Supporting information for: "Thermodynamic stability of hnRNP A1 low complexity domain revealed by high-pressure NMR"

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Α В 1 bar 1 bar 500 bar 500 bar 1000 bar 1000 bar . 110 110 1500 bar 1500 bar • 2000 bar 2000 bar . 2500 bar 2500 bar 115 115 ¹⁵N (ppm) 120 120 125 125 130 130 290K 277K 9.5 9.0 8.0 7.5 7.0 9.5 9.0 8.0 7.0 8.5 7.5 8.5 ¹H (ppm) ¹H (ppm) 1.5×10 С Ε 290K ntensity (a.u) 1.0: - 290K + 277K -10 ∆V_{F→U} (ml/mol) 5.0×1 -20-0.0 -30 1500 1000 200 D 1.5×10⁷ Pressure (bar) 40 Intensity (a.u) 277K 1.0×1 -50 -60 15 20 30 35 40 45 50 55 5 10 25 5.0×1 Residue 0.0 1500 2000 1000 2500 Pressure (bar)

Supporting Figures:

Figure S1. Pressure-induced unfolding of isolated GB1 domain. ¹H-¹⁵N HSQC spectra of GB1 collected at 290 K (**A**) and 277 K (**B**) at pressure varying from 1 bar to 2,500 bar. Intensity profiles of individual GB1 crosspeaks were measured as a function of pressure at 290 K (**C**) and 277 K (**D**) and fitted to equation (3) (solid line) to obtain residue-specific ΔV_{FDU} values. (**E**) ΔV_{FDU} measured at 290 K (black line and dots) are displayed as a function of GB1 sequence and compared with ΔV_{FDU} values measured at 277 K (blue line and dots).

Page 21 of 30



Figure S2. Analytical gel filtration column elution profile of GB1-LCD_{A1} collected with a protein concentration of 150 \Box M. The sample was run on Superdex 200 10/300 GL gel filtration column (GE healthcare life sciences) at 0.4 mL/min. The sample and column were kept at 277 K.



Figure S3. Comparison of ${}^{1}\text{H}{}^{-15}\text{N}$ HSQC spectra collected at 290 K for GB1 in GB1-LCD_{A1} (black) and the isolated GB1 domain (red).

Page 22 of 30



Figure S3: Overlaid ¹H-¹³C HSQC spectra of GB1 (in red) and GB1-LCD_{A1} (in black) recorded at 290 K and 1 bar.