

Supporting Information

Crowding Effects on the Temperature and Pressure Dependent Structure, Stability and Folding Kinetics of Staphylococcal Nuclease

M. Ernkamp, S. Grobelny and R. Winter

TU Dortmund University, Department of Chemistry and Chemical Biology, Physical Chemistry I – Biophysical Chemistry, D-44221 Dortmund, Germany

Additional Figures

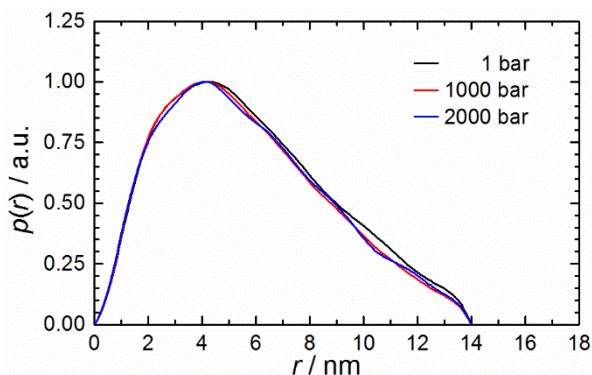


Fig. S1 Distance distribution function, $p(r)$, of 1 wt% macromolecular crowder agent Ficoll PM 70 at different pressures.

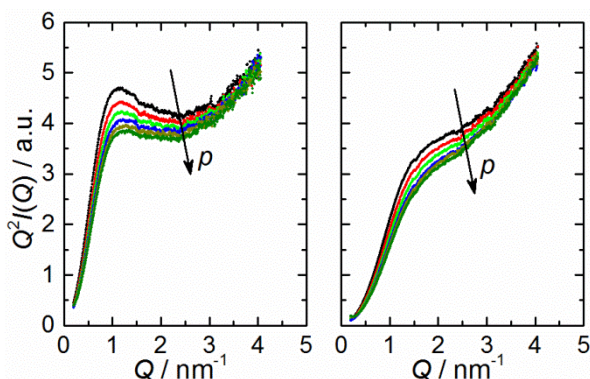


Fig. S2 Kratky plots of the macromolecular crowder agent Ficoll PM 70 at a mass concentration of 15 % (left) and 30 % (right), respectively. The effect of increasing pressure (from 1 bar to 2500 bar in steps of 500 bar) on the scattering curves is indicated by the black arrows.

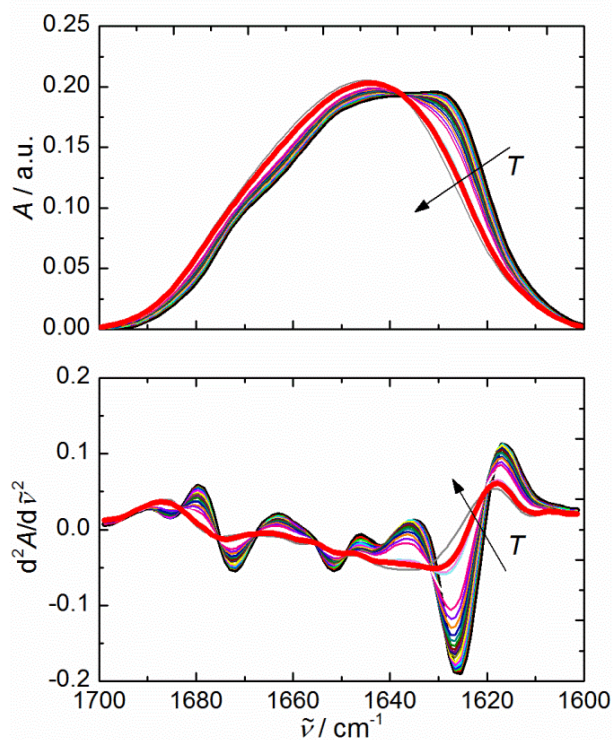


Fig. S3 Normalized FT-IR spectra of 3 wt% SNase in the presence of the macromolecular crowder agent Ficoll PM 70 (at a mass fraction of 30 %) in the amide-I' region upon thermal unfolding at ambient pressure and pD 5.5 (top). The corresponding second derivative spectra are shown to track the changes of the different secondary structure elements more clearly (bottom). Temperature-induced changes (from 10 °C to 65 °C) are indicated by the black arrow.

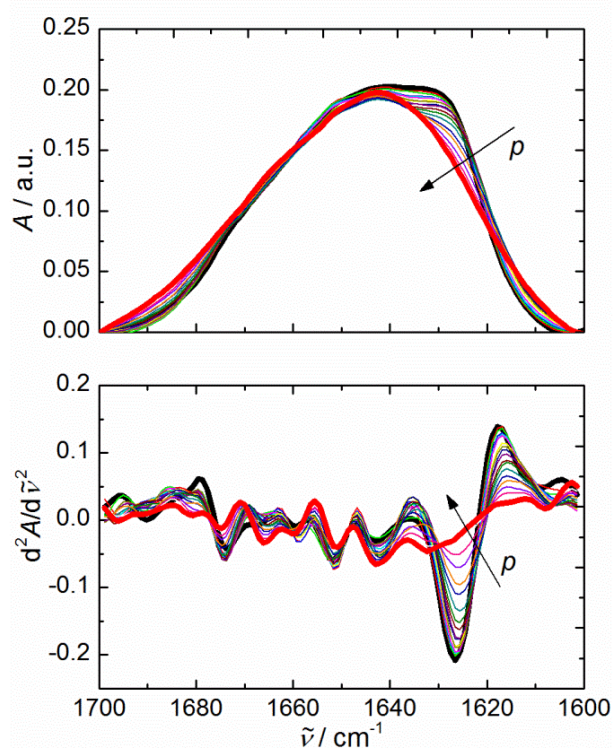


Fig. S4 Normalized FT-IR spectra of 3 wt% SNase in the presence of the macromolecular crowder agent Ficoll PM 70 (at a mass fraction of 30 wt%) in the amide-I' region upon pressure-induced unfolding at 25 °C and pD 5.5 (top). The corresponding second derivative spectra are shown to track the changes of the different secondary structure elements more clearly (bottom). The evolution of the measured curves with increasing pressure (from 1 bar to 7000 bar) is indicated by the black arrows.