Supporting Information

Enhancing Gene Knockdown Efficiency of Poly(*N*-isopropylacrylamide) Nanogels

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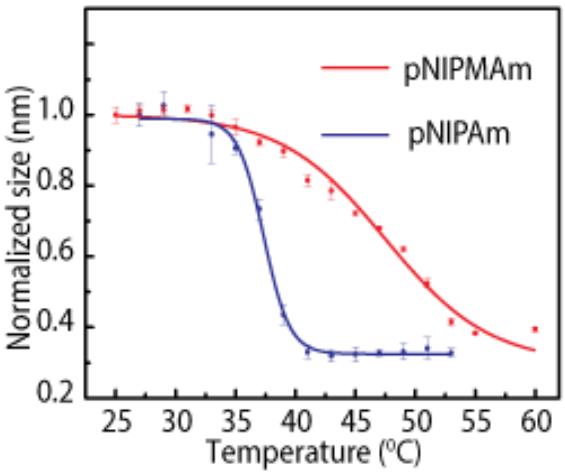

Figure S1. Temperature dependent size of pNIPAm and p(NIPMAm-*co*-NIPAm) nanogels by DLS. Note: p(NIPMAm-*co*-NIPAm) is denoted as pNIPMAm.

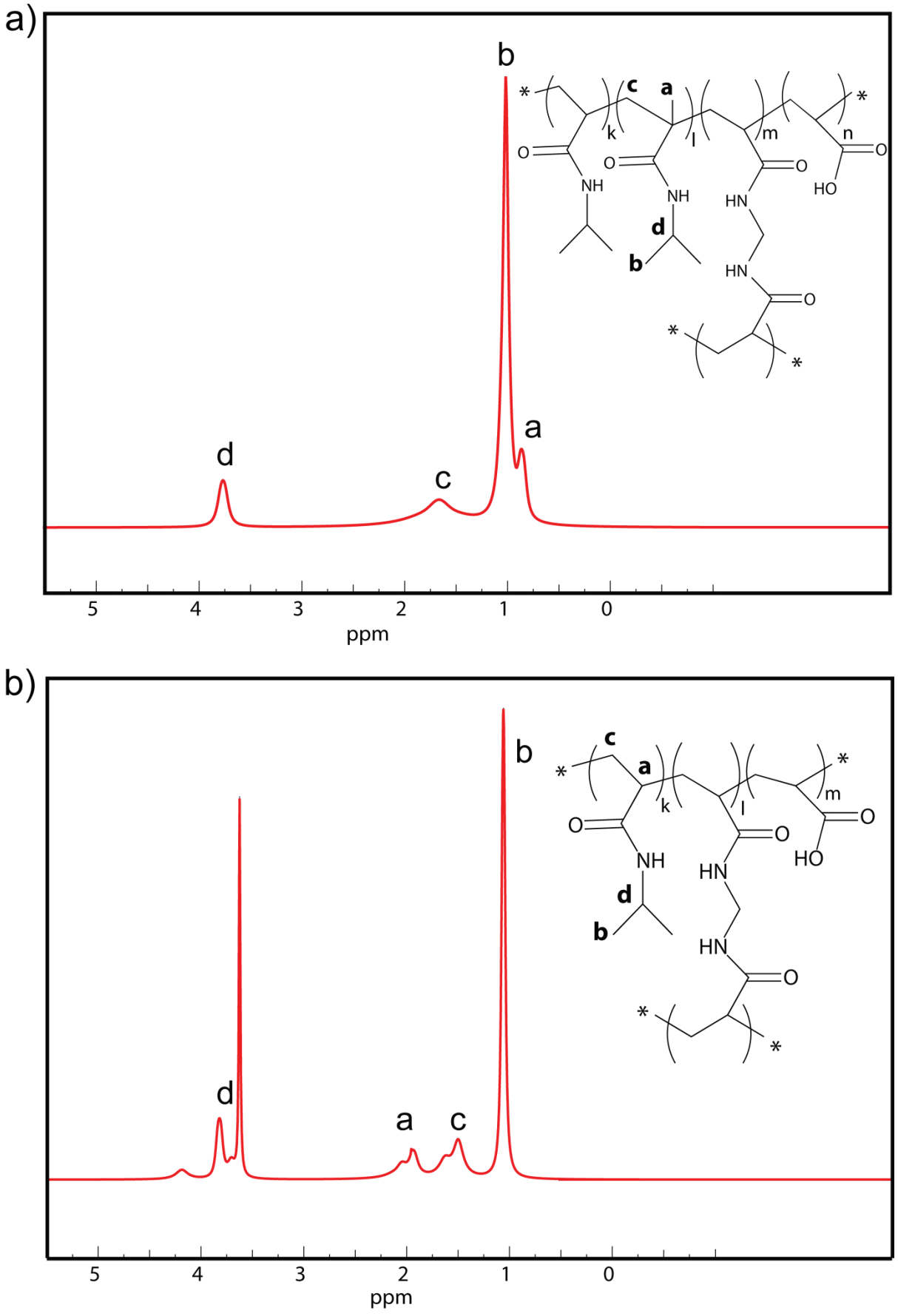

Figure S2. NMR of a) p(NIPMAm-*co*-NIPAm) and b) pNIPAm nanogels.

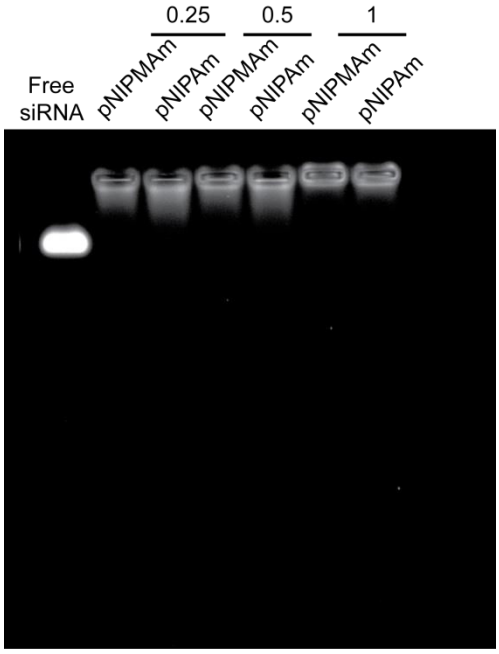

Figure S3: Optimization of siRNA loading. The numbers indicate nanogel:siRNA ratio. (Image contrast adjusted using ImageJ). Note: p(NIPMAm-*co*-NIPAm) is denoted as pNIPMAm.

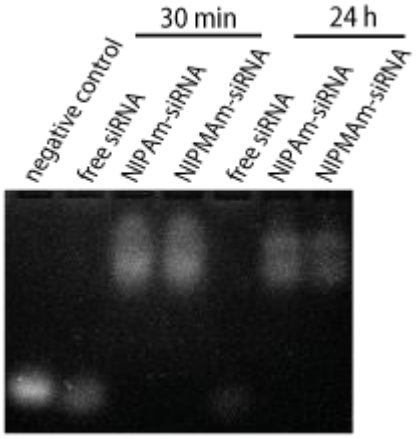

Figure S4. Serum stability of siRNA loaded into nanogels. (Image contrast adjusted using ImageJ). Negative control: free siRNA without serum treatment. Note: p(NIPMAm-*co*-NIPAm) is denoted as pNIPMAm.

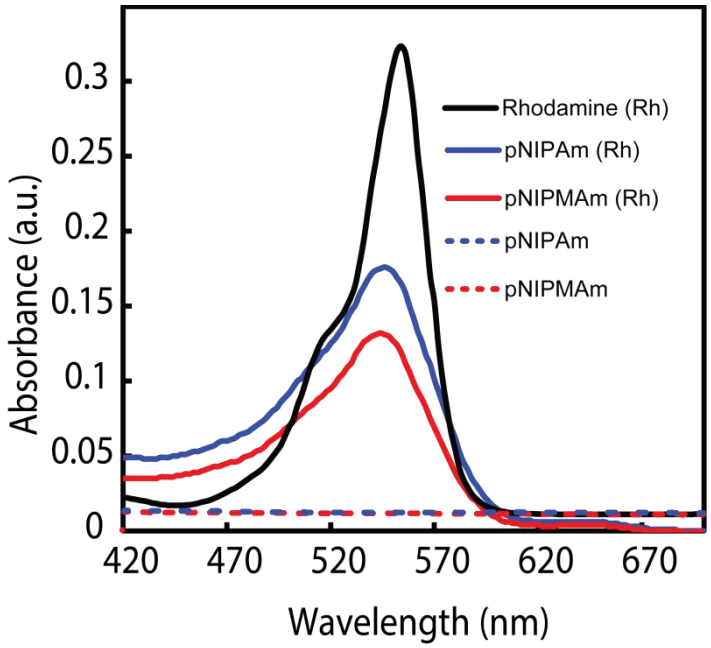

Figure S5. Absorbance spectra of rhodamine loaded nanogels. Note: p(NIPMAm-*co*-NIPAm) is denoted as pNIPMAm.

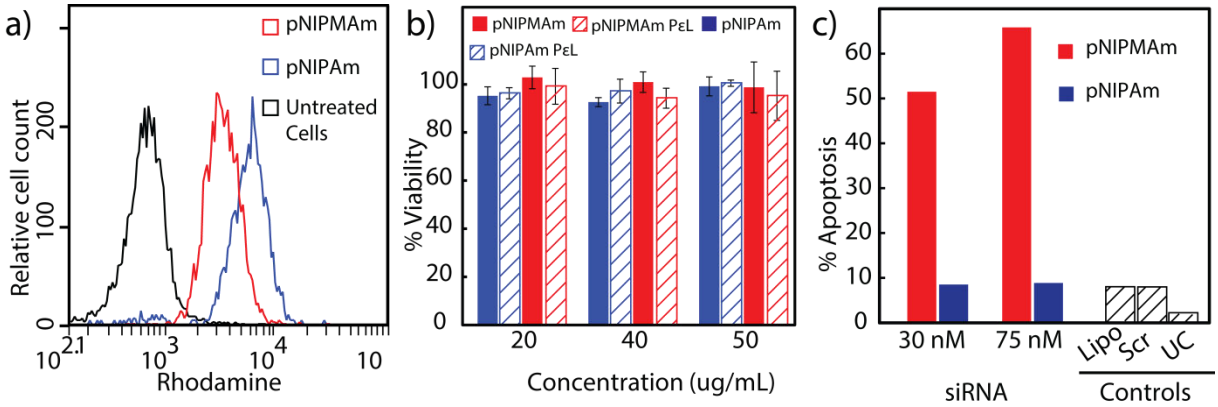

Figure S6. a) Uptake of rhodamine tagged nanogels by MDA-MB-231 cell line. b) Cytocompatibility of nanogels by MTT assay in MDA-MB-231 cell line. The error bars indicate standard deviation between triplicates. c) Flow cytometry analysis of apoptosis induced by knockdown of PKL1 gene, by siRNA loaded nanogels. Lipo: Lipofectamine loaded with 75 nM PLK1 siRNA, Scr: nanogel with 75 nM scrambled siRNA, UC: untreated cells. Note: p(NIPMAm-*co*-NIPAm) is denoted as pNIPMAm.

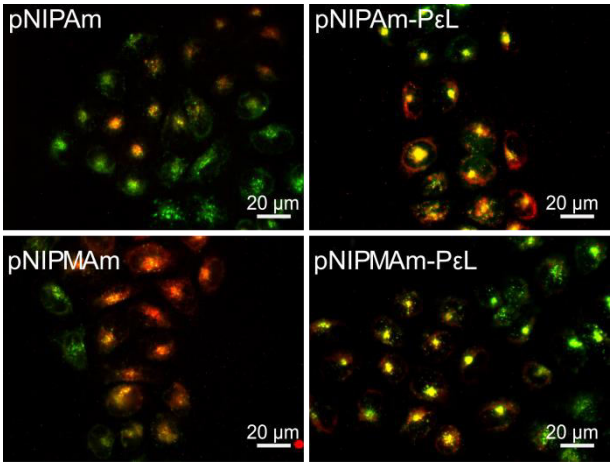

Figure S7: Co-localization of nanogels and endosomes, studied using rhodamine labelled nanogels and Lysotracker blue DND 22, by fluorescence microscopy. Red=nanogels and Green=endosomes (pseudo colored using ImageJ). Magnification: 40×. Note: p(NIPMAm-*co*-NIPAm) is denoted as pNIPMAm.

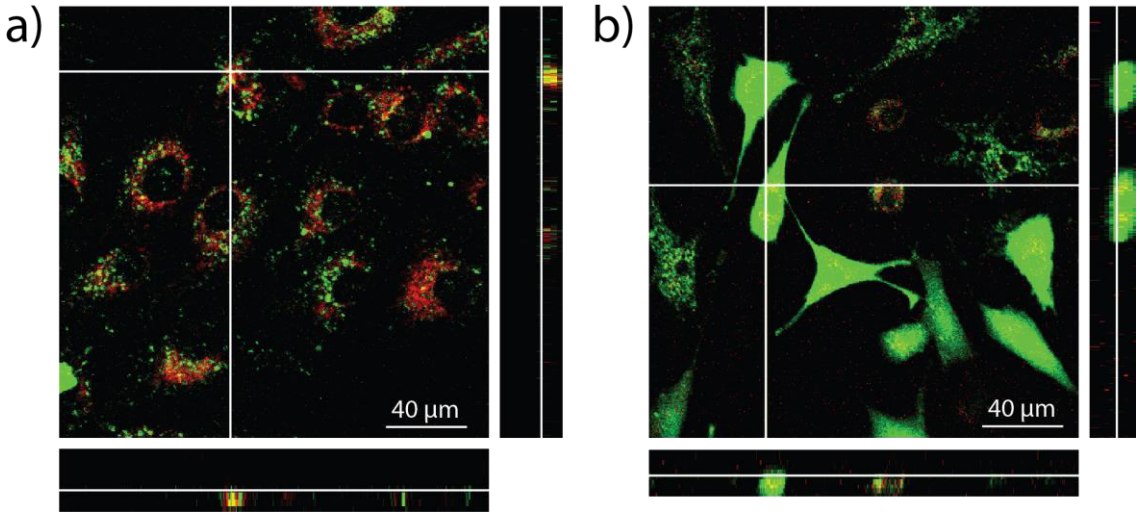

Figure S8. Calcein release into cell cytoplasm analyzed by orthogonal confocal microscopy for MG-63 cells co-incubated with calcein and rhodamine labelled a) p(NIPMAm-*co*-NIPAm) and b) p(NIPMAm-*co*-NIPAm)-PεL.