Supplementary Information

The use of Crosslinked Poly(Ethylene Glycol)-based (PEG) Hydrogels for Protein Crystallization

*Jose A. Gavira[1‡], Andry Cera-Manjarres[2+], Katia Ortiz[2], Janet Mendez[2], Jose A. Jimenez-Torres[2++], Luis D. Patiño-Lopez[1], Madeline Torres-Lugo[2‡ *].*

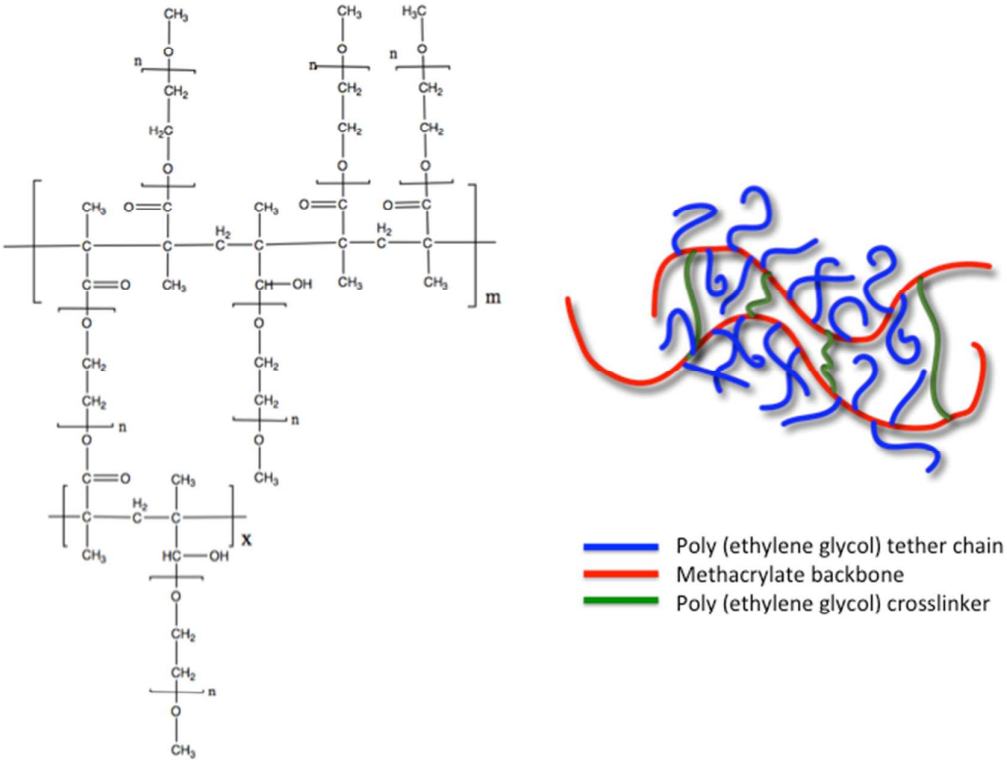

Figure S1. LEFT: Representative molecular structure of a poly (ethylene glycol) crosslinked hydrogel. The subscripts n, m and x represent the molecular weight of the poly(ethylene glycol) tethered chain, the methacrylate backbone of one chain, and the methacrylate backbone of a secondary chain joined by the crosslinker, respectively. RIGHT: Idealized representative model of a poly (ethylene glycol) crosslinked hydrogel.

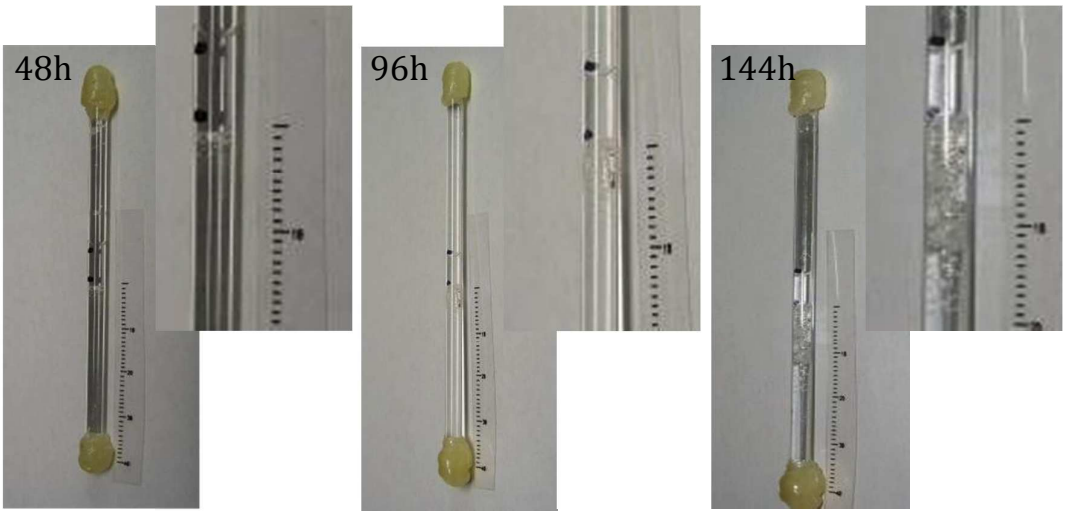

Figure S2. Examples of the experimental determination of the nucleation front position of lysozyme crystals grown in PEG (10% *w/w*) in 3L configuration.

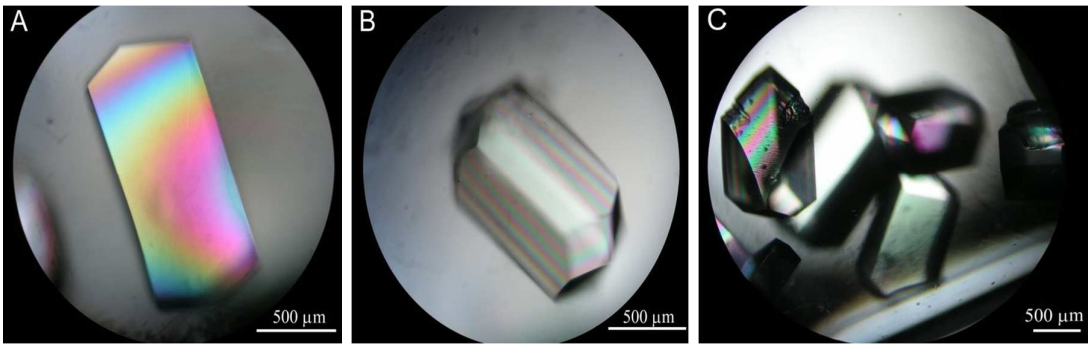

Figure S3. Examples of lysozyme crystals grown using PEG-based hydrogel plugs of 20 (a), 35 (b) and 50 (c) % (*w/w*) compositions.

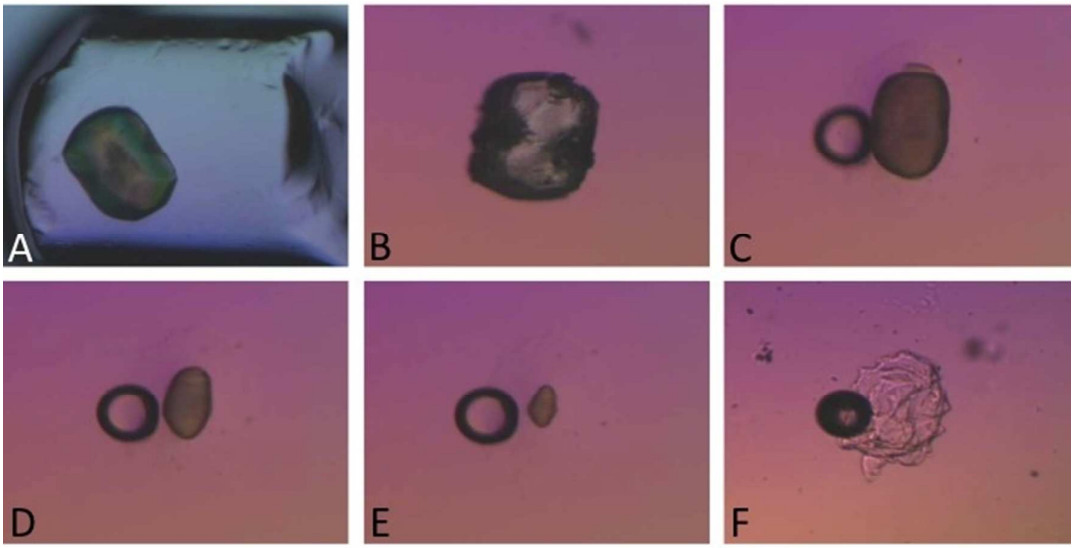

Figure S4. Dissolution of a lysozyme crystal grown in 9% (w/w) PEG-hydrogel by lowering the saturation. A) Shows the crystal still within a block of gel. In B) the crystal has been extracted and cleaned. From C) to E) the dissolution is observed. Last picture, F), shows the gel mask initially incorporated in the crystal.

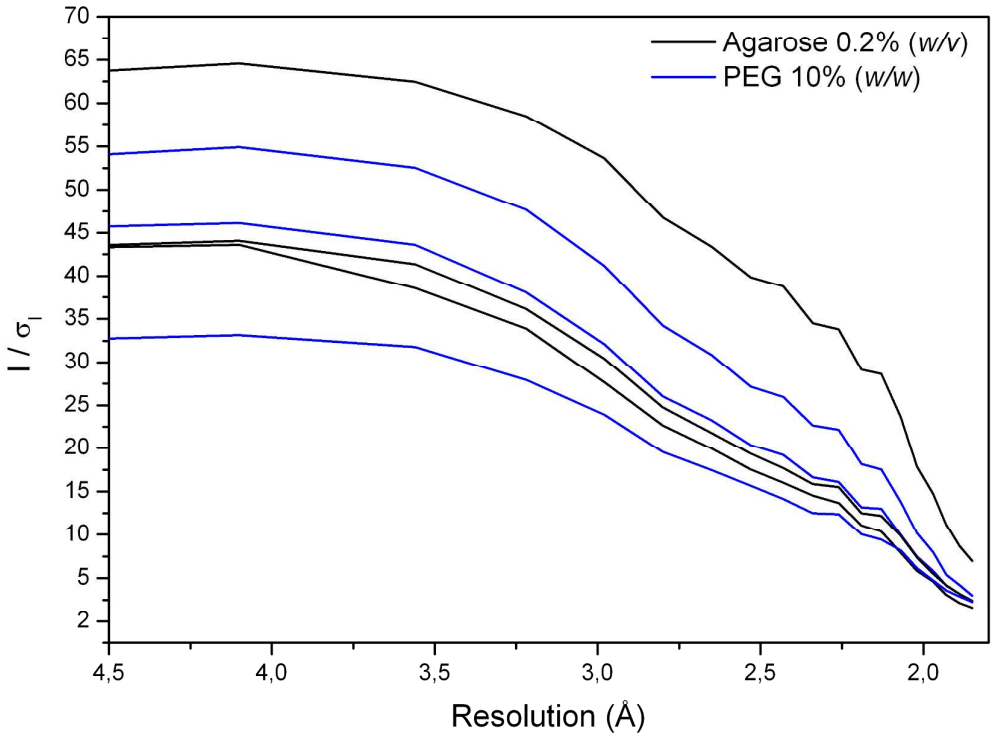

Figure S5. Shown signal to noise ratio as a function of the resolution of X-ray data collected from lysozyme crystals grown in 10% (*w/w*) PEG-hydrogel (blue) and in 0.2% (*w/v*) agarose (black) gel using the 3L counterdiffusion configuration.

Table S1. Slopes and confidence interval correspoding to the linear curve fit of data shown in figure 6.B, front position vs sqrt(t).

	Agarose (0.2 % w/v)			**PEG –hydrogel (10 %)**		
Protein concentration (mg/mL)	Slope	95% Confidence interval		Slope	95% Confidence interval	
40	0.00119	8.9E-4	0.00149	0.00485	0.004577829	0.0051221171
50	0.00435	0.00335	0.00445	0.00552	0.0052269	0.00581173
60	0.00762	0.00572	0.00952	0.00627	0.0059692	0.0065708