**Supporting Information**

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**Figure S1.** MALDI-TOF mass spectrum of rmfp-3b at pH 3.0.

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**Figure S2.** Coomassie blue stained SDS-PAGE (20%). M, pre-stained protein marker; lane A, purified rmfp-3b; lane B, purified rmfp-3b-NT.

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**Figure S3.** Far-UV CD spectra of rmfp-3b. The measurements were performed at 5 and 25 °C (pH 3.0 and pH 8.0), respectively.

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**Figure S4.** Influence of citrate concentration on the Tcp of rmfp-3b-NT at pH 3.0. The rmfp-3b-NT concentration was 4 mg mL-1, providing the identical molar concentration as with 5 mg ml-1 rmfp-3b (see Figure 3a). Tcp refers to the cloud point temperature of UCST behavior. Error bars indicate the standard deviation (n = 3).

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**Figure S5.** Turbidity of rmfp-3b-NT as a function of pH at 20°C. Citrate buffer (blue) and various other buffers (red) were used, such as Gly-HCl buffer (pH 3.0), acetate buffer (pH 4.0, pH 5.0, pH 5.6) and Tris-HCl (pH 7.0, pH 8.0). Turbidity was recorded at a wavelength of 600 nm. Error bars indicate the standard deviation (n = 3).

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**Figure S6.** Turbidity of rmfp-3b and rmfp-3b-NT at different sodium sulfate concentrations at pH 3.0 and 20 °C. The identical concentration of sodium chloride was used as a control. Turbidity was recorded at a wavelength of 600 nm. Error bars indicate the standard deviation (n = 3).

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**Figure S7.** Kyte-Doolittle1 hydrophobicity plot of rmfp-3b. All regions of rmfp-3b exhibit values below zero indicating its hydrophilicity.

**REFERENCE**

1. Kyte, J.; Doolittle, R. F. A simple method for displaying the hydropathic character of a protein. *J. Mol. Biol.* **1982**, 157 (1), 105-132.