SUPPORTING INFORMATION

Biodegradable STING agonist nanoparticles for enhanced cancer immunotherapy

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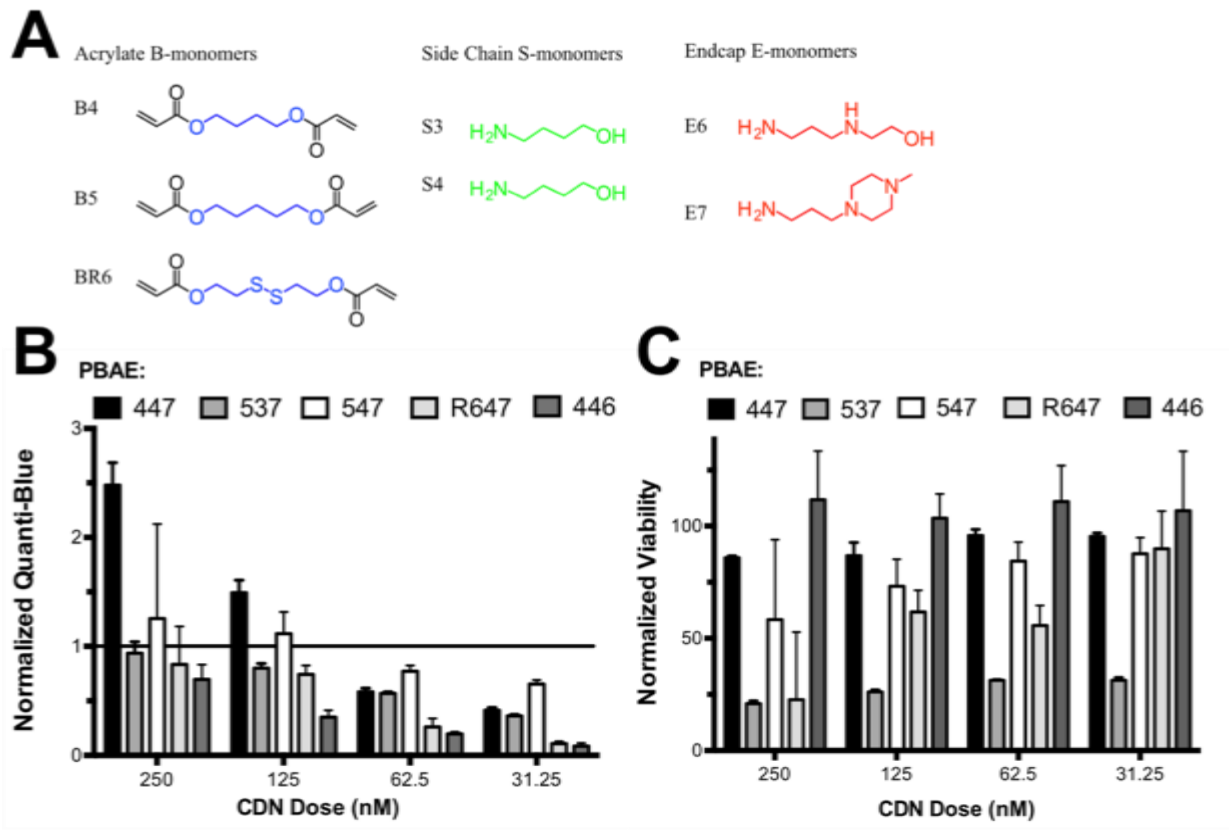
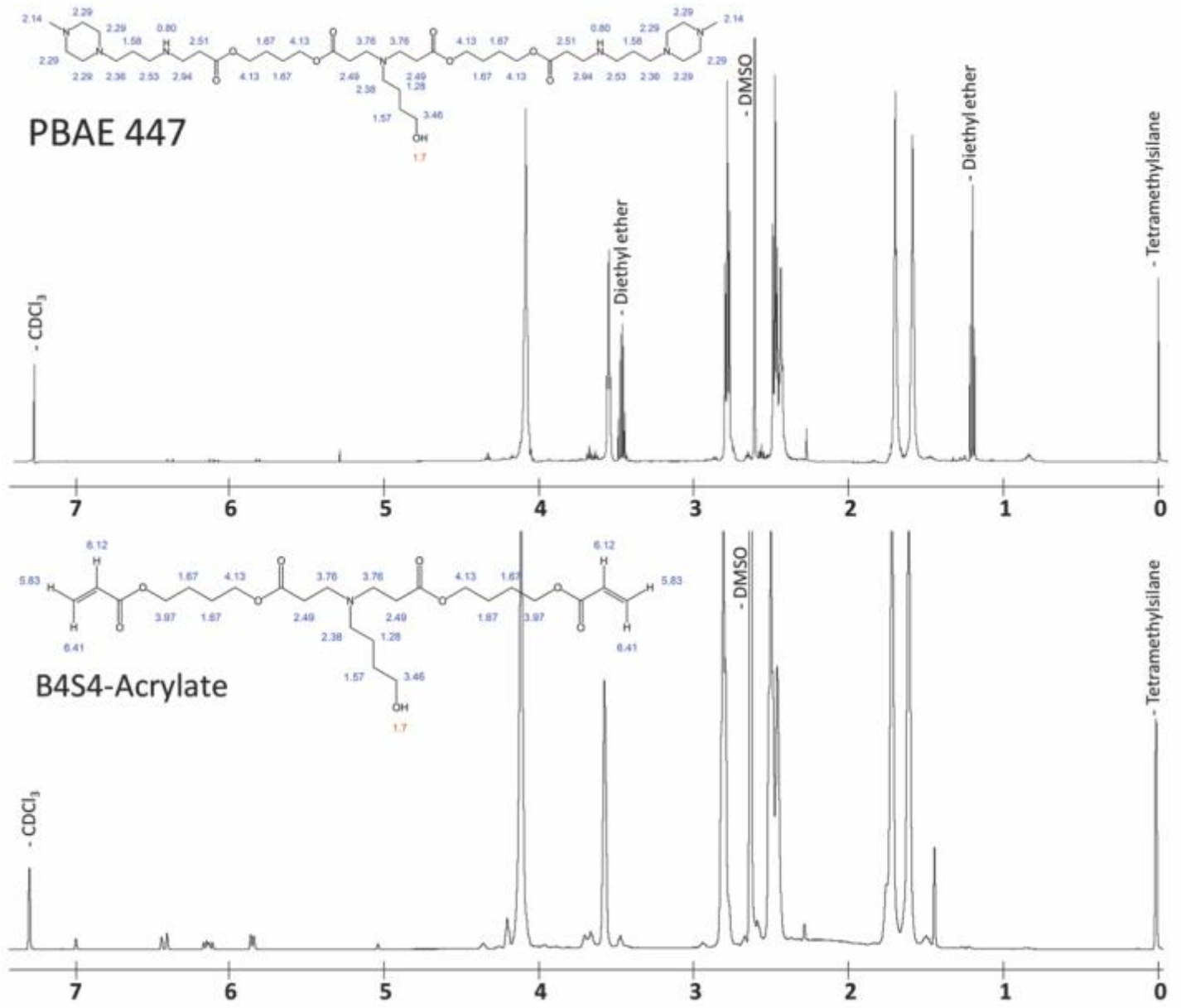
Supplementary Table 1: Monomer sources

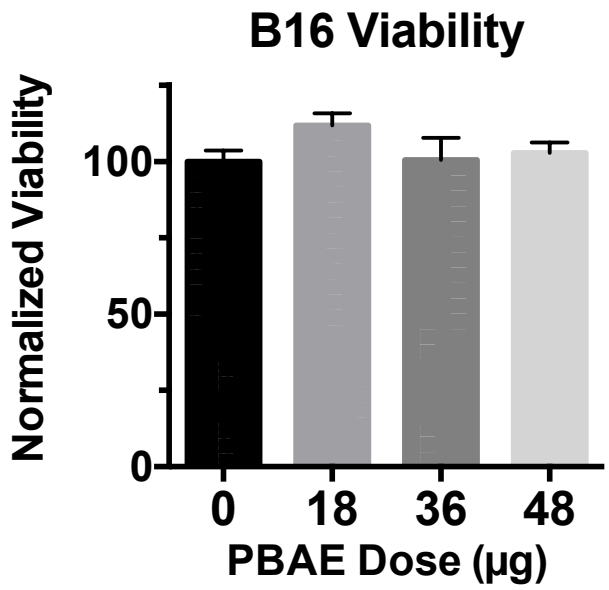
Monomer	Chemical Name	CAS number	Supplier	Product #	MW
B4	1,4-Butanediol diacrylate	1070-70-8	Alfa Aesar	32780	198.22
B5	1,5-Pentanediol diacrylate	36840-85-4	Monomer-Polymer and Dajac Labs	9281	212.24
BR6	2,2-disulfanediylbis(ethane-2,1-diyl) diacrylate	Synthesized according to Kozielski *et al.*[1]			262.34
S3	3-amino-1-propanol	156-87-6	Alfa Aesar	B23041	75.11
S4	4-amino-1-butanol	13325-10-05	Alfa Aesar	A12680	89.14
E6	2-(3-Aminopropylamino)ethanol	4461-39-6	Sigma Aldrich	9293	118.18
E7	1-(3-Aminopropyl)-4-methylpiperazine	4572-031	Alfa Aesar	L04876	157.26



Supplementary Figure 1. (A) Monomers used for PBAE synthesis of structures tested for CDN delivery. PBAE structures were screened for their ability to (B) induce IRF3 response in THP1-Blue cells with delivery of RR-CDG with (C) minimal toxicity assessed by MTT cell metabolic activity assay. CDN dose was titrated, while PBAE dose remained constant between conditions at 15 µg/well. PBAE 447 was selected as most effective at the doses tested. Bars show mean ± SEM of three wells.



Supplementary Figure 2. PBAE polymer 447 and PBAE B4S4-Acrylate ^{1}H NMR in $CDCl_3$ was used to verify polymer structure and estimate M_N to be 7 kDa. The mean repeat unit (MW = 287.36 g/mol) was determined to be 23 using the ratio of area between peaks for the endcap secondary amine hydrogen at 0.81 ppm and the hydrogens of the α-carbons of the B repeat units at 4.08 ppm. The peak and satellites at 2.60 ppm were due to DMSO contamination following isolation of the polymer from a DMSO stock.



Supplementary Figure 3. B16 viability following nanoparticle treatment. The nanoparticle formulation of RR-CDG+PBAE 447 at a 500 w/w ratio was shown not to have any effect on B16 cells viability at doses almost 2.5x greater than those used with THP1-Blue cells for immunostimulatory studies.

1. Kozielski KL, SY Tzeng and JJ Green, **A bioreducible linear poly(β-amino ester) for siRNA delivery**. *Chemical communications (Cambridge, England)*. 2013;49:5319-21