**Electronic Supplementary Information** 

## **Dynamics of Polyzwitterion in Salt-free and Salt Solutions**

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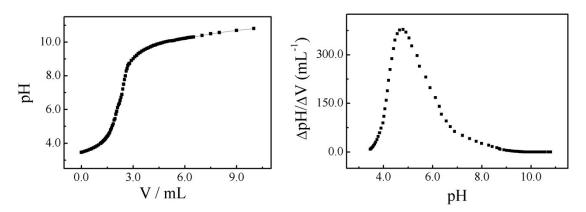
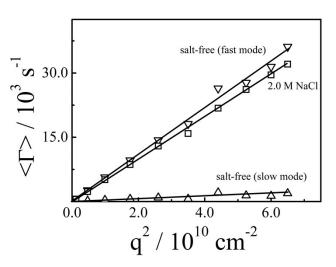


Fig. S1. Titration curve (left) and derivate curve (right) of PSB solution with 0.01 M NaOH, where  $C_p = 5.0 \text{ g/L}$ .

The isoelectric point (PI) of polyzwitterion arises from the asymmetric adsorption effect of anion and cation groups to  $H^+$  and  $OH^-$ . pI of PSB is 4.8 measured by titration.



**Fig. S2.** Scattering vector (q) dependence of average characteristic line width ( $\Gamma$ ) of PSB in salt-free solution and 2.0 M NaCl solution, where  $C_p = 0.02$  g/L.