**Supplementary Material for**

# Sensitivity of lysozyme crystallization to temperature variation

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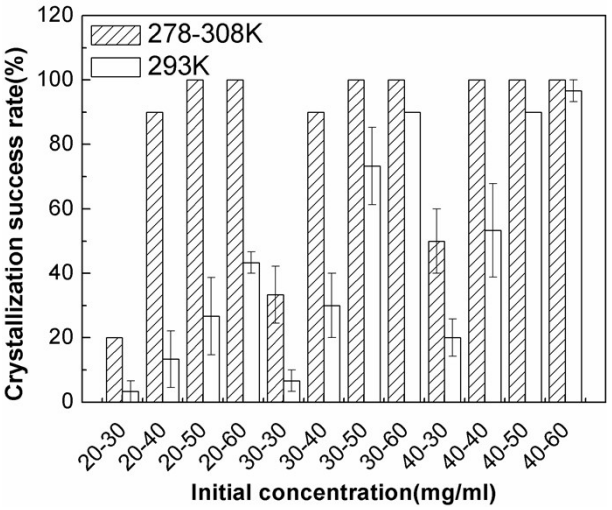
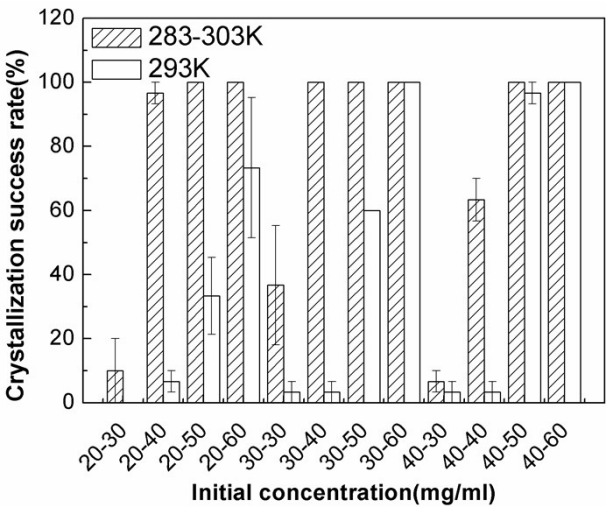
Figs. S1 to S4 and Table S1




(a)

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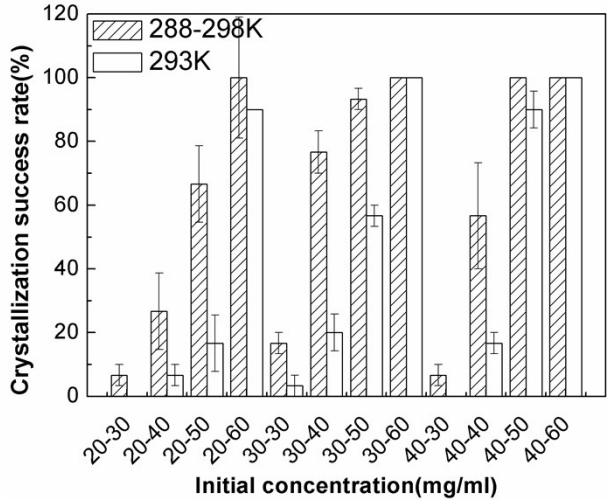


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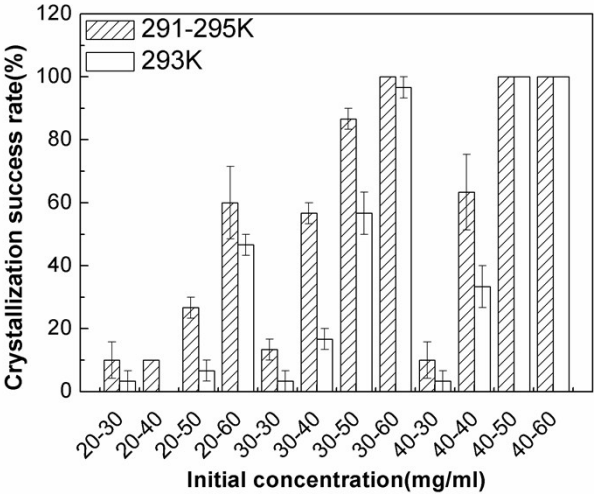


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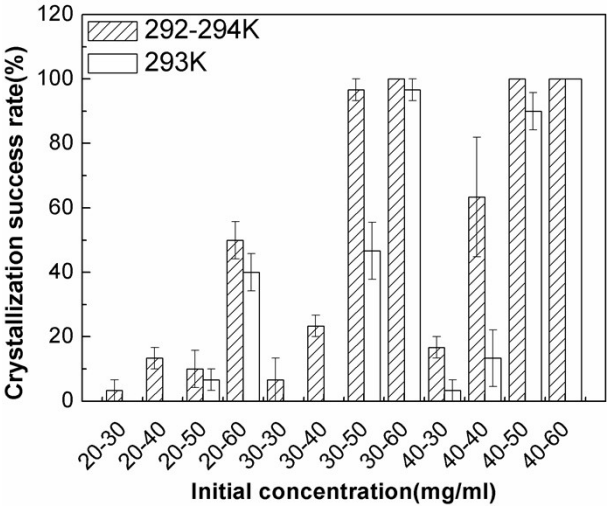



(e)

**Fig. S1.** The crystallization success rate of lysozyme at varying temperature and the constant temperature. (a)

Varying temperature: 278-308 K, constant temperature: 293 K; (b) Varying temperature: 283-303 K, constant temperature: 293 K; (c) Varying temperature: 288-298K, Constant temperature: 293 K; (d) Varying temperature: 291-295 K, constant temperature: 293 K; (e) Varying temperature: 292-294 K, constant temperature: 293 K. 20-30: initial concentration of 20 mg/mL for lysozyme and 30 mg/mL for NaCl; 20-40: initial concentration of 20 mg/mL for lysozyme and 40 mg/mL for NaCl; 20-50: initial concentration of 20 mg/mL for lysozyme and 50 mg/mL for NaCl; 20-60: initial concentration of 20 mg/mL for lysozyme and 60 mg/mL for NaCl; 30-30: initial concentration of 30mg/mL for lysozyme and 30 mg/mL for NaCl; 30-40: initial concentration of 30 mg/mL for lysozyme and 40 mg/mL for NaCl; 30-50: initial concentration of 30 mg/mL for lysozyme and 50 mg/mL for NaCl; 30-60: initial concentration of 30 mg/mL for lysozyme and 60 mg/mL for NaCl; 40-30: initial concentration of 40 mg/mL for lysozyme and 30 mg/mL for NaCl; 40-40: initial concentration of 40 mg/mL for lysozyme and 40 mg/mL for NaCl; 40-50: initial concentration of 40 mg/mL for lysozyme and 50 mg/mL for NaCl; 40-60: initial concentration of 40 mg/mL for lysozyme and 60 mg/mL for NaCl.

**Table S1** The comparison of $\Delta S$ against $\Delta T$ ($\Delta T$ = 10 K) at two different centered temperatures of 283 K and 293 K. $\Delta S$ means the difference in crystallization success rate between crystallization experiments at varying temperatures and a constant temperature.

| Initial concentration | $\Delta S$ | |
|---|---|---|
| | 283 K | 293 K |
| 20 mg/mL HEWL, 30 mg/mL NaCl | 25% | 6.67% |
| 20 mg/mL HEWL, 40 mg/mL NaCl | -5% | 20% |
| 20 mg/mL HEWL, 50 mg/mL NaCl | 0% | 50% |
| 20 mg/mL HEWL, 60 mg/mL NaCl | 5% | 10% |
| 30 mg/mL HEWL, 30 mg/mL NaCl | 40% | 13.33% |
| 30 mg/mL HEWL, 40 mg/mL NaCl | 5% | 56.67% |
| 30 mg/mL HEWL, 50 mg/mL NaCl | 0% | 36.67% |
| 30 mg/mL HEWL, 60 mg/mL NaCl | 0% | 0% |
| 40 mg/mL HEWL, 30 mg/mL NaCl | 0% | 6.67% |
| 40 mg/mL HEWL, 40 mg/mL NaCl | 0% | 40% |
| 40 mg/mL HEWL, 50 mg/mL NaCl | 0% | 10% |
| 40 mg/mL HEWL, 60 mg/mL NaCl | 0% | 0% |

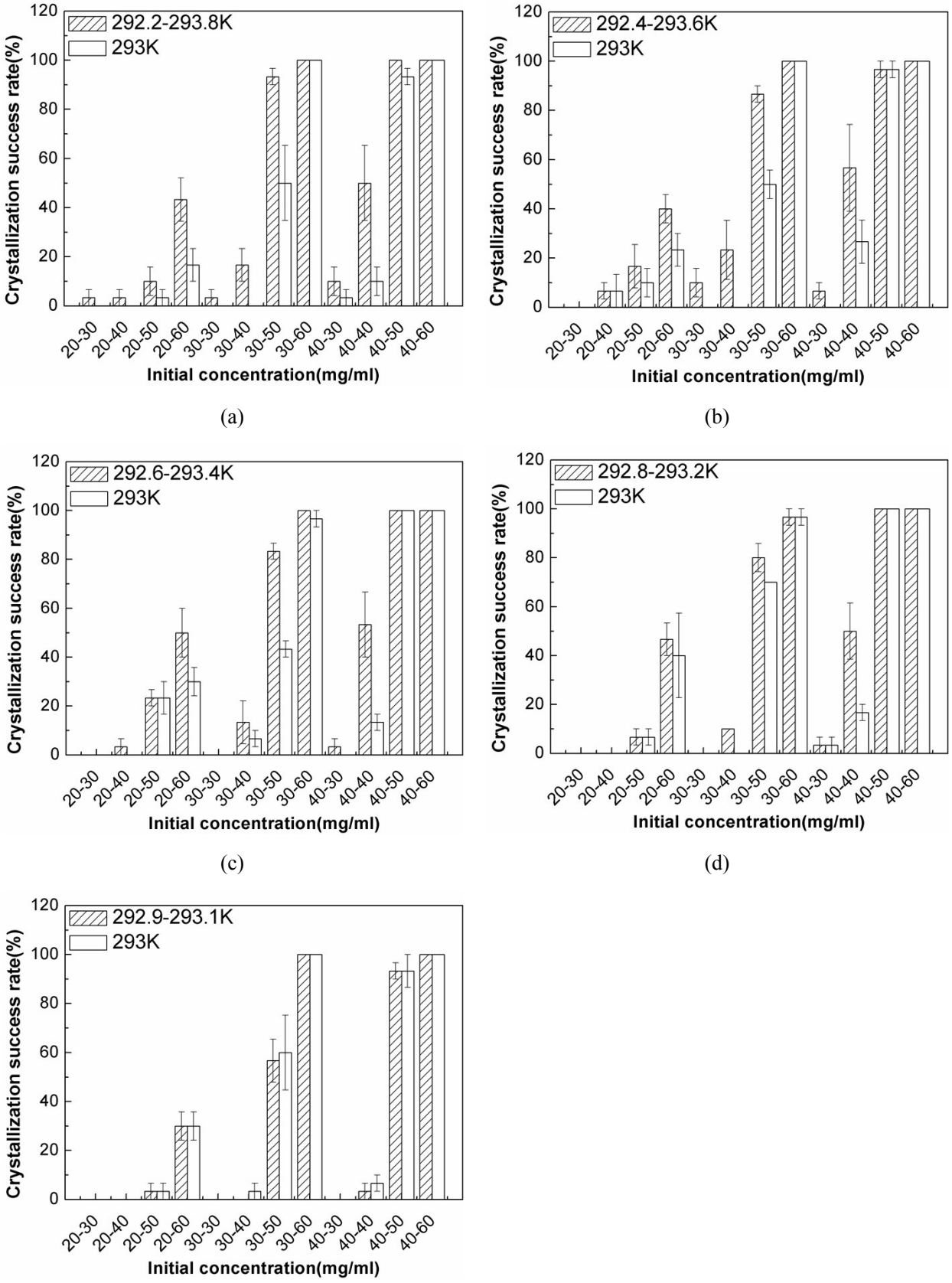



**Fig. S2.** The crystallization success rate of lysozyme at varying temperature and the constant temperature. (a) Varying temperature: 292.2-293.8 K, Constant temperature: 293 K; (b) Varying temperature: 292.4-293.6 K,

constant temperature: 293 K; (c) Varying temperature: 292.6-293.4 K, constant temperature: 293 K; (d) Varying temperature: 292.8-293.2 K, constant temperature: 293 K; (e) Varying temperature: 292.9-293.1 K, constant temperature: 293 K. 20-30: initial concentration of 20 mg/mL for lysozyme and 30 mg/mL for NaCl; 20-40: initial concentration of 20 mg/mL for lysozyme and 40 mg/mL for NaCl; 20-50: initial concentration of 20 mg/mL for lysozyme and 50 mg/mL for NaCl; 20-60: initial concentration of 20 mg/mL for lysozyme and 60 mg/mL for NaCl; 30-30: initial concentration of 30mg/mL for lysozyme and 30 mg/mL for NaCl; 30-40: initial concentration of 30 mg/mL for lysozyme and 40 mg/mL for NaCl; 30-50: initial concentration of 30 mg/mL for lysozyme and 50 mg/mL for NaCl; 30-60: initial concentration of 30 mg/mL for lysozyme and 60 mg/mL for NaCl; 40-30: initial concentration of 40 mg/mL for lysozyme and 30 mg/mL for NaCl; 40-40: initial concentration of 40 mg/mL for lysozyme and 40 mg/mL for NaCl; 40-50: initial concentration of 40 mg/mL for lysozyme and 50 mg/mL for NaCl; 40-60: initial concentration of 40 mg/mL for lysozyme and 60 mg/mL for NaCl.

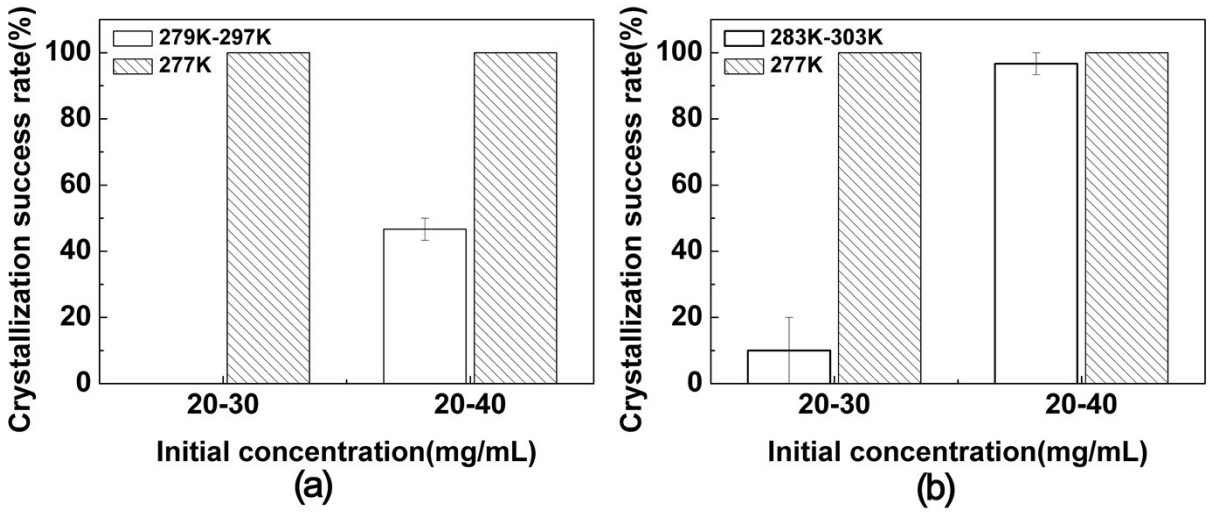
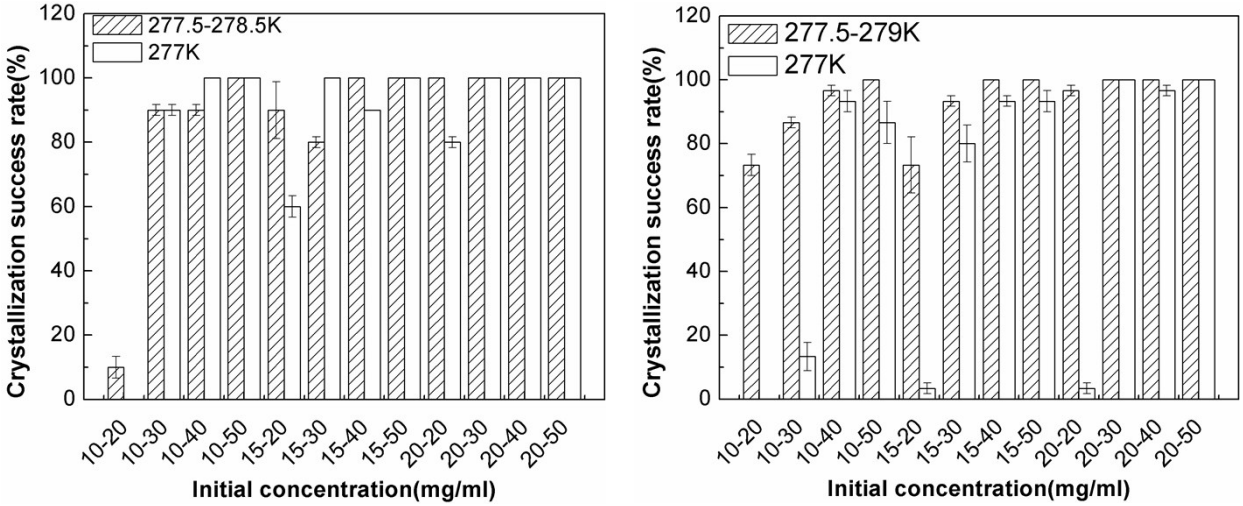



**Fig. S3.** The lysozyme crystallization success rate at varying temperature and constant temperature. (a) The temperature ranged from 279 K to 297 K; (b) The temperature ranged from 283 K to 303 K. 20-30: initial concentrations: HEWL 20 mg/mL, NaCl 30 mg/mL; 20-40: initial concentrations: HEWL 20 mg/mL, NaCl 30 mg/mL.



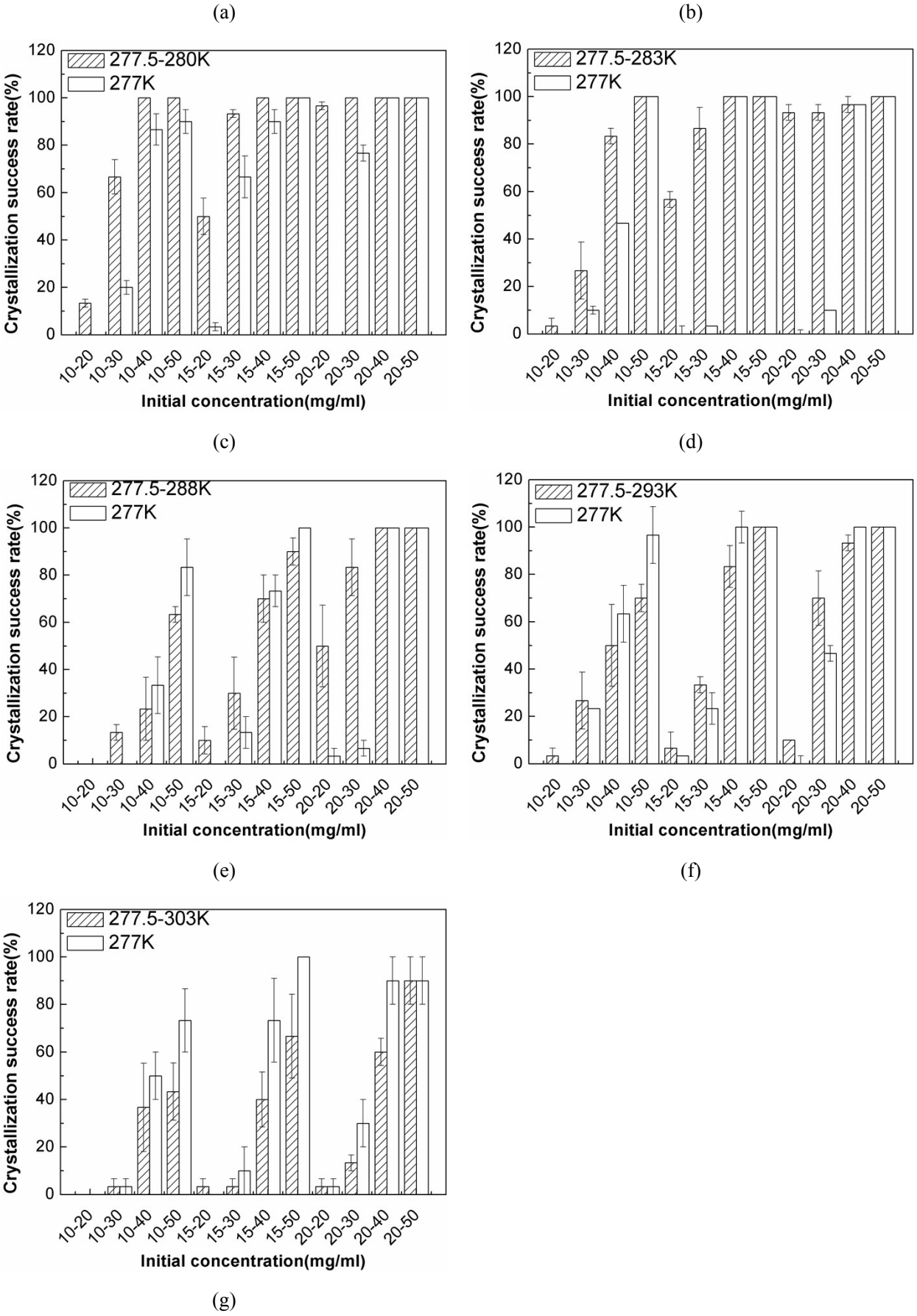



**Fig. S4.** The crystallization success rate of lysozyme at varying temperature and the constant temperature. (a)

Varying temperature: 277.5-278.5 K, constant temperature: 277 K; (b) Varying temperature: 277.5-279 K, constant temperature: 277 K; (c) Varying temperature: 277.5-280 K, constant temperature:277 K; (d) Varying temperature: 277.5-283 K, constant temperature: 277 K; (e) Varying temperature: 277.5-288 K, constant temperature: 277 K; (f) Varying temperature: 277.5-293 K, constant temperature: 277 K; (g) Varying temperature: 277.5-303 K, constant temperature: 277 K. 10-20: initial concentration of 10 mg/mL for lysozyme and 20 mg/mL for NaCl; 10-30: initial concentration of 10 mg/mL for lysozyme and 30 mg/mL for NaCl; 10-40: initial concentration of 10 mg/mL for lysozyme and 40 mg/mL for NaCl; 10-50: initial concentration of 10 mg/mL for lysozyme and 50 mg/mL for NaCl; 15-20: initial concentration of 15mg/mL for lysozyme and 20 mg/mL for NaCl; 15-30: initial concentration of 15 mg/mL for lysozyme and 30 mg/mL for NaCl; 15-40: initial concentration of 15 mg/mL for lysozyme and 40 mg/mL for NaCl; 15-50: initial concentration of 15 mg/mL for lysozyme and 50 mg/mL for NaCl; 20-20: initial concentration of 20 mg/mL for lysozyme and 20 mg/mL for NaCl; 20-30: initial concentration of 20 mg/mL for lysozyme and 30 mg/mL for NaCl;20-40: initial concentration of 20 mg/mL for lysozyme and 40 mg/mL for NaCl; 20-50: initial concentration of 20 mg/mL for lysozyme and 50 mg/mL for NaCl.