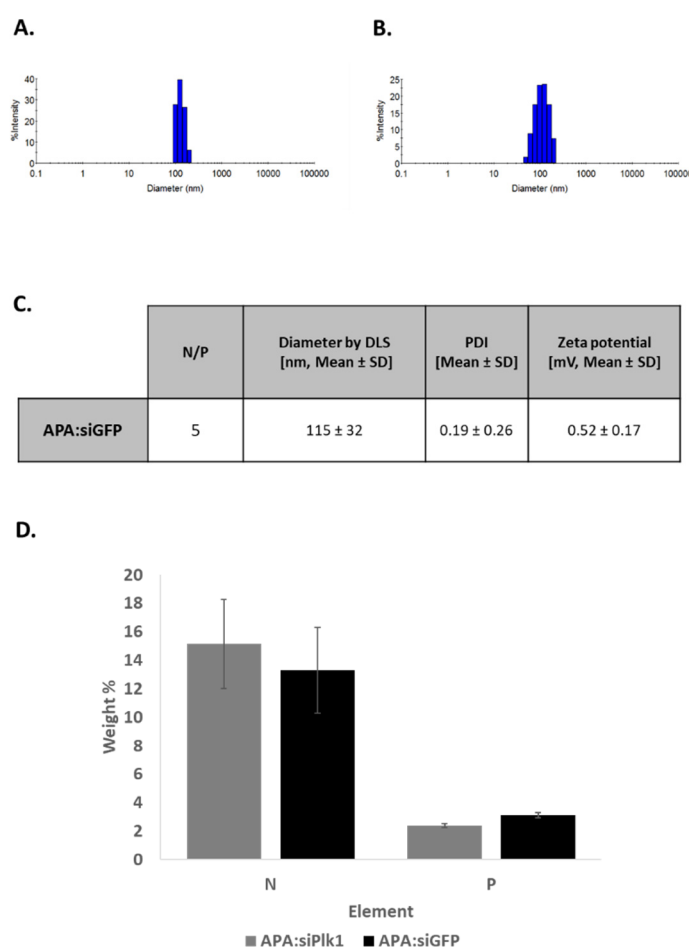
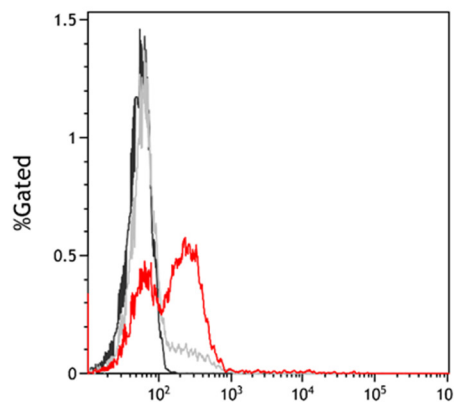





# Supplementary Materials: Sulfonated Amphiphilic Poly( $\alpha$ )glutamate Amine—A Potential siRNA Nanocarrier for the Treatment of Both Chemo-Sensitive and Chemo-Resistant Glioblastoma Tumors

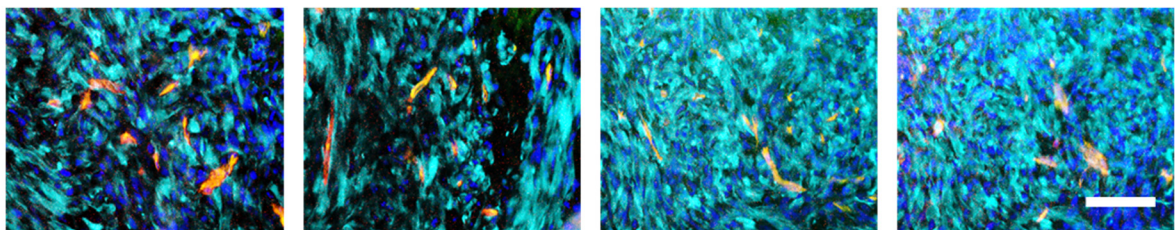
Adva Krivitsky, Sabina Pozzi, Eilam Yeini, Sahar Israeli Dangoor, Tal Zur, Sapir Golan, Vadim Krivitsky, Nitzan Albeck, Evgeny Pisarevsky, Paula Ofek, Asaf Madi and Ronit Satchi-Fainaro



**Figure S1. Physicochemical characteristics of APA:siGFP polyplexes.** (A). APA:siPlk1 and (B). APA:siGFP representative histogram of the main population of polyplexes as obtained by Mobius DLS instrument. (C). A Table summarizing the hydrodynamic diameter, polydispersity index (PDI) and zeta potential of the main population of polyplexes, as obtained by Mobius and PALS instruments. (D). Elemental analysis demonstrating the weight percent of nitrogen (N) and Phosphorus (P) of dry samples of APA:siPlk and APA:siGFP polyplexes, as obtained by Energy-Dispersive X-Ray Spectroscopy (EDS) analysis.

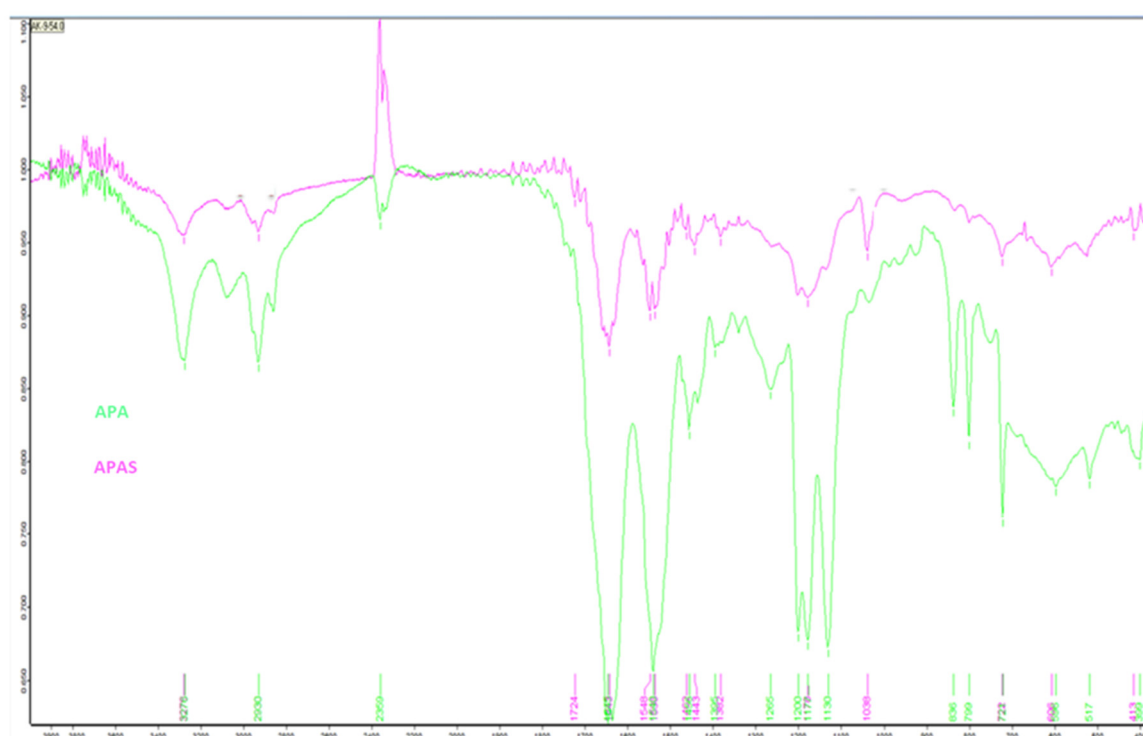
**A.**

		% positive	X-Median
	Unstained	1	55
	2D U251	12	65
	3D U251	56	164

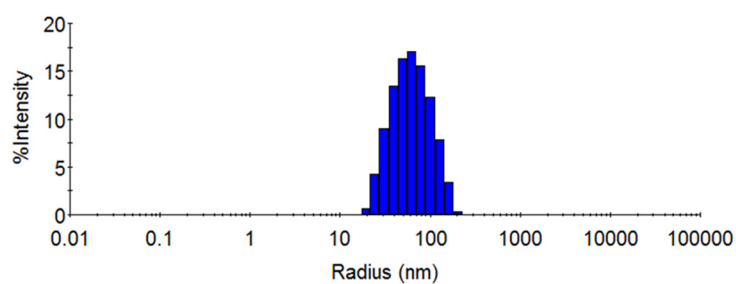
**B.**

U251 CD31 SELP DAPI

**Figure S2. SELP is overexpressed on GB cells and tumor endothelial cells in GB spheroids and *in vivo*.** (A). High expression of SELP on U251 spheroids (3D) compared with tissue culture (2D) as obtained by fluorescence-activated cell sorting (FACS). (B). Co-localization of SELP with CD31 in U251 intracranial tumors (scale= 100  $\mu$ m).

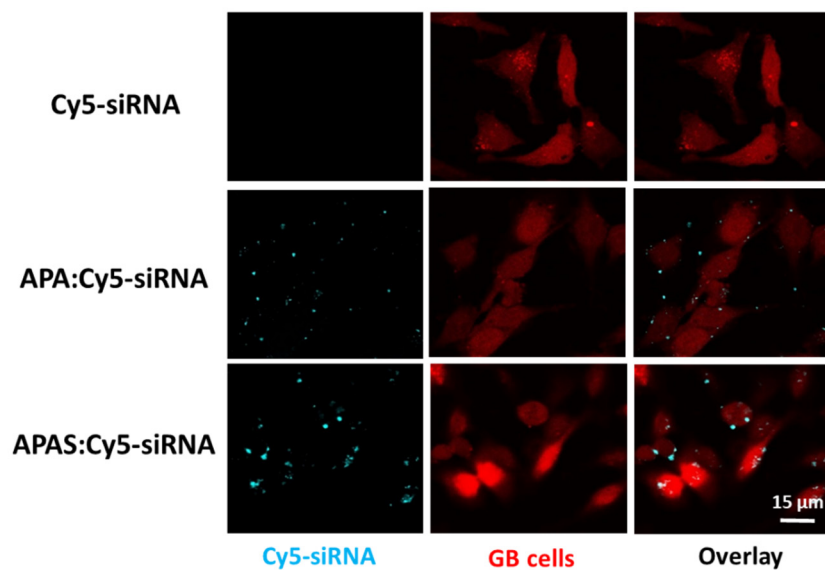


**Figure S3.** IR spectrum of APA and APAS.

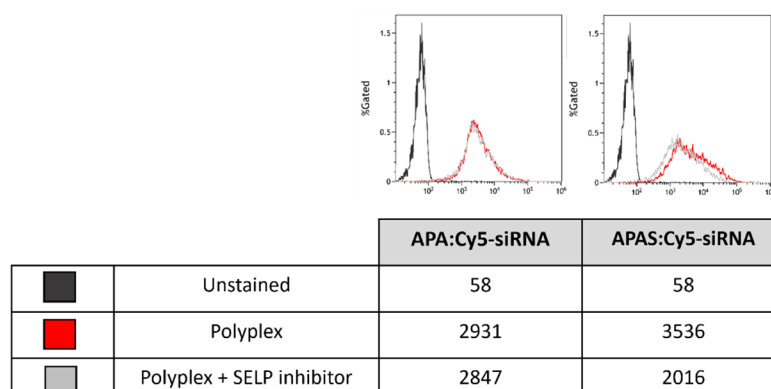


**Figure S4.** APAS:siPlk1 representative histogram of the main population of polyplexes as obtained by Möbius™ DLS instrument.

A.



B.



**Figure S5. Sulfonate-mediated cell internalization via SELP.** (A). Sulfonate modification enhanced the internalization of Cy5-siRNA carrying polyplexes into U251 cells. (B). Inhibition of SELP reduced internalization of APAS: Cy5-siRNA polyplexes into GL261 spheroids, but did not alter the internalization of APA: Cy5-siRNA polyplexes, as obtained by FACS.