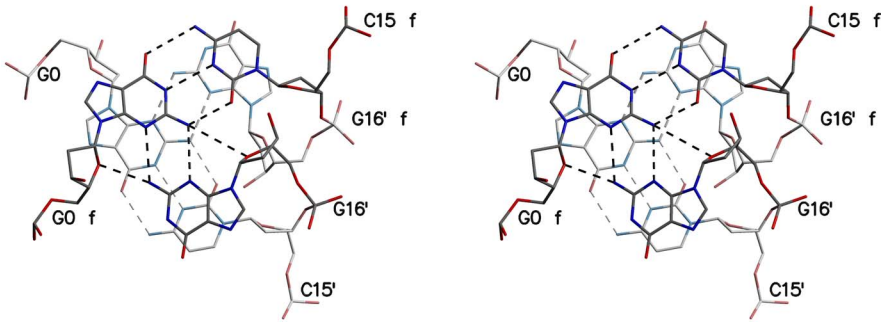

Figure 11 Stereo view of G*(G-C) base-triplets. Bases are numbered according to Figure 1, label (f) refers to free DNA. The black triplet is closer to the viewer than the light grey one.

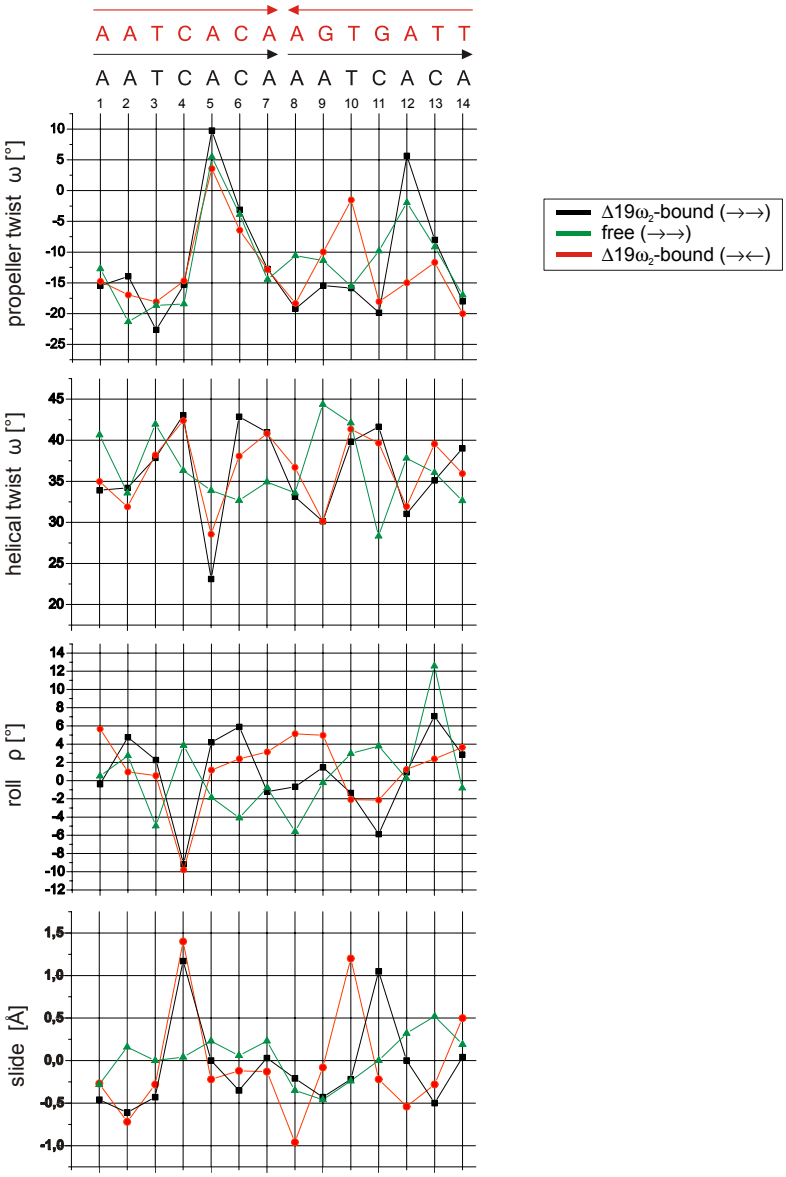

Figure 12 DNA-parameters for $[\Delta 19\omega_2]_2$-bound and free DNA. Strong positive propeller twist is associated with opposite buckle in the CAC regions (see Figure 7). Parameters roll, slide and helical twist are similar in $\Delta 19\omega_2$-bound direct (→→) and inverted (→←) heptads, whereas patterns for heptads of free (→→) do not correspond.

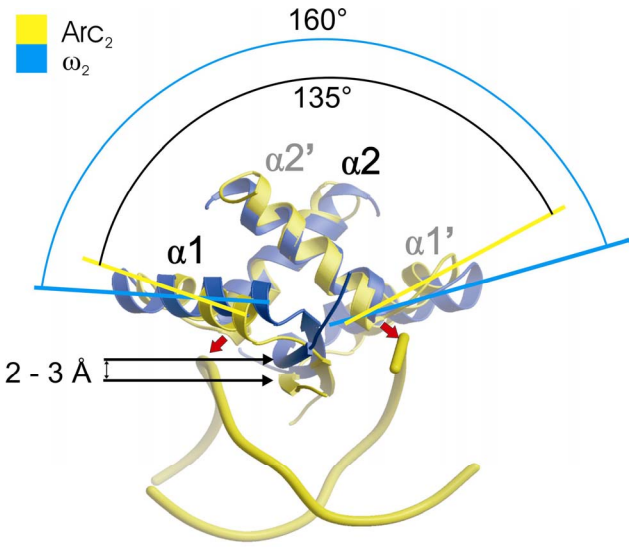

Figure 13 Helices α2 of repressors Arc_2 (yellow) and ω_2 (green) were superimposed to show that helices α1 and the β-sheets have different orientations/positions in ω_2 and Arc_2. Phosphate backbone DNA trace of Arc_2 is shown by thick yellow lines. Black arrows point at 2 – 3 Å separation between β-sheets while orange arrows indicate interactions between N-termini of helices α2 and DNA phosphate groups. Blue and yellow lines indicate the inclination of helices α1 of ω_2 and Arc_2, respectively. Note that helices α1 of Arc_2 are inclined by ~135° to accommodate the bent DNA double helix.