



**Fig. S1 Molecular weight and distribution of APS. (a) Chromatogram of samples molecular mass determined by size exclusion chromatography-multiangle laser light scattering (SEC-MALLS) method. The blue curve was the differential refractive index (dRI) calibration curve versus retention time. (b) Molecular weight distribution of samples.**

**Table S1 Molar mass moments and polydispersity of the samples**

Item	Peak 1	Peak 2	Peak 3
Peak limits (min)	10.392–15.660	15.793–20.331	20.375–24.980
Mw (g/mol)	$7.145 \times 10^6$	$5.973 \times 10^4$	$4.698 \times 10^4$
Mn (g/mol)	$4.016 \times 10^6$	$3.563 \times 10^4$	$4.042 \times 10^4$
Polydispersity	1.779	1.676	1.162

Peaks were detected in the differential refractive index (dRI) chromatogram. Mw: weight-average molecular weight; Mn: number-average molecular weight; Polydispersity: Mw/Mn.