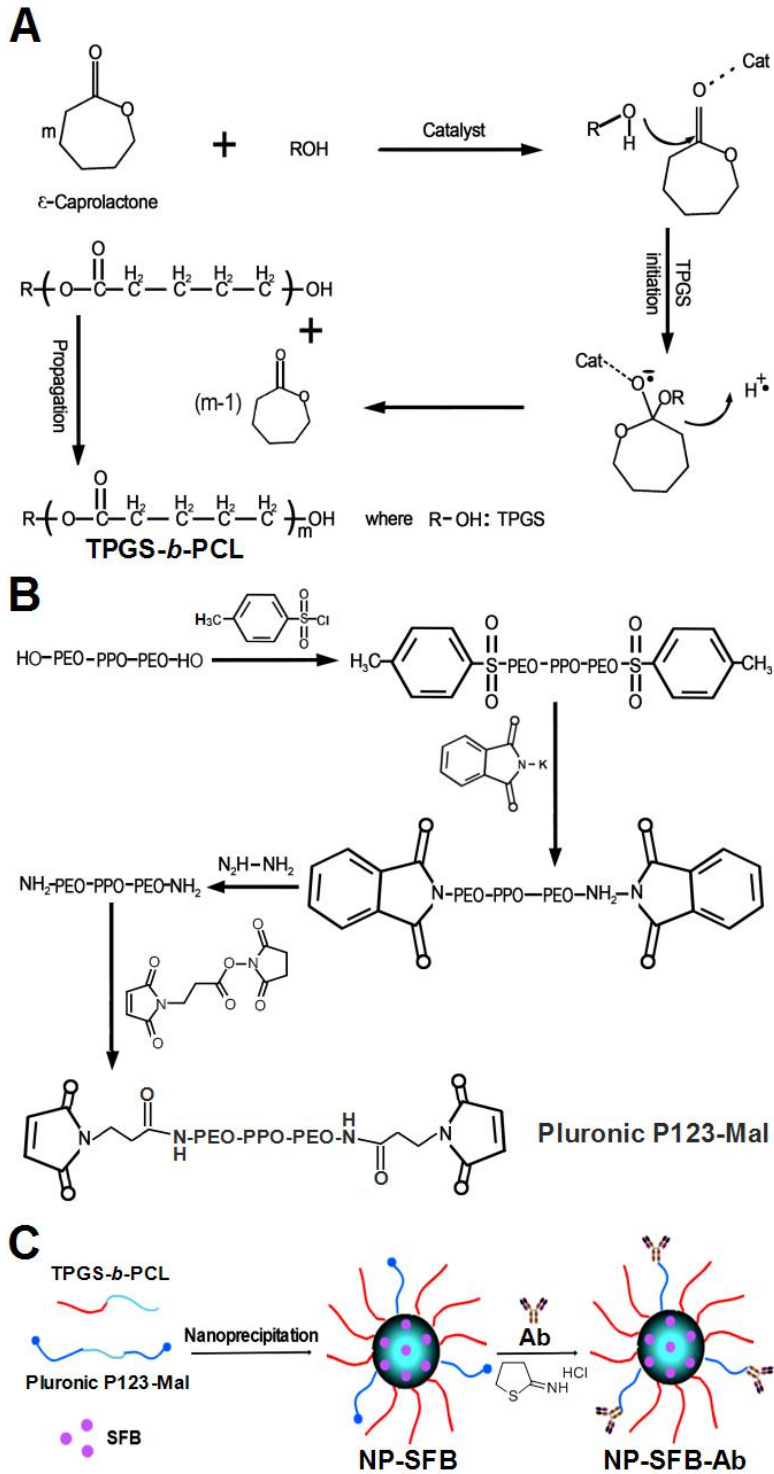


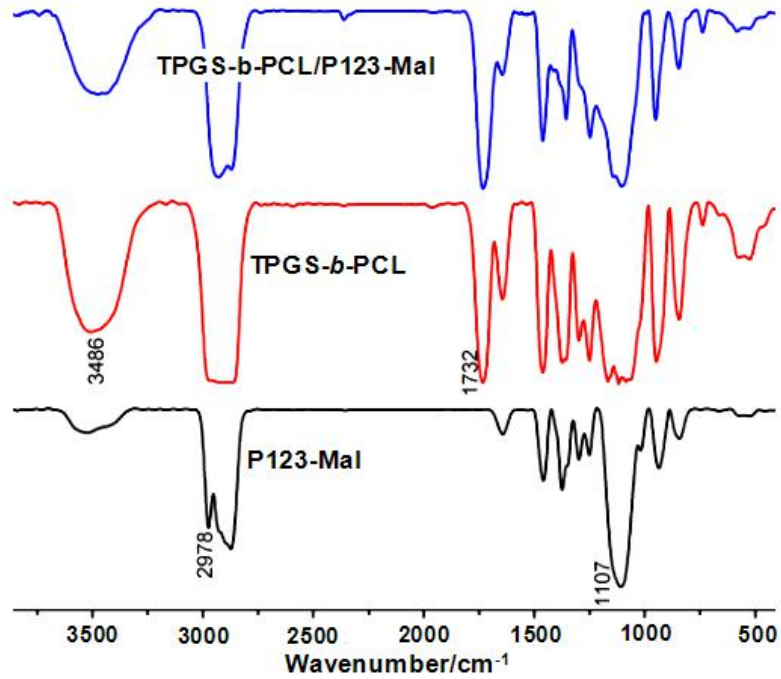
**Table 1S.** Characterization of SFB-loaded polymeric nanoparticles<sup>a</sup>.

NPs	D <sub>h</sub> (nm)	PDI	ZP (mV)	LC (%)	EE (%)
Null-NP	95.3 ± 7.3	0.22	-12.8 ± 0.6		
NP-SFB	102.3 ± 6.3	0.15	-14.1 ± 0.5	10.1	77.1
NP-SFB-Ab	115.1 ± 8.2	0.18	-15.3 ± 0.8	9.9	75.9

**Note:** D<sub>h</sub>, average hydrodynamic diameter; PDI, polydispersity index; ZP, zeta potential; NP, TPGS-b-PCL/P123-Mal nanoparticles; SFB, Sorafenib; LC, drug loading content; EE, drug encapsulation efficiency.

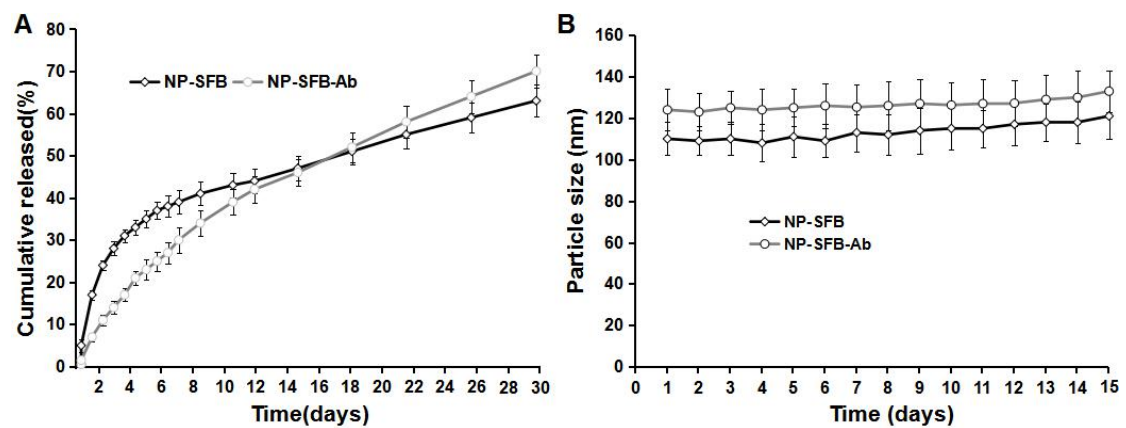


**Fig. 1S** Synthesis of TPGS-*b*-PCL (A), Pluronic P123-Mal (B) and NP-SFB-Ab(C).

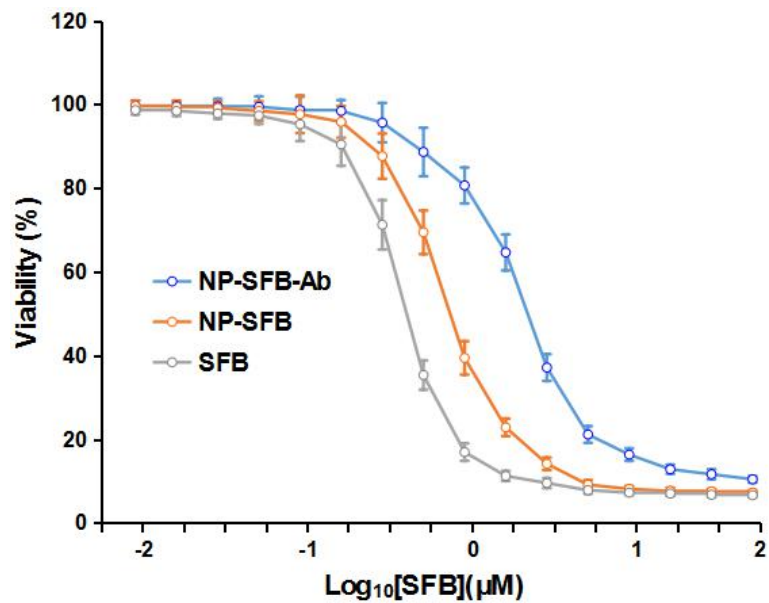


**Figure 2S** FTIR spectra of P123-Mal, TPGS-b-PCL and TPGS-b-PCL/P123-Mal copolymer.

**Abbreviations:** FTIR, Fourier transform infrared; PCL, poly( $\epsilon$ -caprolactone); TPGS, D- $\alpha$ -tocopheryl polyethylene glycol 1000 succinate.

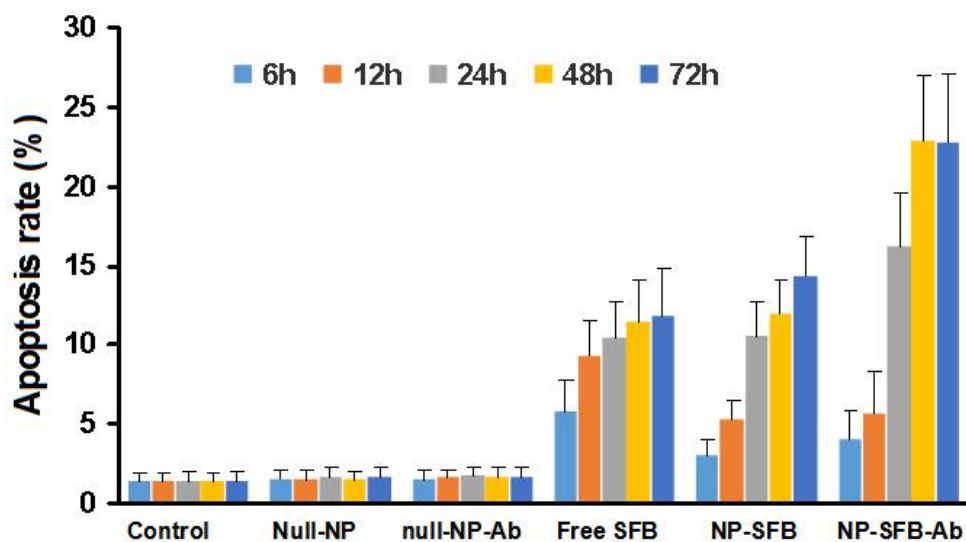


**Figure 3S.** Stability and drug cumulative release efficiency of drug-loaded nanoparticles. (A) Cumulative SFB release of NP-SFB and NP-SFB-Ab in cell medium over 30 days; (B) Size changes of NP-SFB and NP-SFB-Ab incubated in cell medium containing 10% FBS over 14 d.

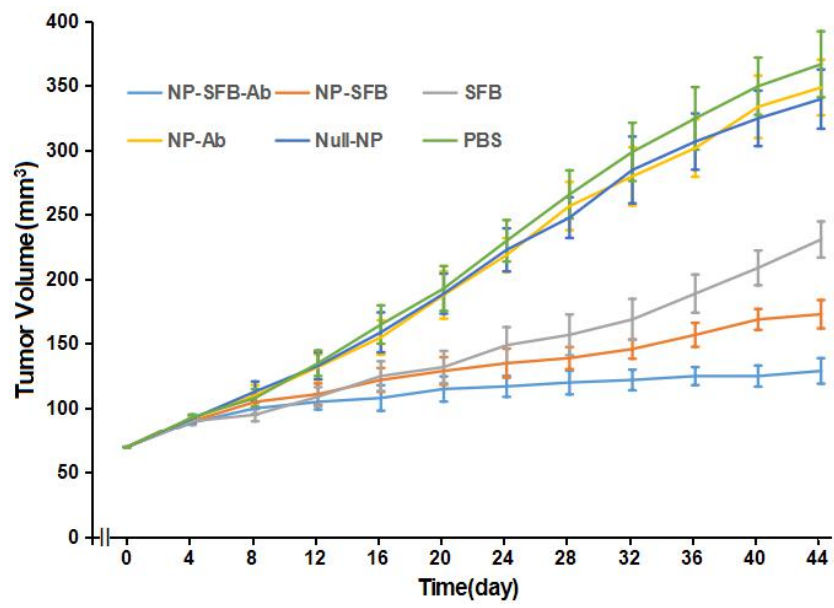


**Figure 4S** In vitro cytotoxicities of SFB-loaded formulations. Cytotoxicity of free SFB and SFB-loaded formulations against EaHy926 cells with the MTT assay. Data from three independent experiments were expressed as mean  $\pm$  SEM (n=3).

**Abbreviations:** MTT, 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide; SFB, Sorafenib.



**Figure 5S** Cell apoptosis rate of HepG2 cells treated by different drug.



**Figure.6S** Antitumor efficacy of NP-SFB-Ab upon HepG2 xenograft-bearing nude mice.