Electronic Supplementary Information (ESI)

for

Functional block copolymer nanocarriers for anticancer drug delivery †

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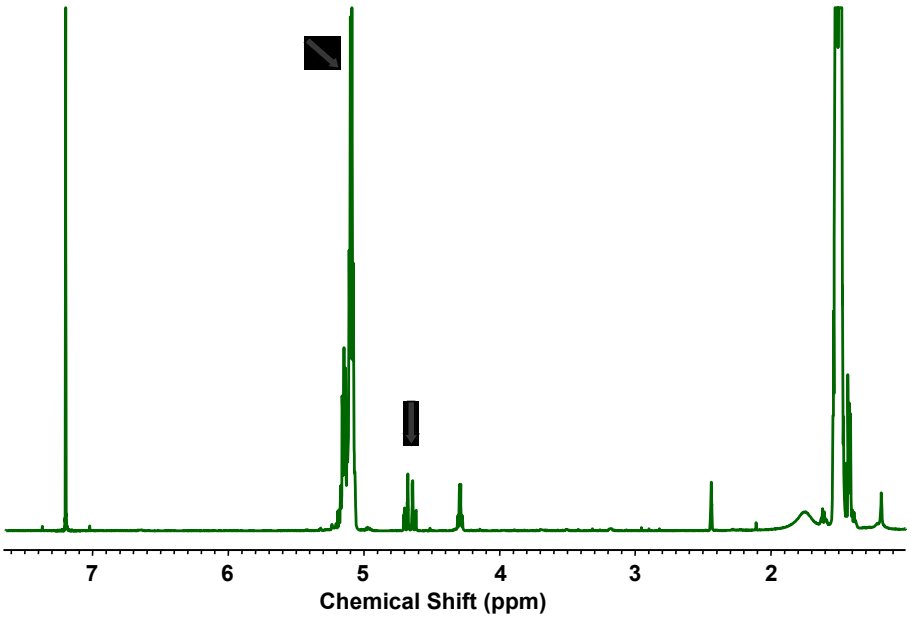

Fig. S1 ^{1}H NMR (600 MHz) spectrum in $CDCl_3$ of alkyne end-functionalized poly(D,L-lactide) (A-PLA-OH).

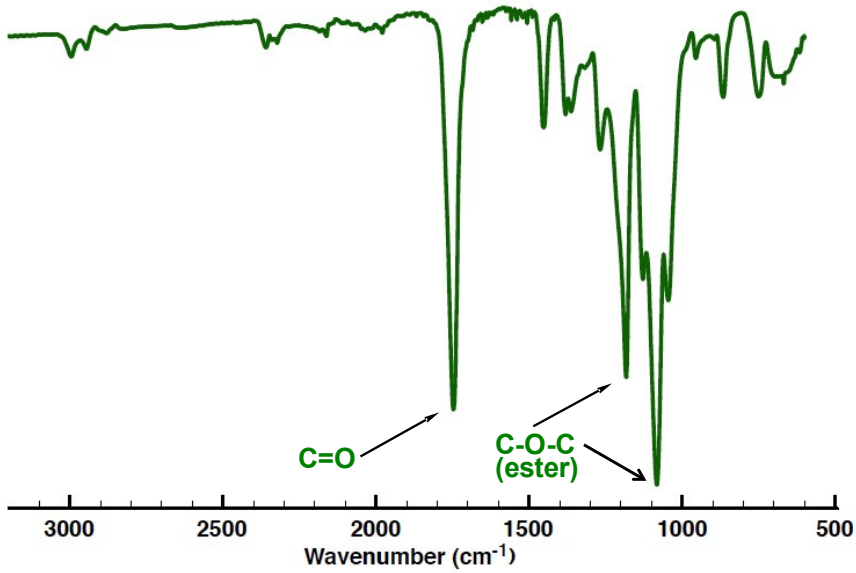

Fig. S2 FTIR spectrum of alkyne end-functionalized poly(D,L-lactide) (A-PLA-OH).

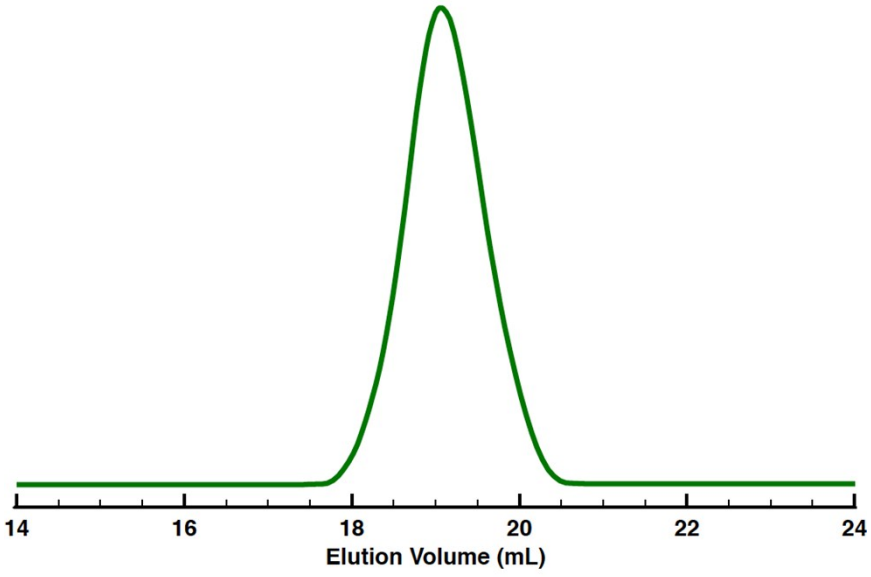

Fig. S3 GPC elugram of poly(D,L-lactide) (A-PLA-OH) in THF (M_n = 3900 g mol^{-1}, $Đ_M$ = 1.18, *vs.* polystyrene standards).

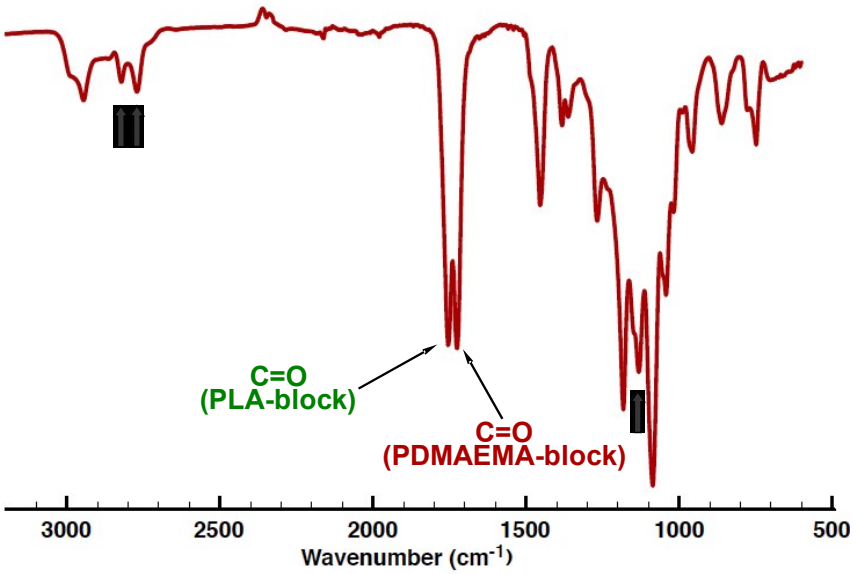

Fig. S4 FTIR spectrum of the amphiphilic diblock copolymer A-PLA-b-PDMAEMA.

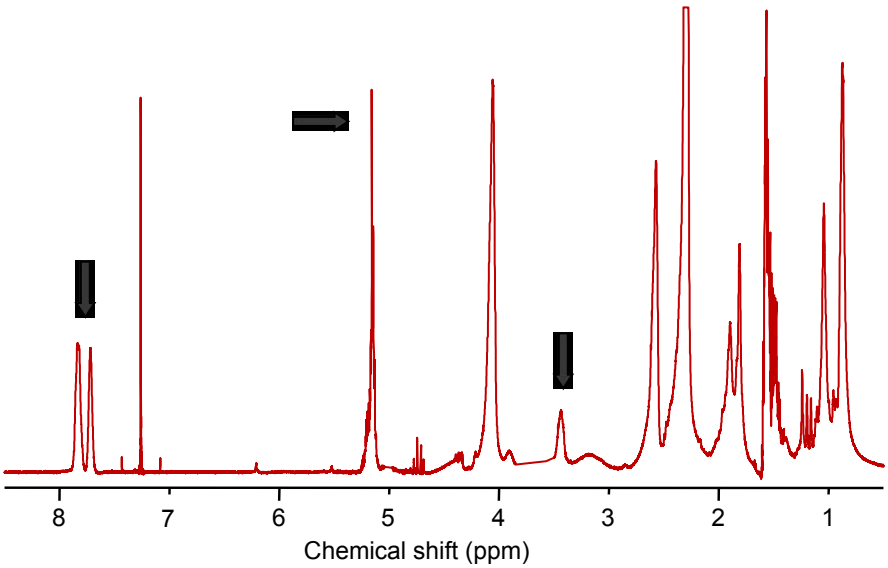

Fig. S5 ^{1}H NMR (600 MHz) spectrum in $CDCl_3$ of triphenylphosphonium-modified block copolymer (A-PLA-b-PDMAEMA-TPP^{+}).

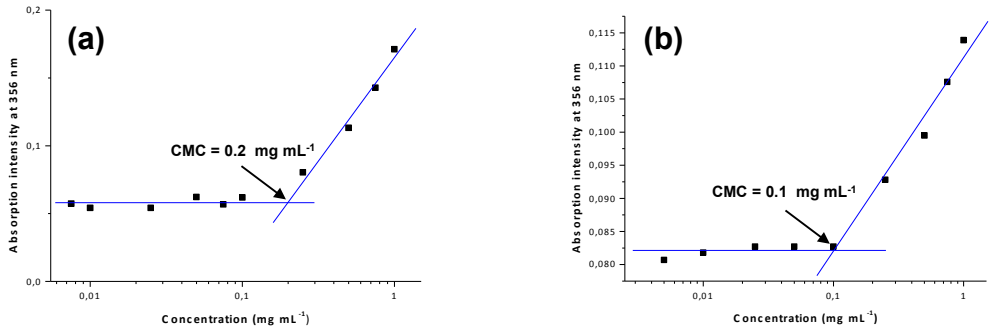

Fig. S6 Effect of triphenylphosphonium-modified block copolymers (A-PLA-b-PDMAEMA-TPP$^+$) concentration on the absorption intensity of DPH at 356 nm in aqueous media for: (a) A-PLA$_{10}$-b-PDMAEMA$_{19}$-TPP$^+$ (copolymer B1), and (b) A-PLA$_{19}$-b-PDMAEMA$_{26}$-TPP$^+$ (copolymer B2).

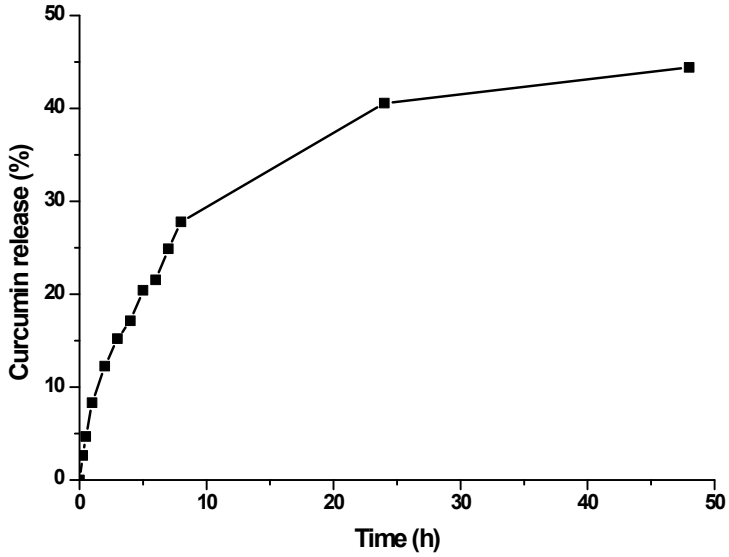

Fig. S7 *In vitro* curcumin release from A-PLA$_{19}$-*b*-PDMAEMA$_{26}$-TPP$^+$ (B2) copolymer micelles in aqueus media against chloroform at 37 ^{o}C.

Table S1 Characteristics of functional block copolymer (B1 and B2) micelles.

code	M_n (g mol^{-1})		CMC (mg mL^{-1})	average diameter (nm)		PdI	DLE (wt%)	DLC (wt%)
	PLA-block	PDMAEMA-block		DLS	TEM			
B1	1 440	3 000	0.2	165	187	0.079	94	9.4
B2	2 800	4 100	0.1	76	84	0.270	98	9.8