Supporting Information
for
Self-Assembled Polypeptide Nanogels with Enzymatically Transformable Surface as a Small Interfering RNA Delivery Platform

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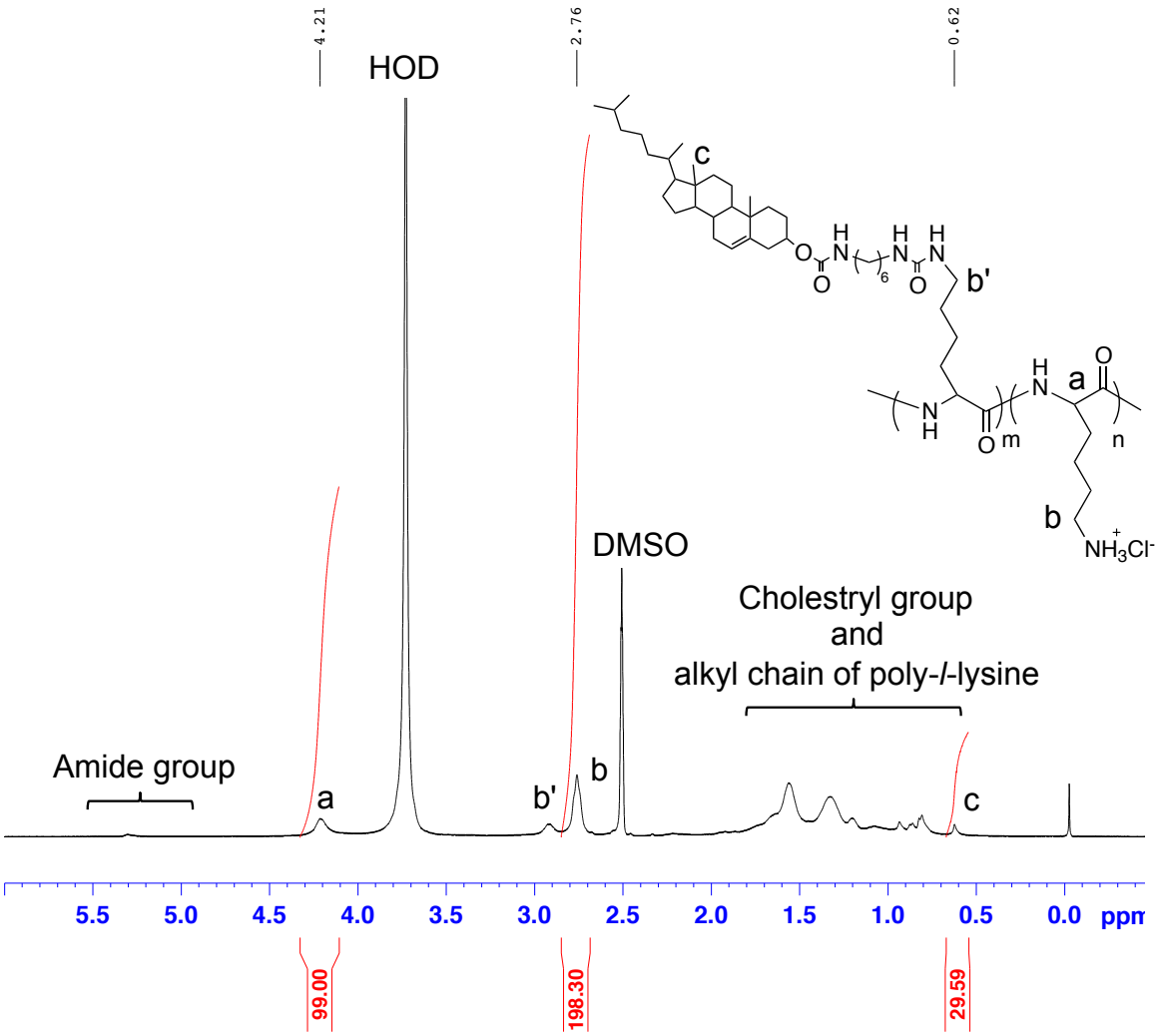

Figure S1 ^{1}H-NMR spectrum of CPL in DMSO-d_6

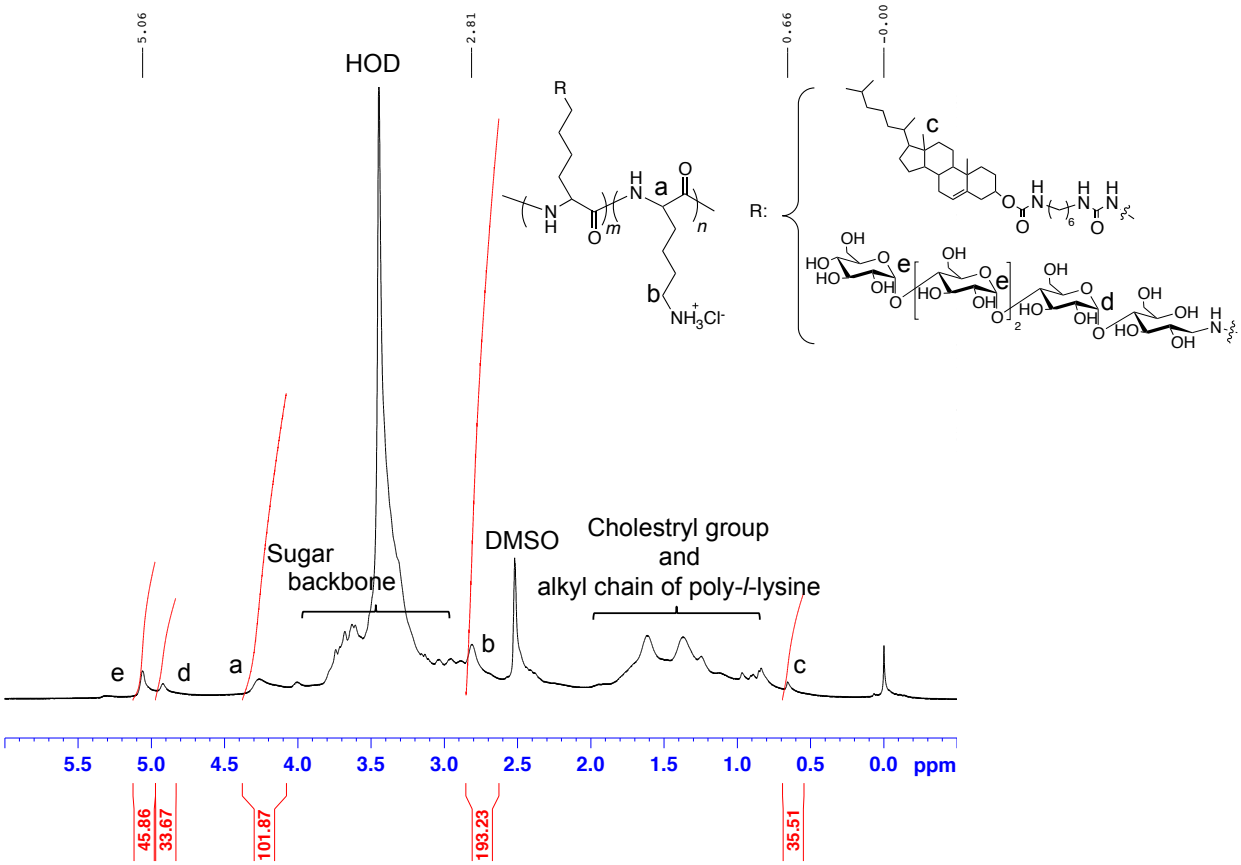

Figure S2 ^{1}H-NMR spectrum of CMaPL in DMSO-d_6:D_2O=9:1

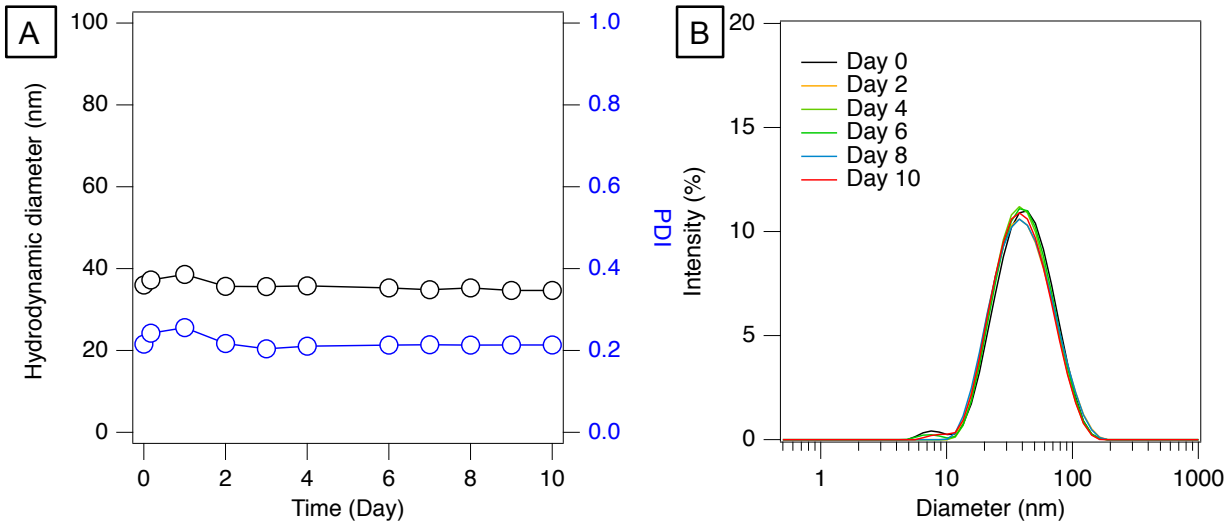

Figure S3 Changes in size and PDI of CMaPL during incubation in PBS buffer.

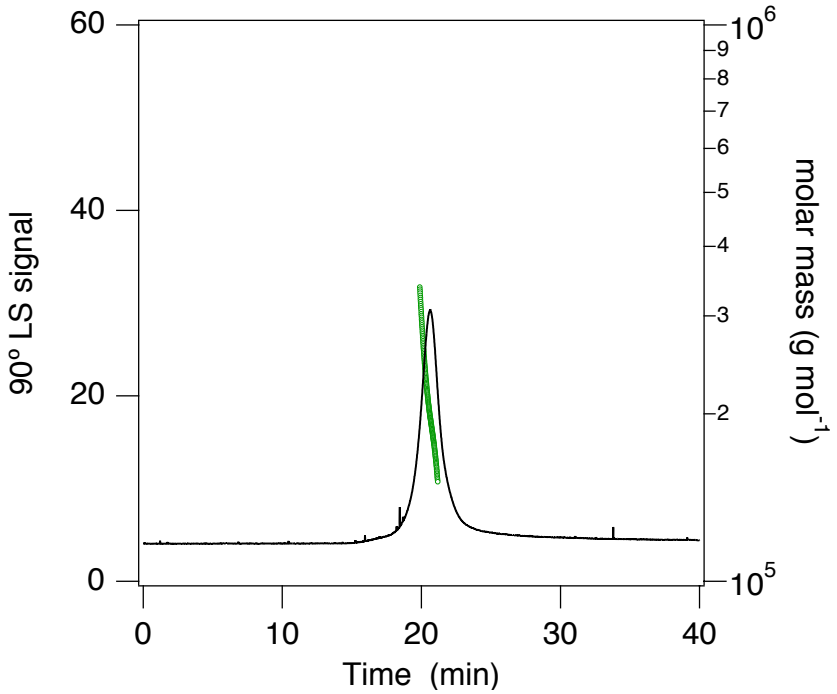

Figure S4 SEC-MALS chromatogram of CMaPL in water (50 mM $NaNO_3$). Open circle, molar mass; solid line, 90° light-scattering signal.

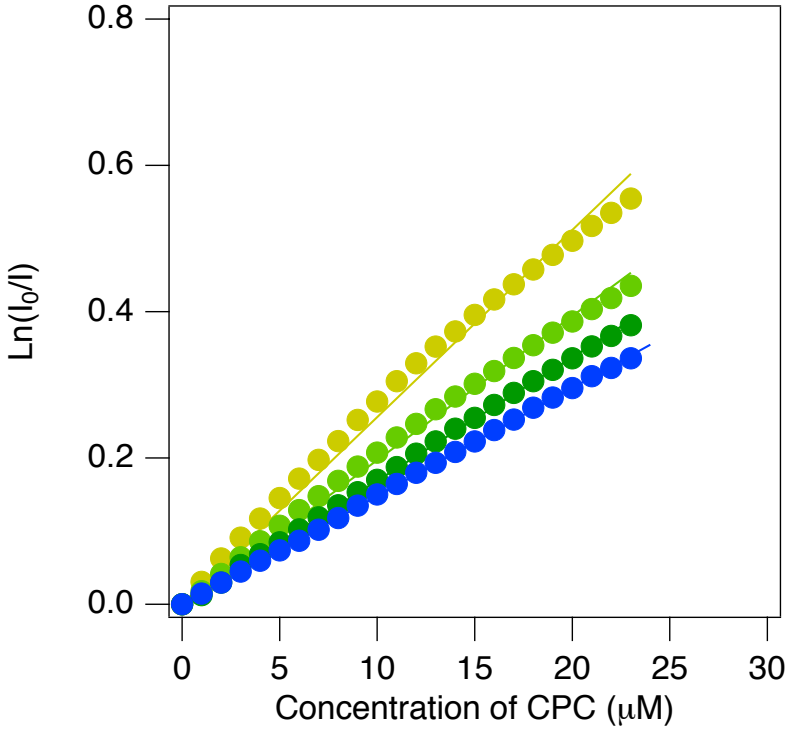

Figure S5 The ratio of fluorescence intensity I (presence of a quencher) to I_0 (absence of a quencher) ($In(I_0/I)$) of Pyrene fluorescence as a function of CPC concentration in the presence of CMaPL (1.5, 2, 3 and 4 mg/mL).

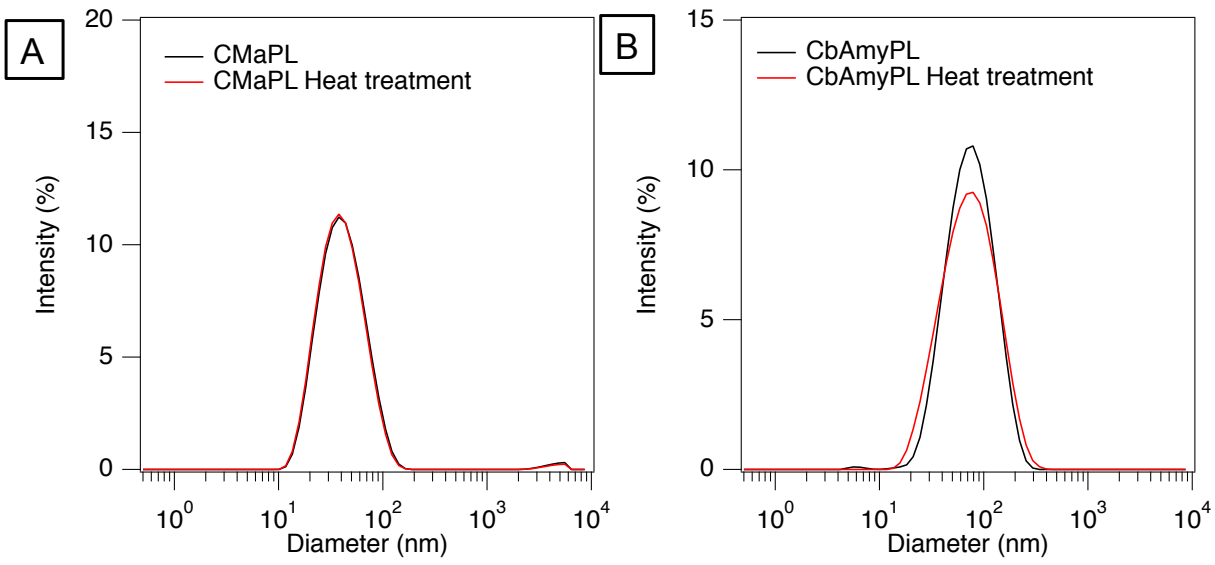

Figure S6 The size distributions of CMaPL and CbAmyPL before and after heat treatment.

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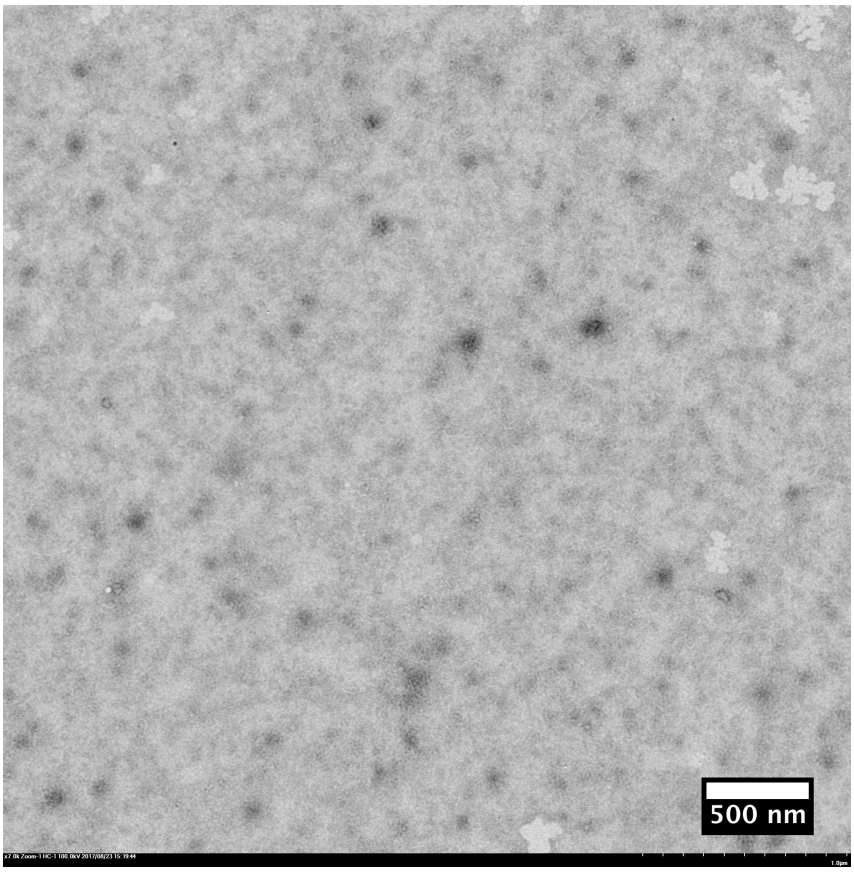

Figure S7 A TEM image, with positive staining using Ti blue, of CbAmyPL (1 mg/ml) in PBS buffer.

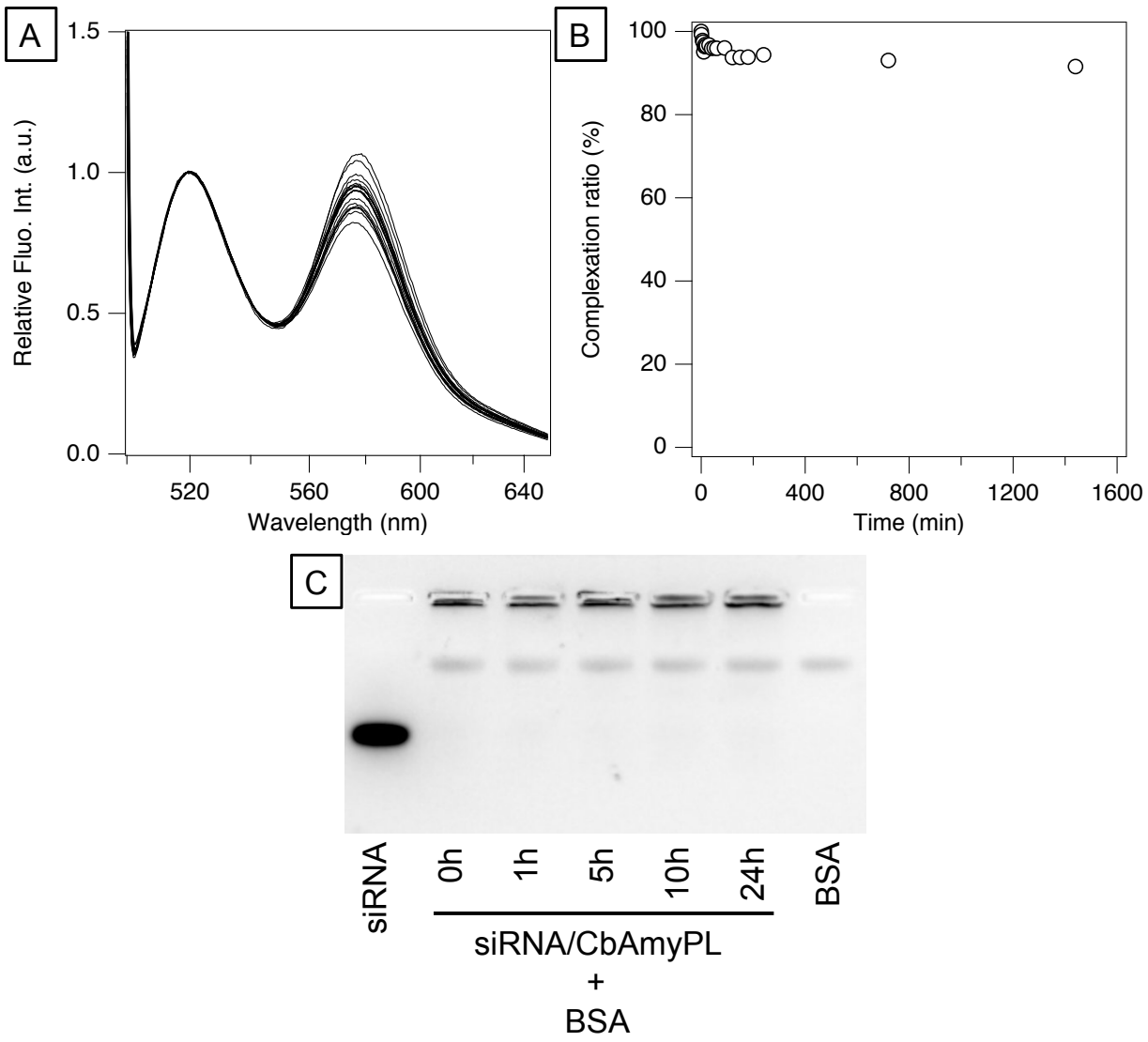

Figure S8 (A)Fluorescence spectra of AlexaFluor 488 siRNA/CbAmyPL-Rhodamine complexes in the presence of BSA (40mg/ml), (B) time dependence of complexation ratio of AlexaFluor 488/CbAmyPL-Rhoamine complexes (C) agarose gel electrophoresis of AlexaFluor 488 siRNA/CbAmyPL-Rhodamine complexes in the presence of BSA.

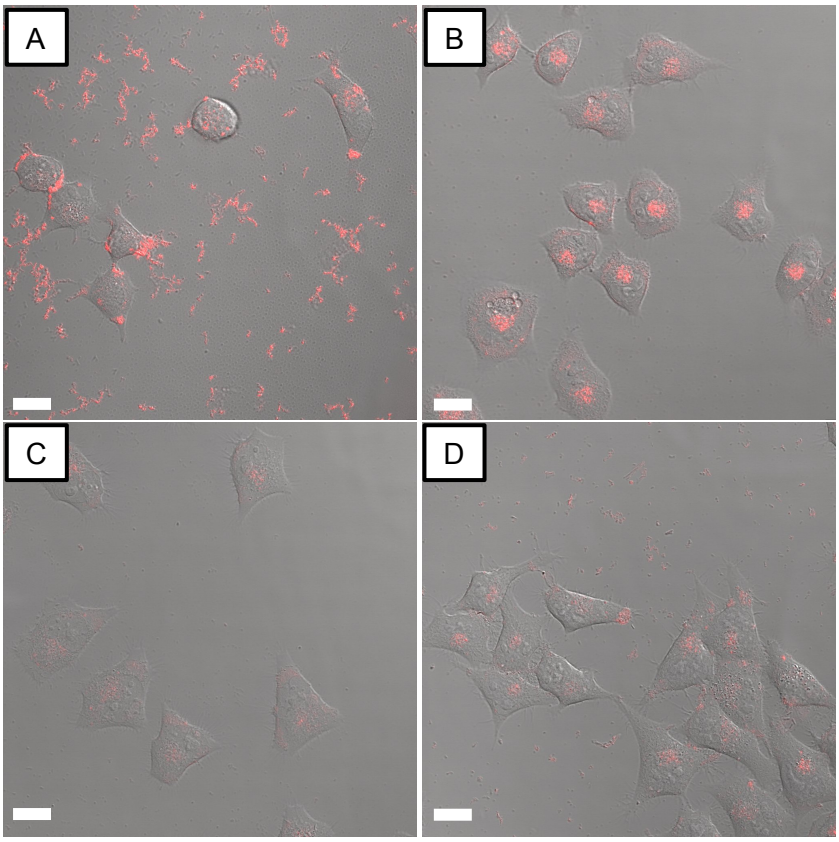

Figure S9 CLSM images of Renca cells treated with (A) CPL-rhodamine, (B) CMaPL-rhodamine, (C) CbAmyPL-rhodamine, and (D) CbAmyPL-rhodamine in the presence of α-amylase (200 U/L). Scale bar: 20 μm

Table S1 Physical parameters of CbAmyPL and the siRNA/CbAmyPL complexes

Sample	D.P.	D.B.(%)	z-ave. (nm)	ζ-potential (mV)
CbAmyPL	15	5.5	62±0.4	+2±1
Complex with siRNA (C/P=8)	15	5.5	60±1.5	+3±0