Electronic Supplementary Material (ESI) for RSC Advances.

SUPPORTING INFORMATION

Enhanced Antitumor Activity of Carbendazim on HeLa Cervical Cancer Cells by Aptamer Mediated Controlled Release

Bilge G. Tuna,*[a] Pinar B. Atalay, [b] Gamze Kuku, [c] E. Esma Acar, [d] H. Kubra Kara,[d] M. Deniz Yilmaz,[d] and V. Cengiz Ozalp*[d]

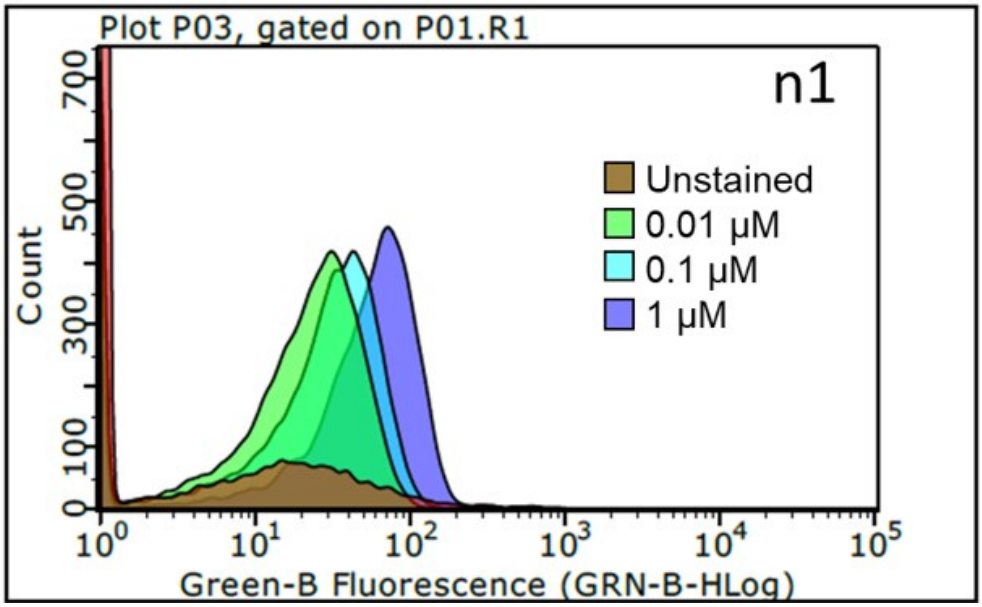

Fig. S1. Targeting analysis of fluorescein labelled nucleolin binding aptamers (FL-AS1411) to HeLa cells analysed by Flow Cytometry.The original anti-nucleolin aptamer sequence is a 26 base long guanine-rich oligonucleotide and reported to target cell surface nucleolin protein.

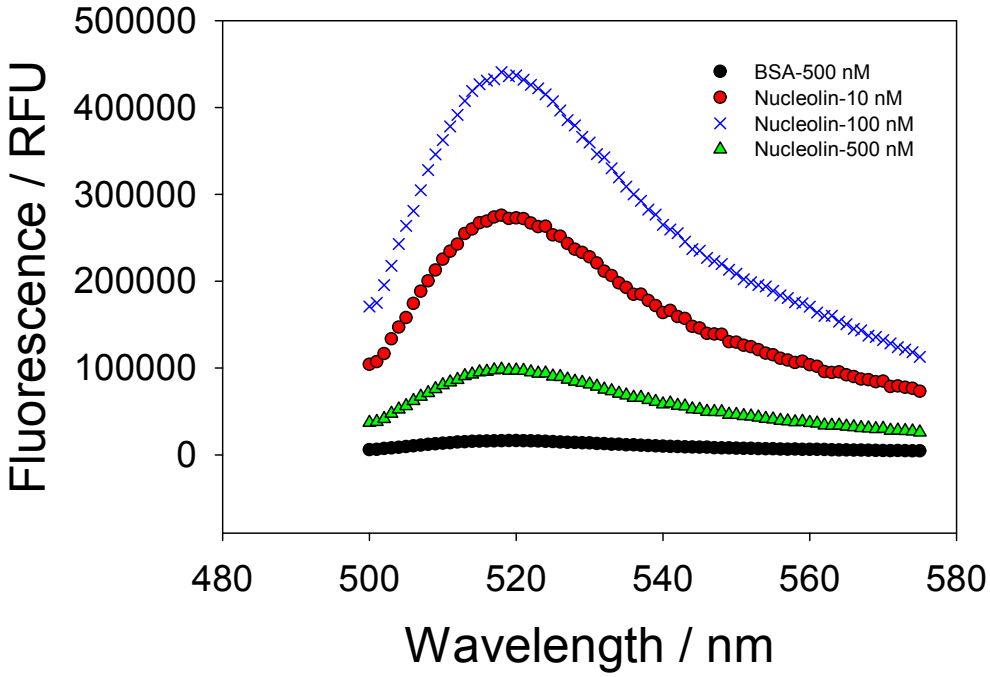

Fig. S2. FRET analysis of the anti-nucleolin aptamer gate structure for addition of nucleolin protein at 10, 100 and 500 nM Bovin Serum Albumin (BSA) at 500 nM was used as control for selectivity of the gate structure. FRET probe was designed with a fluorophore (Alexa Fluor 488) and quencher (Black Hole 1) covalently attached at the two ends of the nucleolin aptamer gate sequence (CCA CCA CGG TGG TGG TGG TTG TGG TGC GTG GTG G). Emission spectra was recorded for λex. at G 480 nm, The y-axis is fluorescence at arbitrary units as measured by Mithras^2 LB 943 microplate reader (Berthold Technologies GmbH & co KG, Germany).

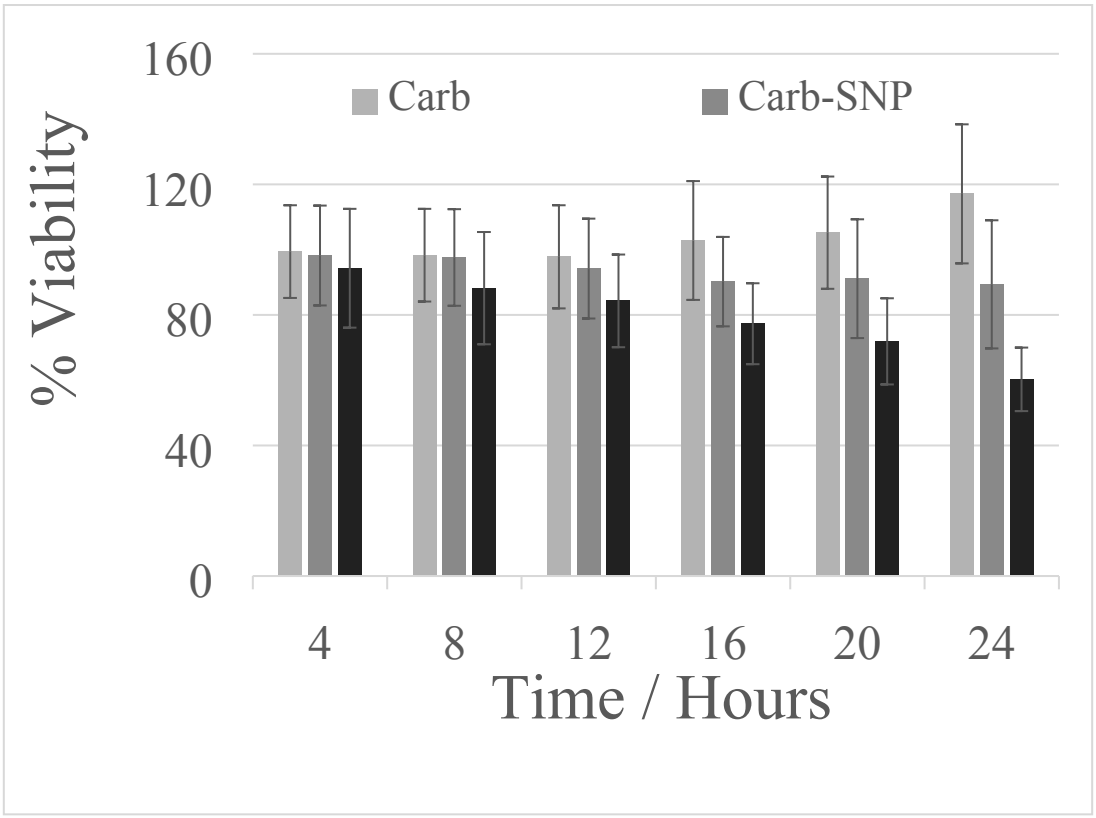

Fig. S3. Time-course analysis for CCK-8 assay results of HeLa cells incubated with 60 μM Carbendazim (Carb) or carbendazim loaded Silica nanoparticles (Carb-SNPs) and carbendazim loaded aptamer conjugated silica nanoparticles (Carb-Apt-SNPs) adjusted to release indicated amounts of carbendazim. Error bars represent mean ± standard deviation.

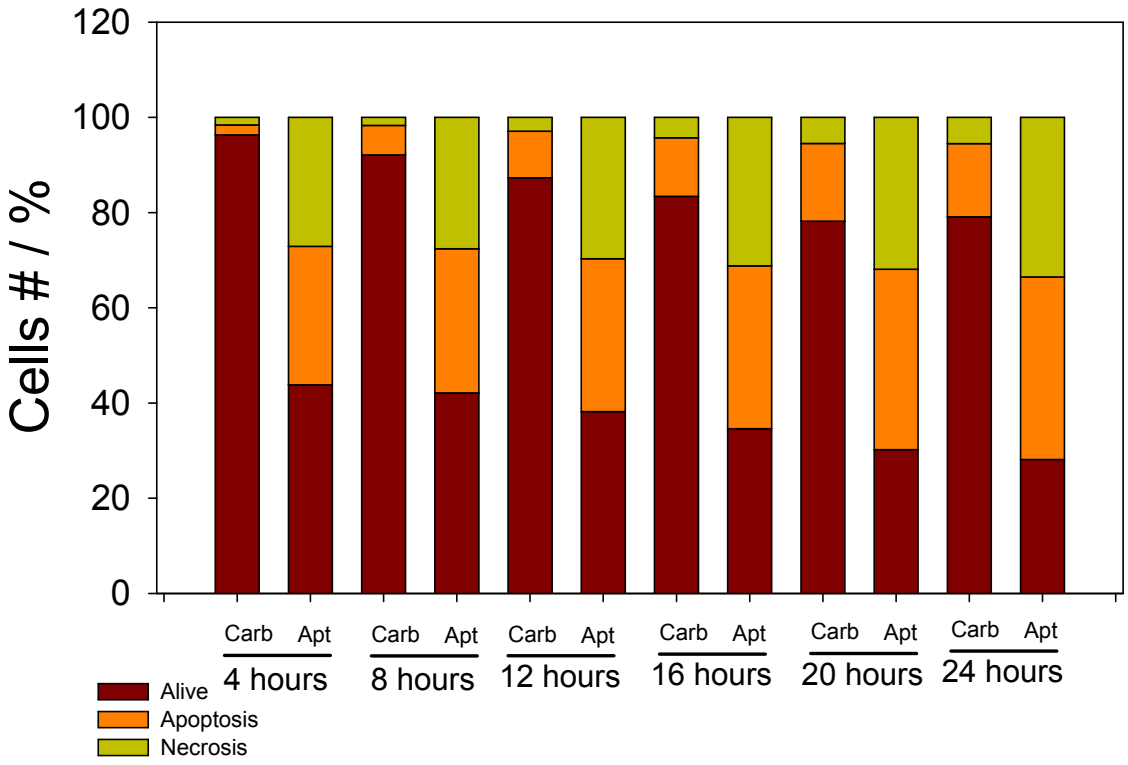

Fig. S4. Time-course analysis for alive, apoptotic and necrotic cell percentages as determined with annexin/PI assay.