Electronic Supplementary Information

Targeted Multicomponent Polysomes for High Efficiency, Simultaneous Anti-sense and Gene Delivery.

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Supplementary Figures and Tables

Table S1. Measured and calculated values for determination of the RNA and DNA amount bound to the MCPs

MCPs at different steps	A= OD_{260}	B (Abs. due to dil.)= A/dil. Factor 2	C= Abs. difference at OD_{260} = A-B	G=calculated conc. in CPs: DNA=A*50; RNA=C*40; (µg/mL) (± SD)	H= Added nucleic acid conc. (µg/mL)	Uploading efficiency=H*100 /G (%)
Cp53	0.677± 0.12	0.3385		33.85±6	50	67.7
iMCp53	0.924± 0.14		0.5855	23.42±5.6	135.7	17.31

In table S1 the values for OD for the plasmid (Cp53; dsDNA) and the siRNA containing iMCp53 were determine by from UV-Vis spectroscopy at 260 nm absorption wavelength which is specific for the nucleic acids and it is tagged with A. B is the OD after considering that by mixing the same volume of condensed plasmid with the RNA solution we introduce a dilution factor of 2. Chitosan has no absorption at 260 nm. Hence we can assume that the additional absorption for the iMCp53 is coming exclusively from the siRNA. C is the difference of A and B, hence the signal coming from the RNA. G is finally the calculation of the amount by considering the OD_{260}=1 for 50 µg/ml dsDNA and 40 µg/ml RNA.[2] H is the concentration of added nucleic acids. With the initial amount of nucleic acids (H) and the amount of nucleic acids (G) bound to the surface and into the core of MCPs we calculated the uploading efficiency of the particles.

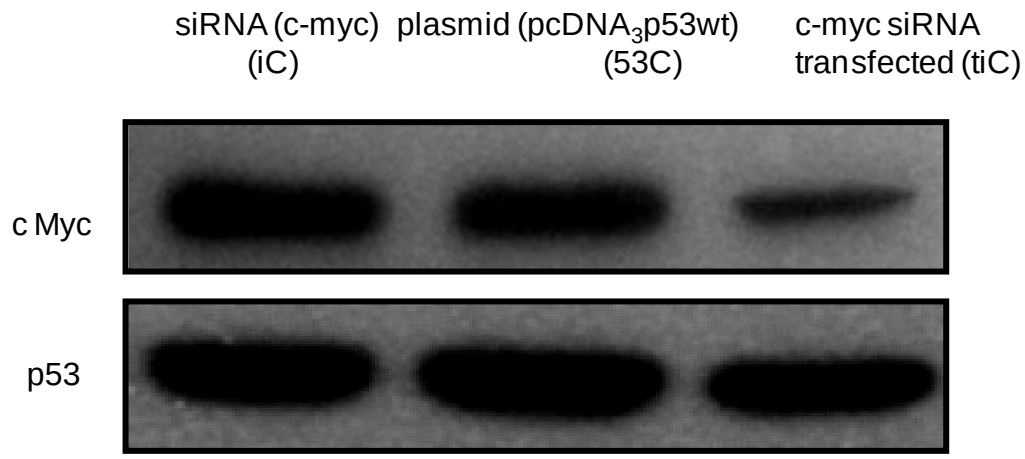

Figure S1. Representative western blot results of the respective protein expression after treatment with c-myc siRNA (iC) alone, pcDNA$_3$p53wt plasmid (53C) alone and transfected with siRNA-Lipofectamine 2000 against *c-myc* mRNA (tiC) in MDA MB 231cells as a control. The total cellular proteins were extracted and the protein band was determined by western blot.

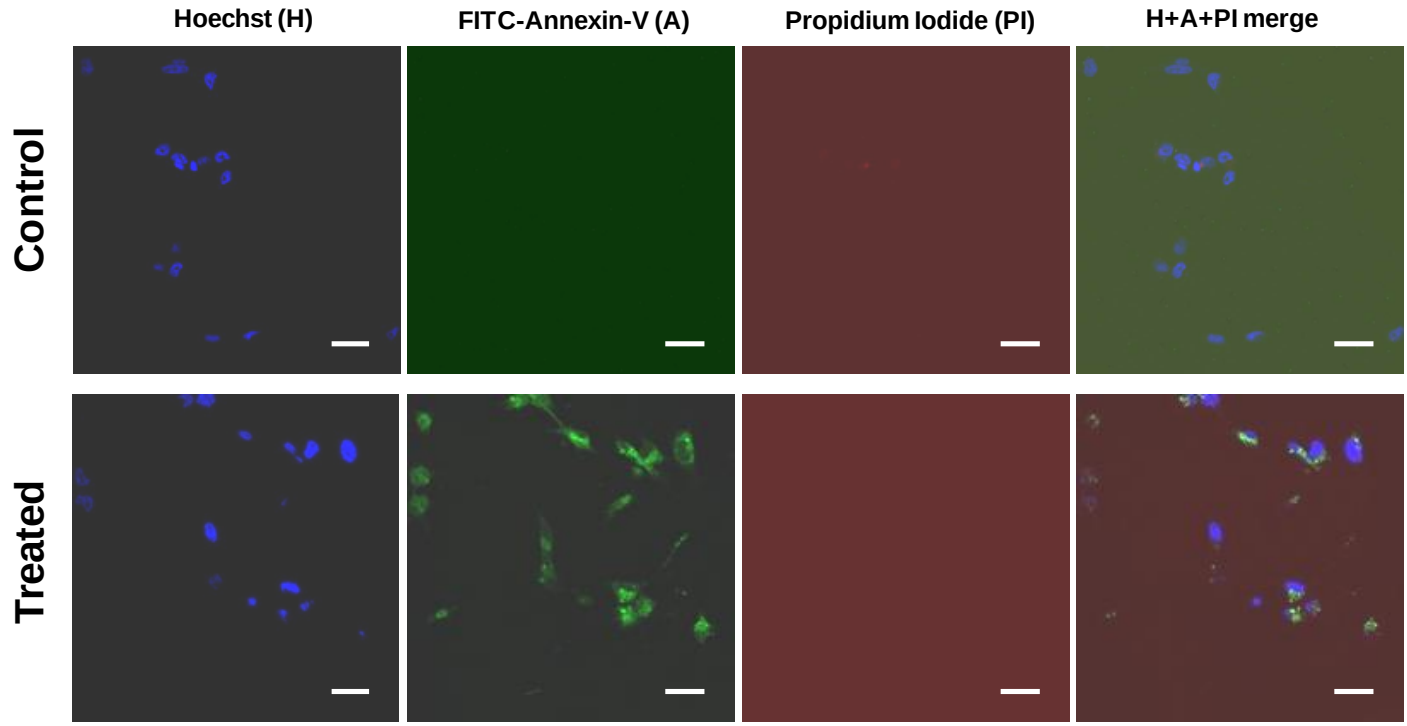

Figure S2. Immuno-fluorescence images of Annexin-V/PI co-staining to determine the apoptotic status of control (untreated) and [Fo-P^{3}iMCp53] MCP treated MDA MB231 cells. The scale bar indicates 20μm. FITC-labeled Annexin-V (green) indicates early apoptosis, PI stains late apoptotic and necrotic cells (red) and the nucleus is stained with Hoechst-33342 (blue).