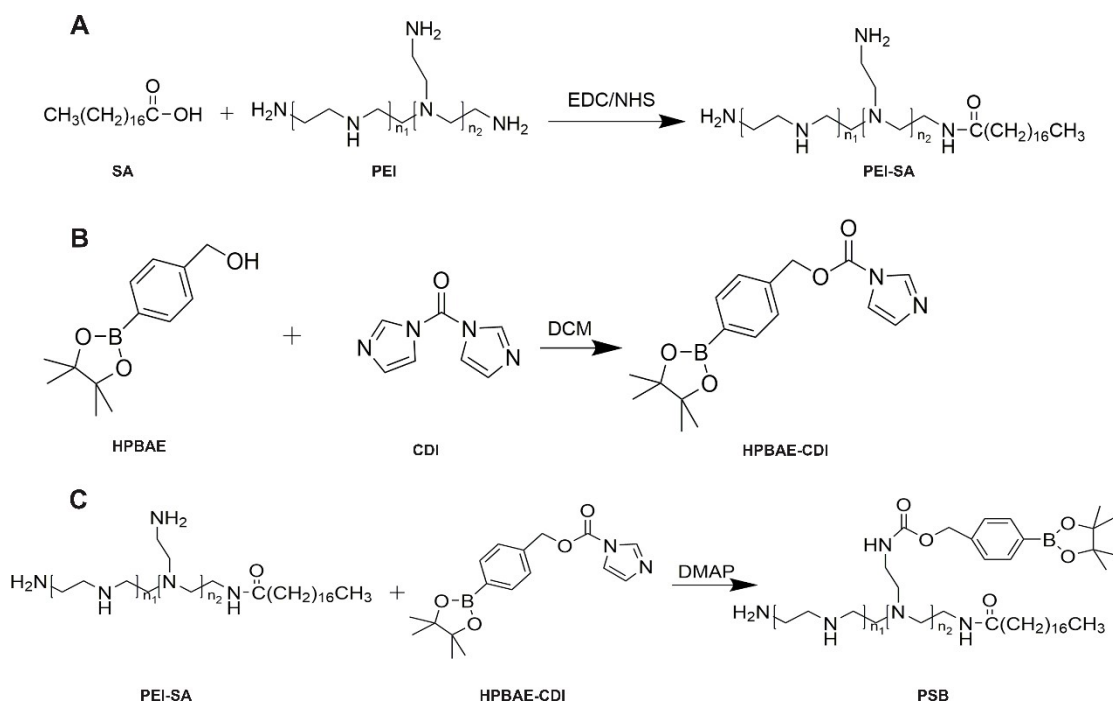
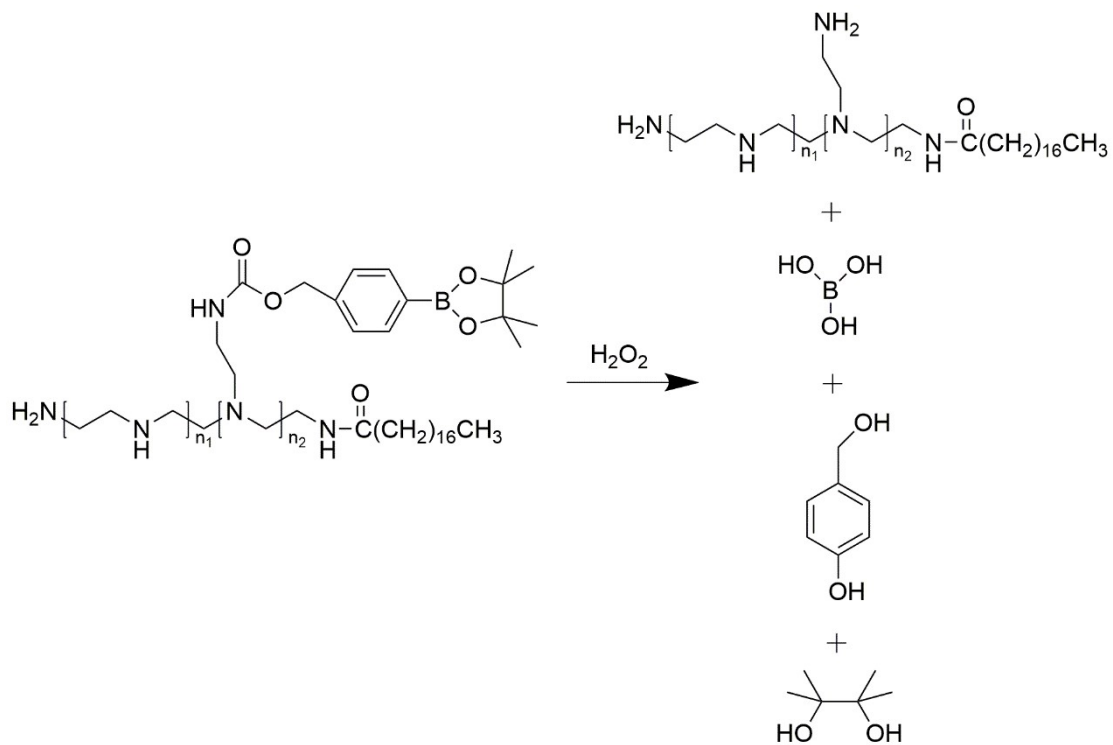


Supporting Information



Scheme S1. The synthesis routes of (A) PEI-SA, (B) HPBAE-CDI, and (C) PSB.



Scheme S2. Schematic diagram of PSB response to H_2O_2 cleavage.

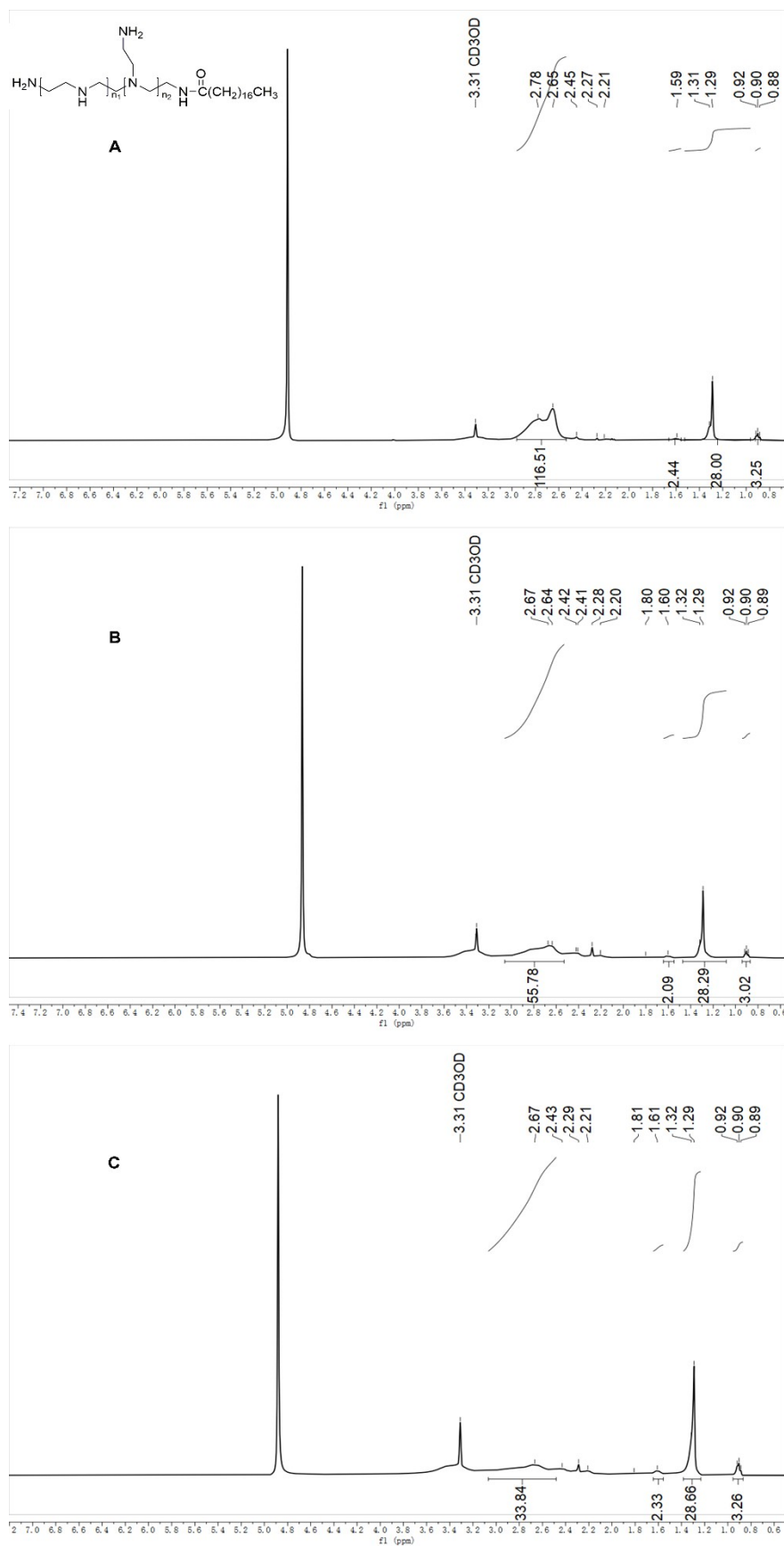


Figure S1. $^1\text{H-NMR}$ spectra (MeOD- d_4 , 400MHz) of PSB at PEI/SA molar ratios of

(A) 1.5:1, (B) 1:3, and (C) 1:4.

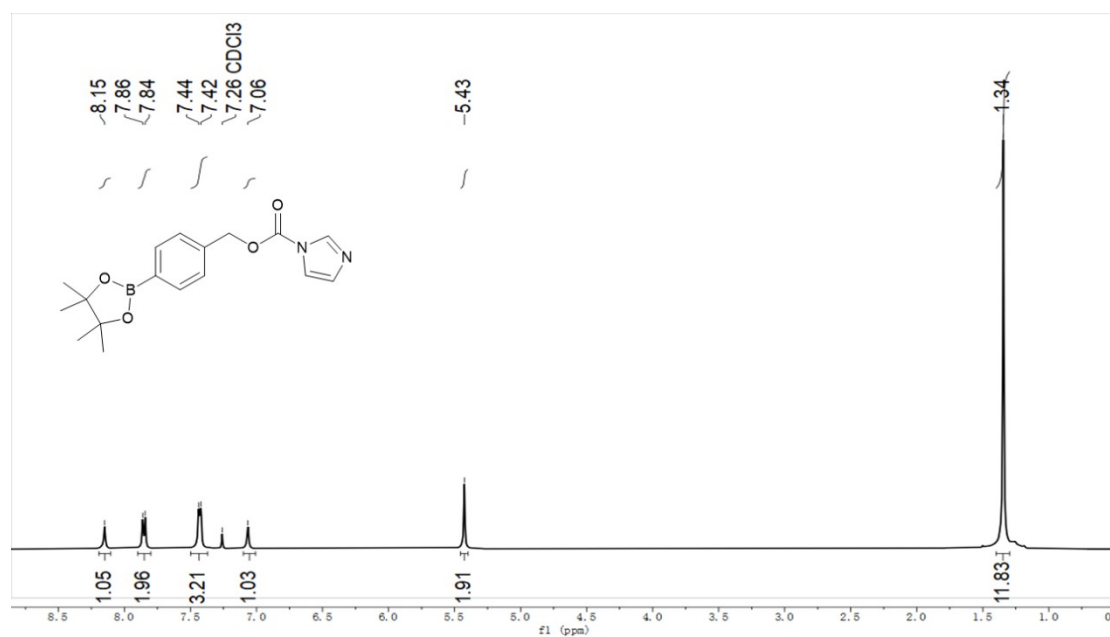


Figure S2. ¹H-NMR spectra (CDCl₃, 400MHz) of HPBAE-CDI.

Table S1. Characterization of Dex/PSB NPs prepared with different Dex/material mass ratio.

Dex/PSB(m/m)	Size (nm)	PDI	ζ potential	EE (%)	DL (%)
1/5	123.7 ± 5.1	0.22 ± 0.02	29.27 ± 0.64	67.09 ± 1.18	11.18 ± 0.20
1/10	138.7 ± 3.0	0.20 ± 0.02	29.23 ± 0.29	77.45 ± 0.17	7.04 ± 0.01
1/15	110.2 ± 2.1	0.25 ± 0.04	28.07 ± 1.94	62.43 ± 0.81	3.97 ± 0.05
1/20	169.5 ± 7.9	0.25 ± 0.01	29.03 ± 0.73	68.57 ± 3.37	3.26 ± 0.16

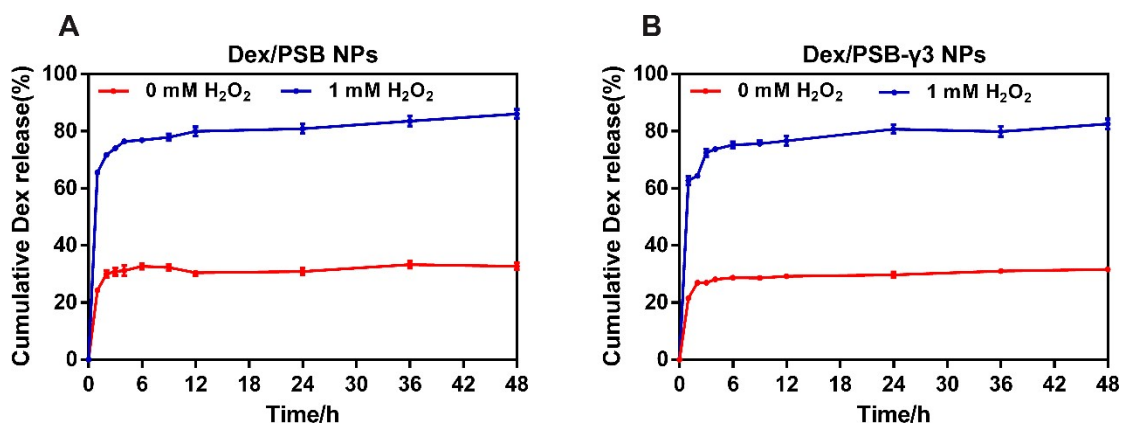


Figure S3. In vitro release curves of (A) Dex/PSB NPs, (B) Dex/PSB- γ 3 NPs incubated with H₂O₂ (0, 1 mM).

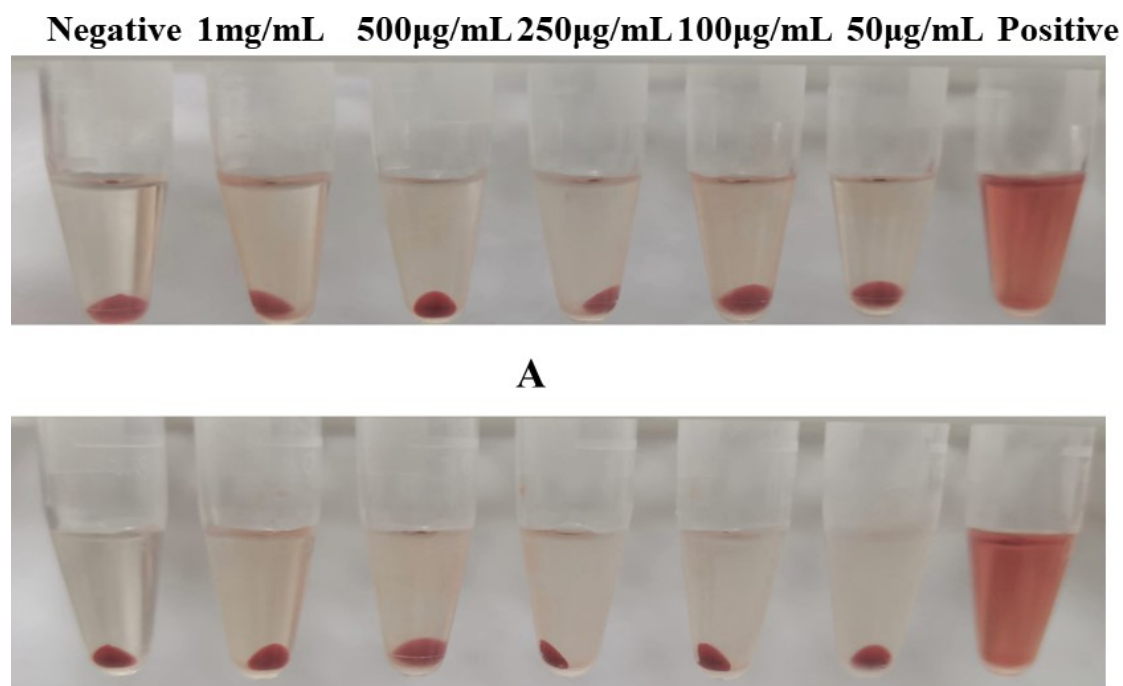


Figure S4. (A) Dex/PSB NPs, (B) Dex/PSB- γ 3 NPs representative images of hemocompatibility assay.

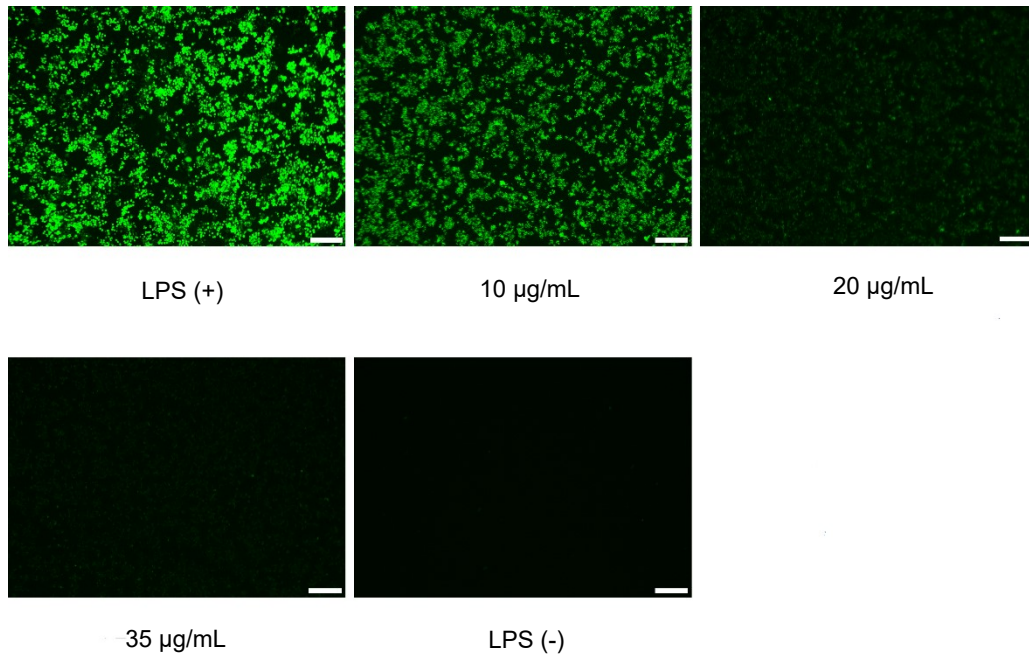


Figure S5. Representative fluorescent images of LPS-stimulated Raw 264.7 cells treated with different concentrations of Dex/PSB NPs. scale bar, 100 µm (n=3).

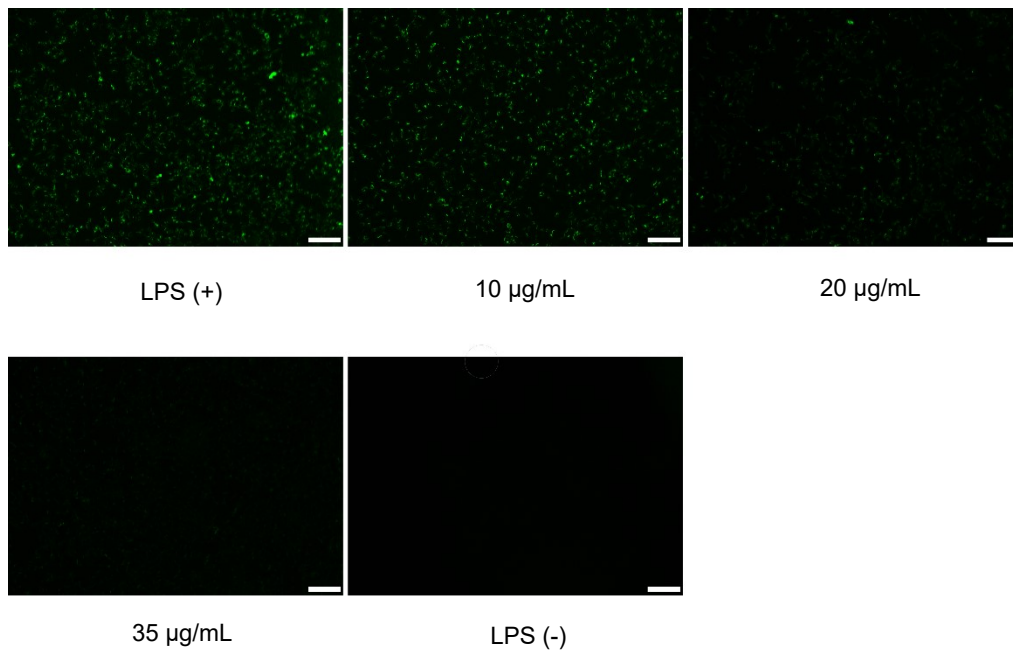


Figure S6. Representative fluorescent images of LPS-stimulated HUVEC cells treated with different concentrations of Dex/PSB NPs. scale bar, 100 µm (n=3).

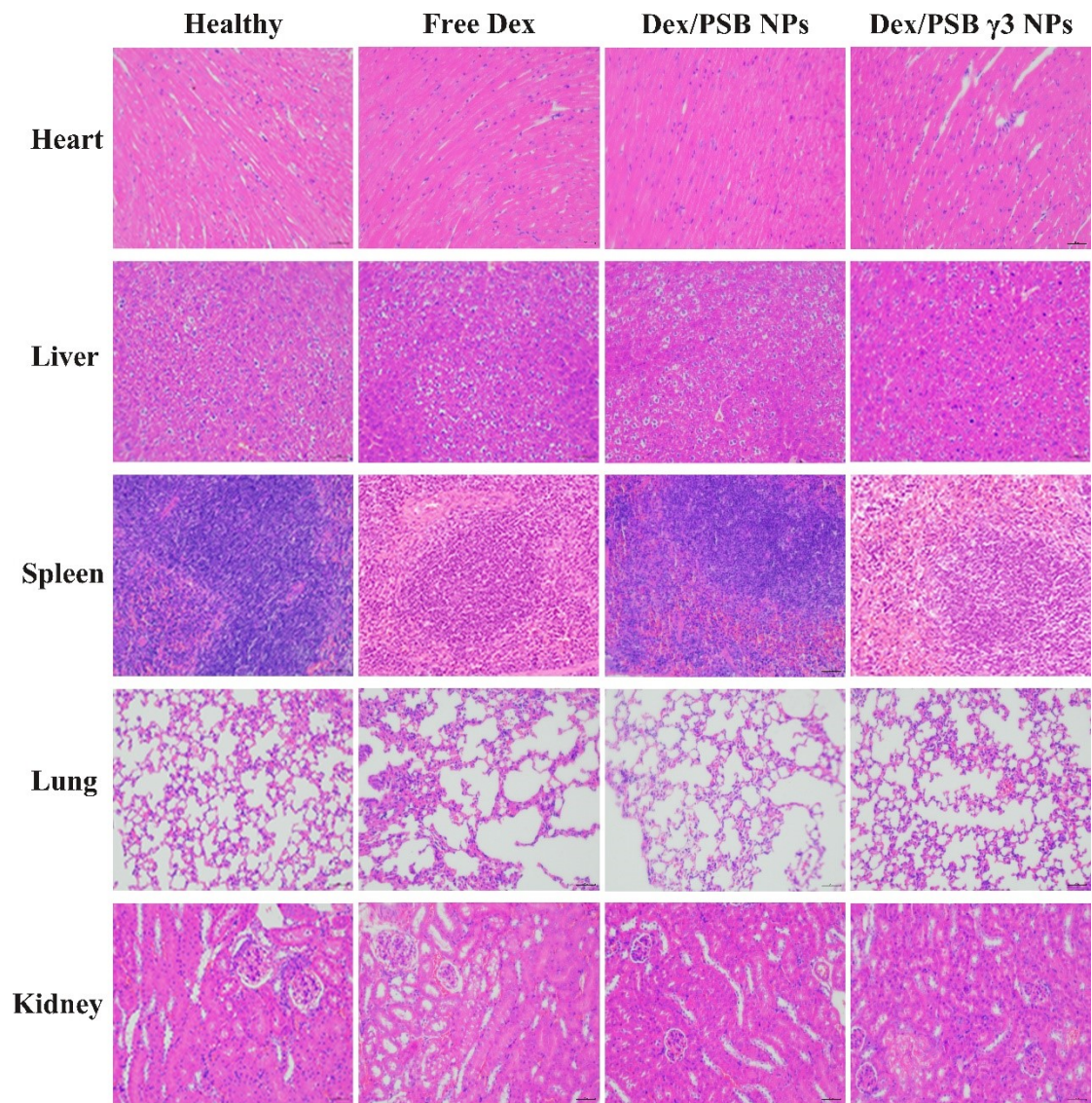


Figure S7. Representative images of organ tissue slices stained with H&E. Scale bar, 100 μ m.