Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Tuning protein-protein interactions by cosolvents: specific effects of ionic and non-ionic additives on protein phase behavior

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Supporting Information

Table S1 – List of denaturation temperatures in the absence of cosolvents, T_0, which were determined in previous studies (as indicated) using differential scanning calorimetry (see Eq. (5) and Fig. 9 of the manuscript).

cosolvent	*p*H	buffer	protein concentration	heat rate / K/min	T_0 / °C
GuHCl [1]	4.6	acetate			79
glycerol [2]	4.0	0.01 M glycine	2%	1.4	74.8
DMSO [3]	5.0		50 mg/mL	1	73.6

Figure S1 – Critical temperatures T_c used in Fig. 10 of the manuscript.

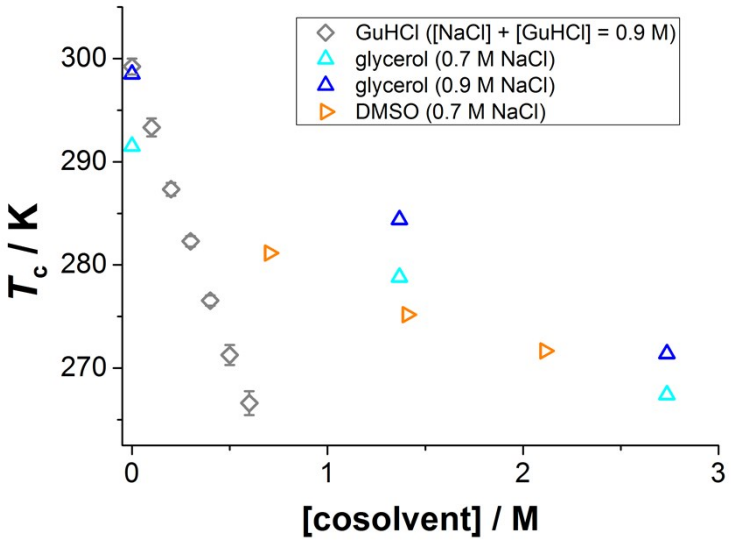
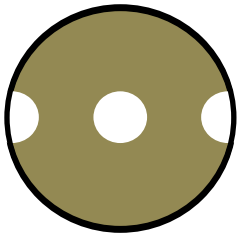


Figure S2 – In Sear's model,[4] proteins are modeled as hard spheres (large circle) with an even number of conical interaction sites (small circles).



References

1. G.I. Makhatadze and P.L. Privalov, J. Mol. Biol., 1992, 226, 491-505.
2. K. Gekko, J. Biochem., 1982, 91, 1197-1204.
3. A. Torreggiani et al., J. Mol. Struct., 2008, 891, 115-122.
4. R.P. Sear, J. Chem. Phys, 1999, 111, 4800-4806.