



### Supplemental Figure S6: Residual Dipolar Coupling

(A) Graph showing experimental one-bond RDCs values plotted against the residue numbers. RDCs were measured at 30°C, in the absence of magnesium. (B) Graph showing experimental one-bond RDCs values plotted against the residues numbers. RDCs were measured at 30°C, in the presence of 3 mM magnesium. (C) Graph showing the difference between experimental one-bond RDCs measured at 30°C, in the absence and with 3 mM magnesium. Error bars were calculated from the accuracy of the measured coupling constants estimated at  $\pm 6.8$  Hz,  $\pm 2.8$  Hz and  $\pm 3.8$  Hz for  $^1D_{C-H}(\text{aromatic})$ ,  $^1D_{C-H}(\text{ribose})$  and  $^1D_{N-H}$ , respectively.