

SUPPORTING INFORMATION

Self-assembly of Stimuli Responsive Coiled-coil Fibrous Hydrogels

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Table S1. Amino acid sequence of protein Q.^{1,2}

Protein	Sequence
Q	MRGSHHHHHHGSIEGR VKE ITFLKNT APQMLRE LQETNAA LQDVREL LRGGSKL

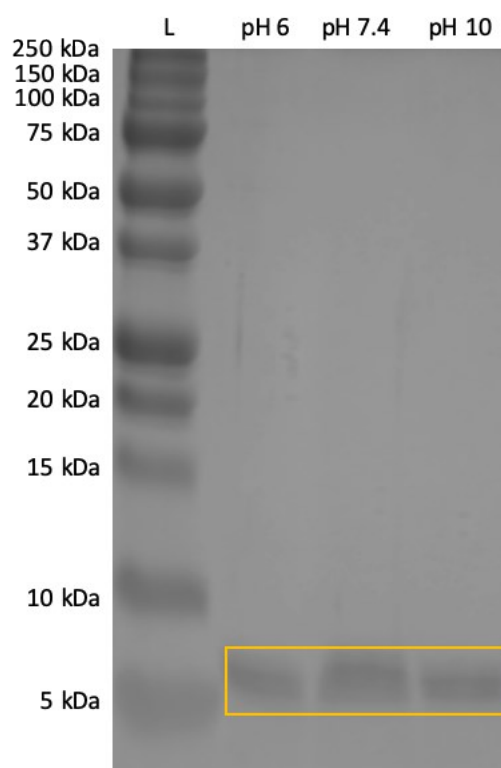


Figure S1. Q protein following purification, dialysis, and concentration at pH 6, 7.4, and 10, respectively.

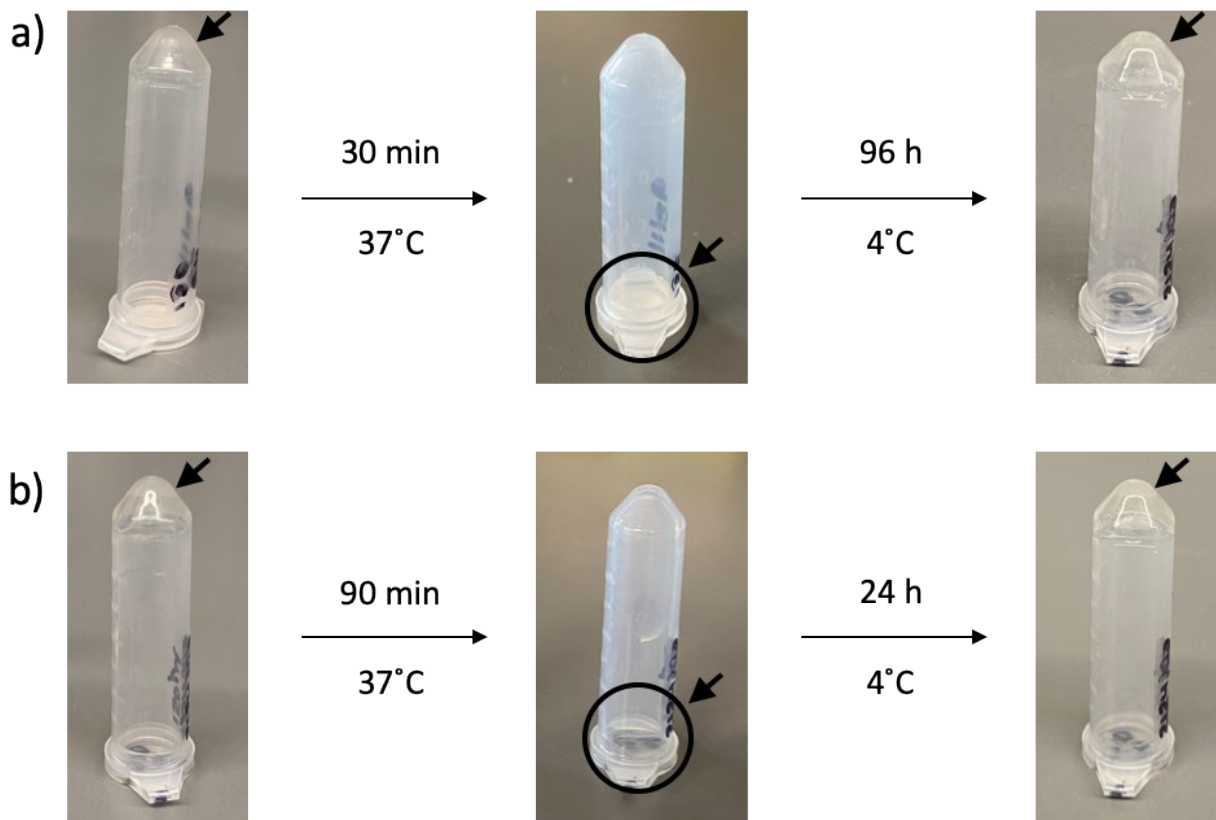


Figure S2. Transition of Q back into solution after incubation at 37°C and then back to a hydrogel after incubation at 4°C for (a) pH 7.4 and (b) pH 10.

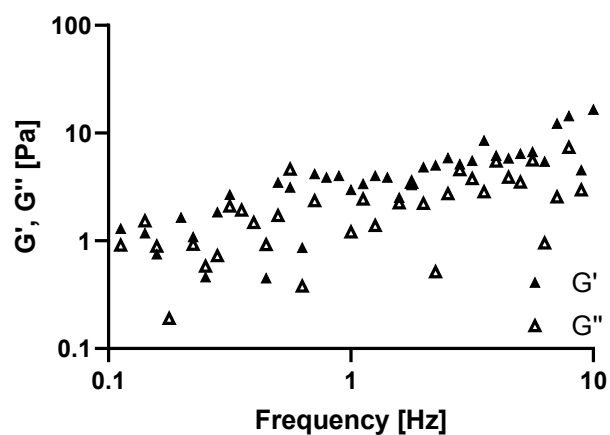


Figure S3. Rheological properties of Q solution at pH 6. Storage (G') (filled) and loss (G'') (empty) moduli were measured over a frequency range of 0.1-10 Hz at a constant 5% oscillatory strain at 4°C.

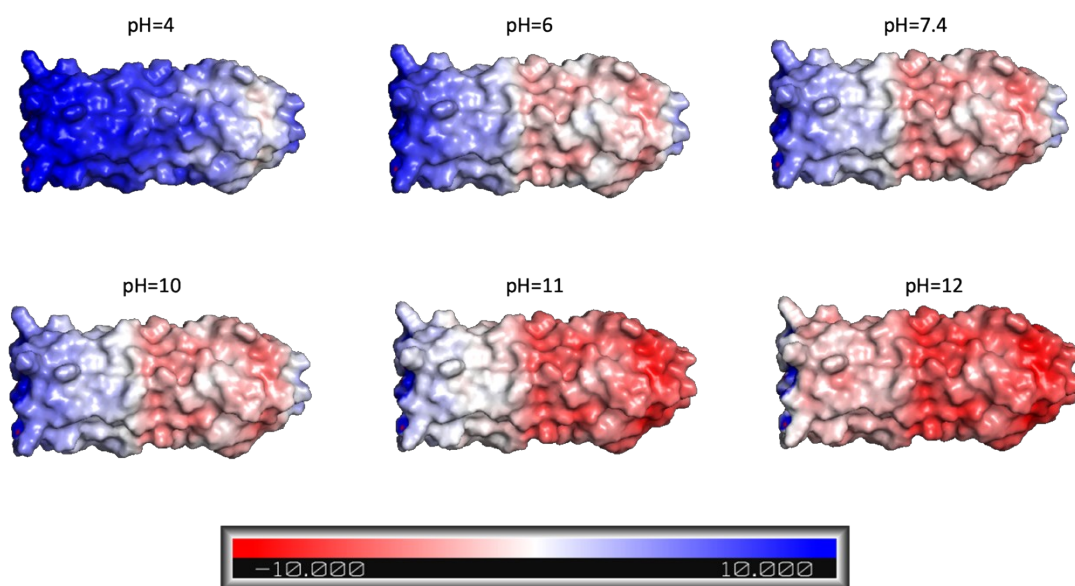


Figure S4. Electrostatic potential map of Q oriented from N- to C-terminus as a function of pH from pH 4-12. The scale bar from red to blue is -10 kbT/e to 10 kbT/e

Table S2. Calculated net charge of Q protein at pH studied and phase behavior at 4°C

pH	Charge	Phase at 4°C
4	+10.8	Sol ¹
6	+5.2	Sol
7.4	+2.0	Gel
10	+0.3	Gel
11	-1.1	Gel
12	-2.6	Gel

SUPPORTING INFORMATION REFERENCES

1. Hill, L. K.; Meleties, M.; Katyal, P.; Xie, X.; Delgado-Fukushima, E.; Jihad, T.; Liu, C.-F.; O'Neill, S.; Tu, R. S.; Renfrew, P. D.; Bonneau, R.; Wadghiri, Y. Z.; Montclare, J. K., Thermoresponsive Protein-Engineered Coiled-Coil Hydrogel for Sustained Small Molecule Release. *Biomacromolecules* **2019**, *20* (9), 3340-3351.
2. Hume, J.; Sun, J.; Jacquet, R.; Renfrew, P. D.; Martin, J. A.; Bonneau, R.; Gilchrist, M. L.; Montclare, J. K., Engineered Coiled-Coil Protein Microfibers. *Biomacromolecules* **2014**, *15* (10), 3503-3510.