Supplementary Material

Formation of complexes in aqueous solutions of amphiphilic triblock polyelectrolytes of different topologies and an oppositely charged protein

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Salt dependence

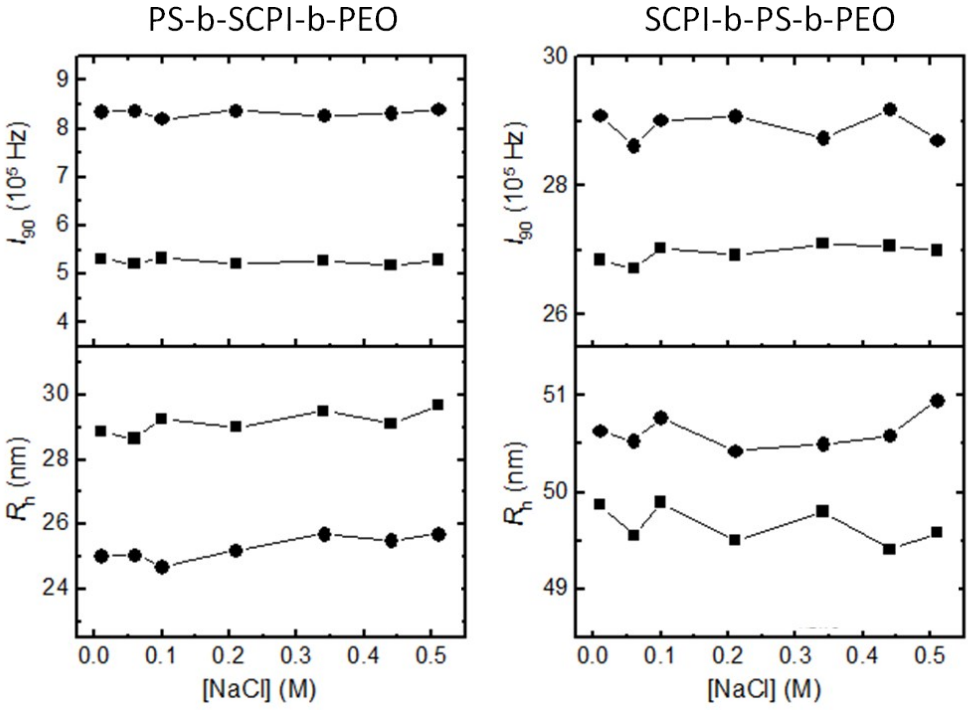

Fig. S1 Salt content dependence for scattered intensity and R_h at θ=90° for PS-*b*-SCPI-*b*-PEO and SCPI-PS-PEO complexes with 0.05 (circles) and 0.6 (squares) mg/ml lysozyme at pH 7.

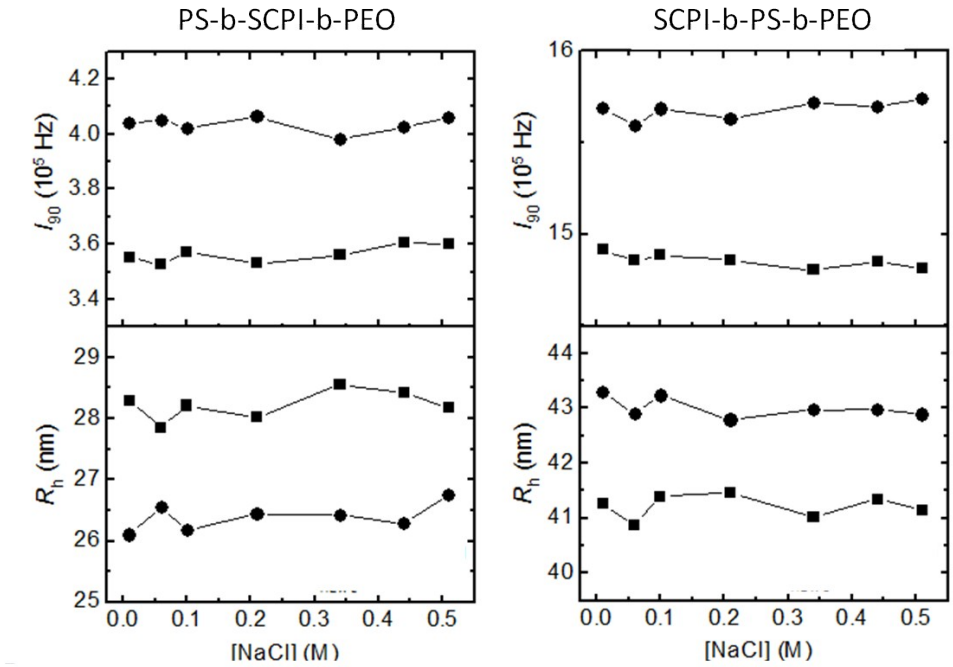

Fig. S2 Salt content dependence for scattered intensity and R_h at θ=90° for PS-SCPI-PEO and SCPI-PS-PEO complexes with 0.05 (circles) and 0.6 (squares) mg/ml lysozyme at pH 3.

SANS parameters

Table S1a SANS extracted parameters from PS-*b*-SCPI-*b*-PEO (0.075 mg/ml) in D_2O at 0.01 M NaCl and pH 7 in the absence and presence of lysozyme (0.6 mg/ml).

Parameters/Sample	PS-*b*-SCPI-*b*-PEO	PS-*b*-SCPI-*b*-PEO/ Lysozyme
$R_c\,(nm)$	3.3±0.1	3.2±0.1
$R_{in}\,(nm)$	15.9±0.5	14.2±0.5
$R_{out}(nm)$	33.3±0.8	26.5±0.8
$R_{g,mic}(nm)$	7.6±0.2	6.1±0.2
φ_0^{SCPI}	1.00±0.01	0.66±0.01
φ_0^{PEO}	(0.99±0.2)x10^{-2}	(4.6±0.2)x10^{-2}
α	1.4±0.1	1.3±0.1
β	1.2±0.1	1.2±0.1
N^{mic}	21±2	21±2
$I_0^{mic}(cm^{-1})$	0.085±0.002	0.21±0.01
$G(cm^{-1})$	0.98±0.02	9.1±0.1
$R_{g,frac}(nm)$	52±3	52±3
d	2.5±0.1	2.7±0.1
N^{frac}	22±3	820±60
$weight\ \%\ NPs$	8.2±0.7	46±3
$number\ \%\ NPs$	8.5±0.7	97±5
$R_{g,app}(nm)$	50±2	49±2
N^{app}	22±2	110±10

Table S1b SANS extracted parameters from SCPI-*b*-PS-*b*-PEO (0.075 mg/ml) in D_2O at 0.01 M NaCl and pH 7 in the absence and presence of lysozyme (0.6 mg/ml).

Parameters/Sample	SCPI-*b*-PS-*b*-PEO	SCPI-*b*-PS-*b*-PEO/ Lysozyme
$R_c\,(nm)$	7.1±0.3	6.9±0.3
$R_{in}\,(nm)$	17.7±0.6	17.5±0.6
$R_{out}(nm)$	31.3±0.8	30.7±0.8
$R_{g,mic}(nm)$	13.9±0.4	13.2±0.4
$\varphi_{0,in}^{SCPI}$	(6.3±0.6)·10^{-1}	(6.7±0.6)·10^{-1}
φ_0^{PEO}	(1.8±0.3)·10^{-1}	(1.8±0.3)·10^{-1}
$\varphi_{0,out}^{SCPI}$	(2.1±0.6)·10^{-1}	(1.9±0.6)·10^{-1}
α	1.5±0.1	1.5±0.1
β	2.0±0.1	2.2±0.1
N^{mic}	182±10	161±10
$\%SCPI\ out$	66±5	63±5
$I_0^{mic}(cm^{-1})$	0.068±0.005	0.26±0.06
$G(cm^{-1})$	0.29±0.03	1.8±0.4
$R_{g,frac}(nm)$	43±6	54±4
d	3.2±0.2	3.3±0.2
N^{frac}	8.5±2	71±5
$weight\ \%\ mNPs$	0.05±0.01	6.0±0.4
$number\ \%\ mNPs$	1.0±0.2	2.7±0.2
$R_{g,app}(nm$	14±2	13±2

N^{app}	0.78±0.4	5.7±0.8

CD analysis

Table S2 Analysis of the secondary structure of lysozyme in the complexes with PS-*b*-SCPI-*b*-PEO and SCPI-*b*-PS-*b*-PEO at 0.075 mg/ml polymer concentration, 0.01 M NaCl and pH 7.

SAMPLE		α-helix (%)	β-sheet (%)	random coil (%)
LYSOZYME (0.5 mg/ml)		33	17	50
PS-*b*-SCPI-*b*-PEO&LYS	C_{LYS}= 0.1 mg/ml	32	18	50
	C_{LYS}= 0.3 mg/ml	32	18	50
	C_{LYS}= 0.6 mg/ml	32	18	50
SCPI-*b*-PS-*b*-PEO&LYS	C_{LYS}= 0.1 mg/ml	33	18	49
	C_{LYS}= 0.3 mg/ml	31	16	53
	C_{LYS}= 0.6 mg/ml	32	18	50