

## Supporting Information

### Endosomolytic reducible polymeric electrolytes for cytosolic protein delivery

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Table S1. Consumed volume of 0.1 N HCl in protein solutions, polyelectrolyte solutions, and polyelectrolyte/protein complex solutions.

	$\Delta V_{\text{HCl}}$ (pH 7.4 – 7.0)	$\Delta V_{\text{HCl}}$ (pH 7.0 – 6.0)	$\Delta V_{\text{HCl}}$ (pH 6.0 – 5.1)	$\Delta V_{\text{HCl}}$ (pH 7.4 – 5.1)
bPEI <sub>25kDa</sub>	10.1	21.1	18.9	50.1
bPEI <sub>25kDa</sub> /BSA (WR 1)	8.7	24.2	17.9	50.8
RPC-bPEI <sub>0.8kDa</sub> 2	5.7	11.1	8.6	25.4
RPC-bPEI <sub>0.8kDa</sub> 2/BSA (WR 1)	4.7	11.3	9.8	25.8
BSA	0.2	2.5	1.6	4.3

	$\Delta V_{\text{HCl}}$ (pH 7.4 – 7.0)	$\Delta V_{\text{HCl}}$ (pH 7.0 – 6.0)	$\Delta V_{\text{HCl}}$ (pH 6.0 – 5.1)	$\Delta V_{\text{HCl}}$ (pH 7.4 – 5.1)
bPEI <sub>25kDa</sub> COOH	2.6	9.3	8.0	19.8
bPEI <sub>25kDa</sub> COOH/LYZ (WR 1)	3.5	8.1	8.6	19.9
RPA-bPEI <sub>0.8kDa</sub> 2	2.5	8.0	7.5	18.0
RPA-bPEI <sub>0.8kDa</sub> 2/LYZ (WR 1)	2.9	9.5	13.0	25.4
LYZ	1.6	2.8	3.5	7.9

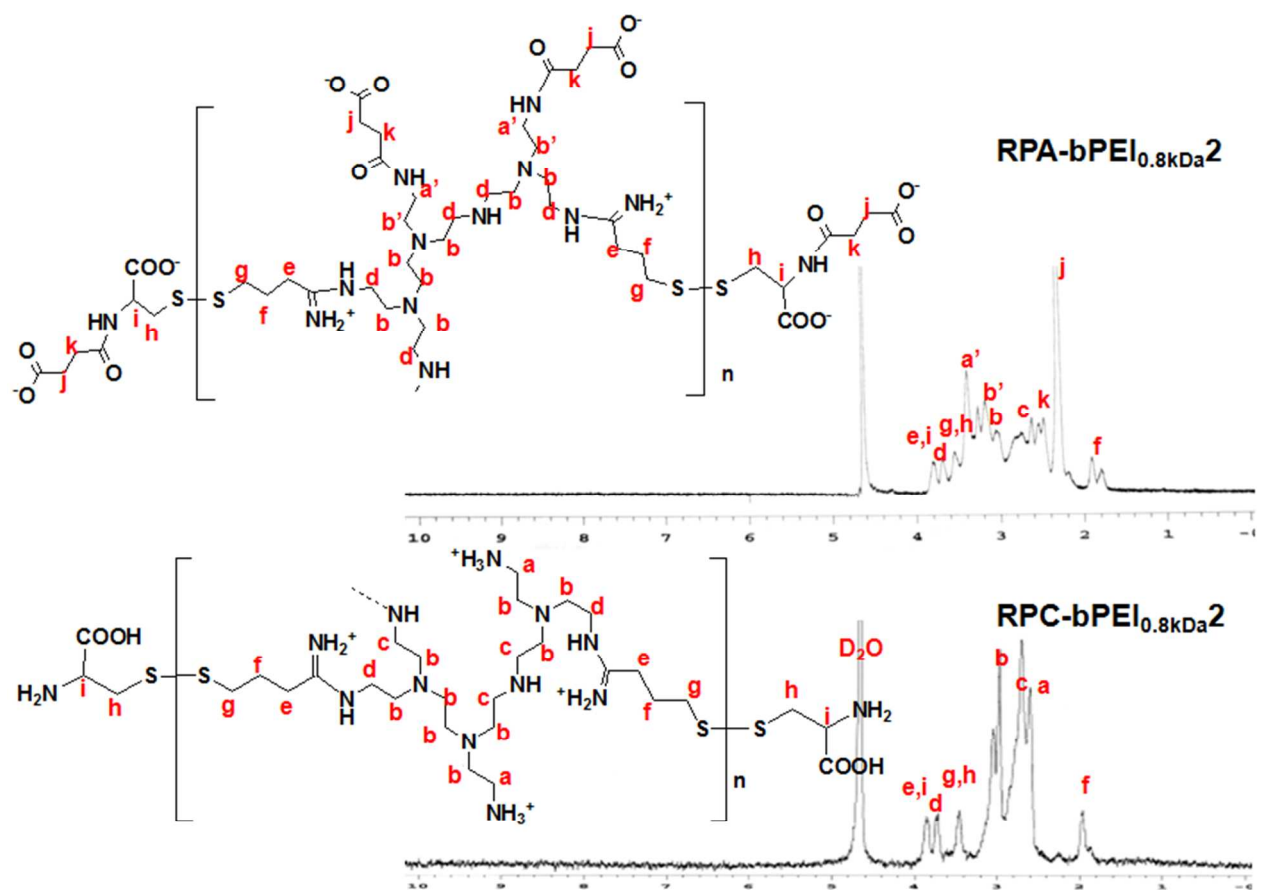


Figure S1. <sup>1</sup>H-NMR spectra of RPC-bPEI<sub>0.8kDa2</sub> and RPA-bPEI<sub>0.8kDa2</sub>

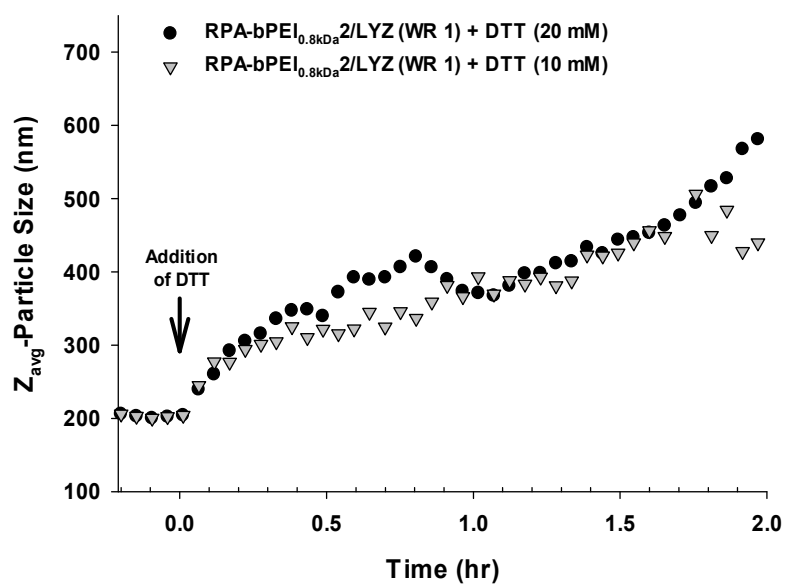
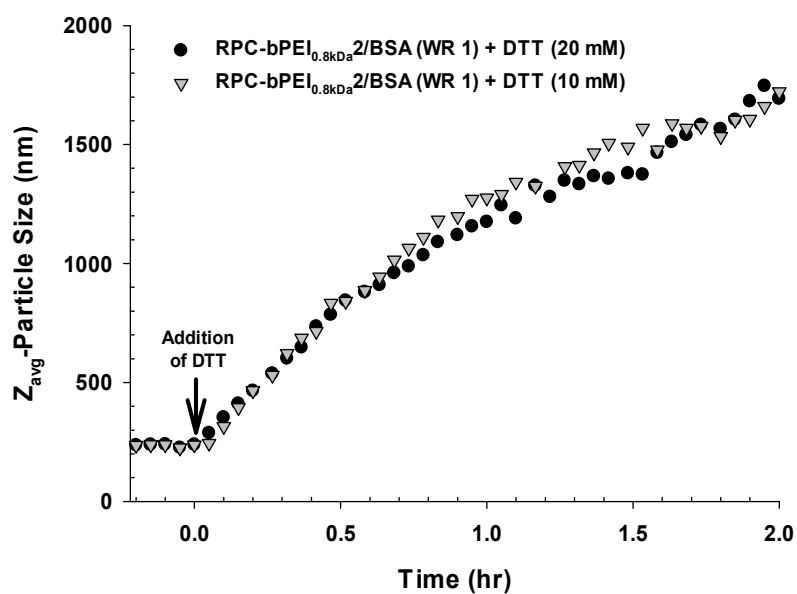


Figure S2. Time-dependent DTT-induced size change of polymer/protein complexes (WR 1) at RT in the presence of DTT (10 mM or 20 mM)

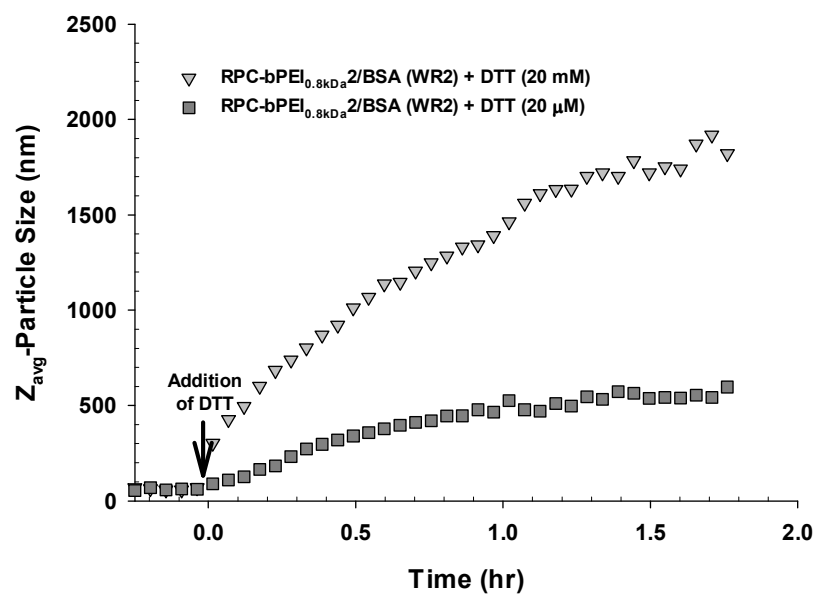


Figure S3. Time-dependent DTT-induced size change of RPC-bPEI<sub>0.8kDa</sub><sup>2</sup>/BSA complexes (WR2) at RT in the presence or absence of DTT (20 μM or 20 mM)