



Supplementary Figure 1: Comparison of 750 MHz ^1H - ^{15}N BEST-TROSY and semi-BEST-TROSY spectra of KKT4 $^{145-232}$. A small region of the BEST-TROSY (dark blue) and semi-BEST-TROSY (light blue) spectra of KKT4 $^{145-232}$, in 25 mM HEPES, 150mM NaCl and 0.5 mM TCEP (95% H_2O /5% D_2O), at pH 7.2, 30 °C, are overlaid. Peaks in the two spectra are offset in the ^{15}N dimension by the one-bond $^1\text{H}^{\text{N}}\text{-}^{15}\text{N}$ coupling constant. Peaks in the BEST-TROSY spectrum show much narrower ^{15}N linewidths than observed in the semi-BEST-TROSY spectrum indicating that under the conditions being studied, KKT4 $^{145-232}$ shows a significant ‘TROSY’ effect due to a long effective rotational correlation time.