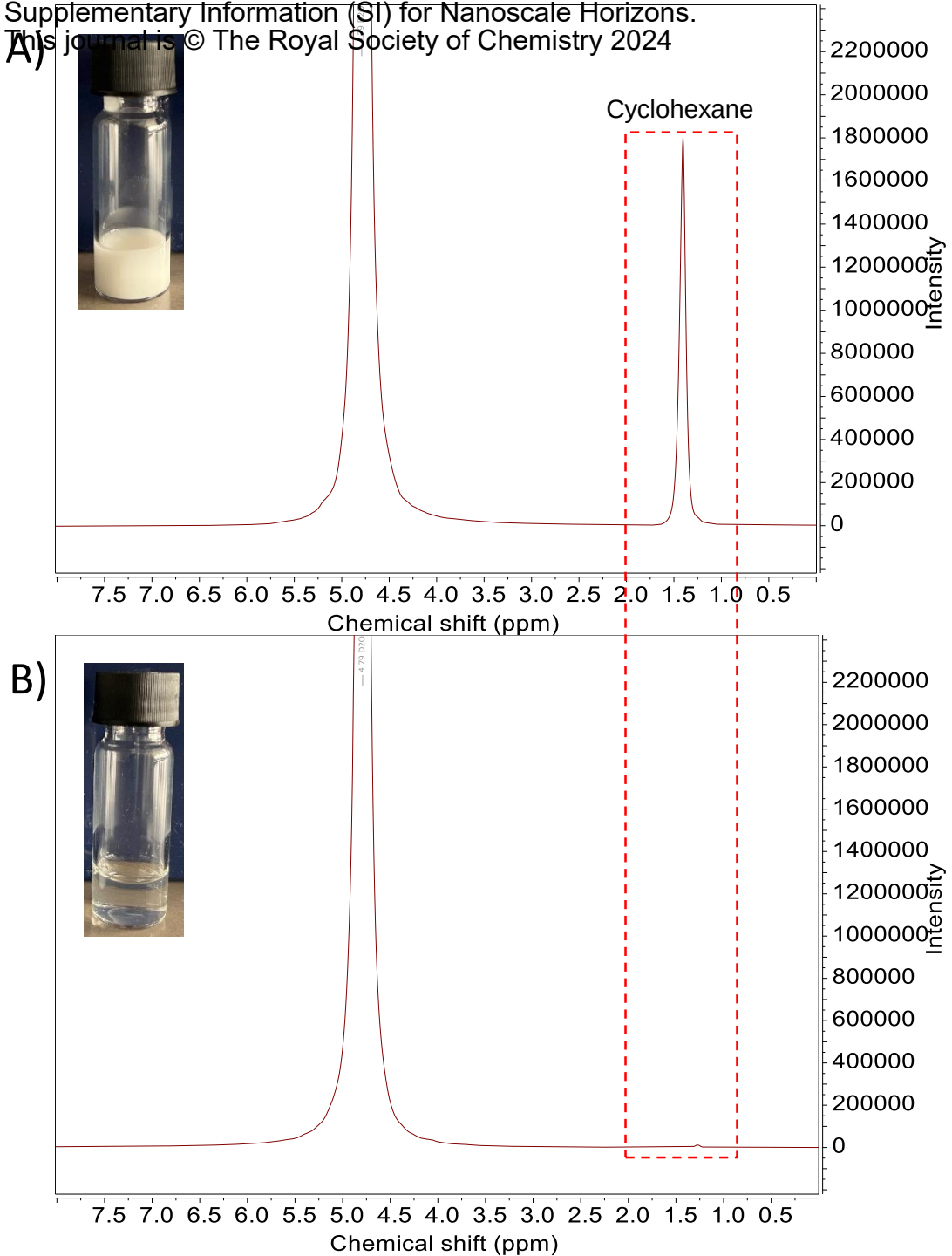

Figure S1: ^{1}H-NMR spectra of nanocapsules in A) the beginning of redispersion process and **B)** after the evaporation of cyclohexane. NMR samples were prepared in 10% D_2O. The vial picture in A) shows the nanocapsule emulsion before and the vial in B) shows it after the evaporation of cyclohexane.

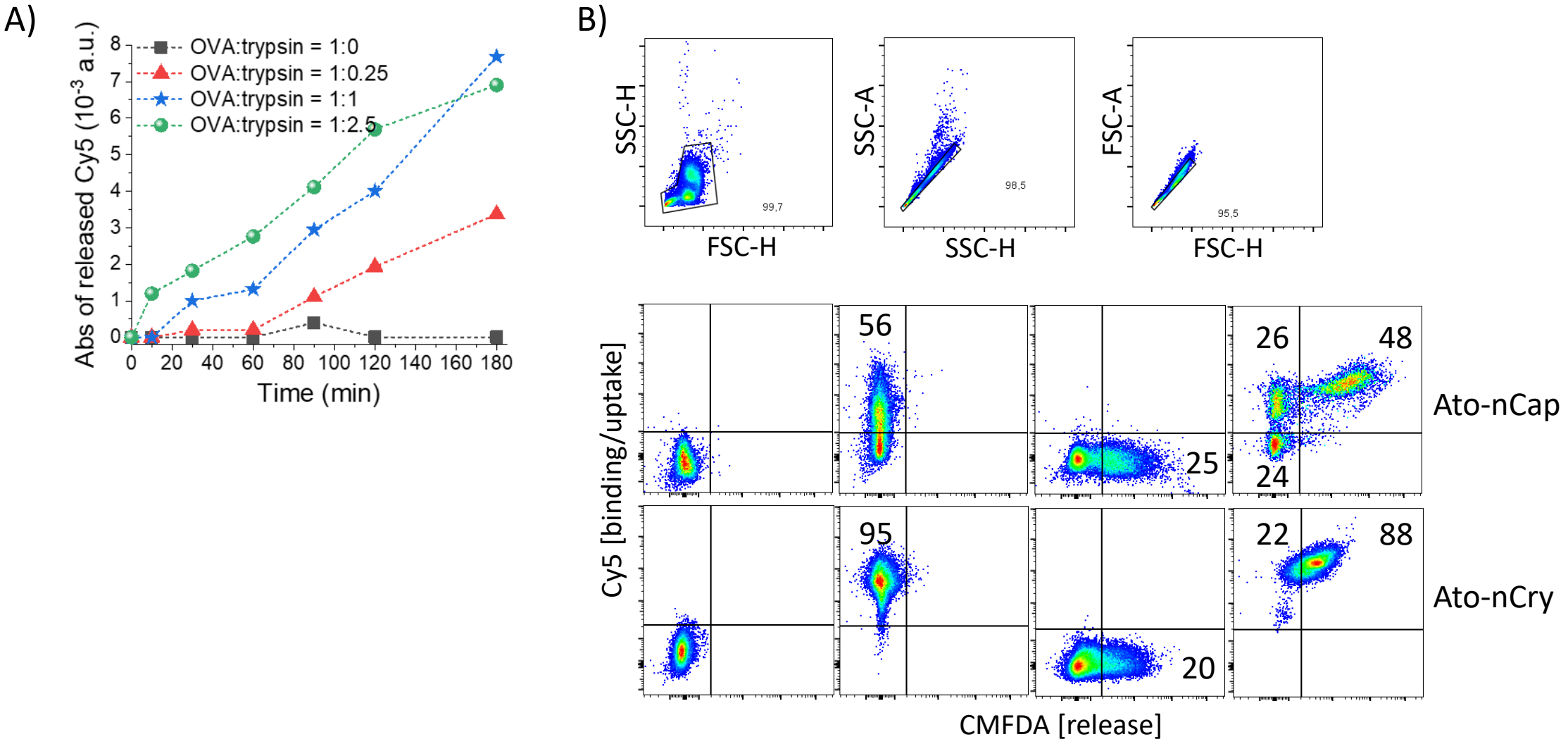

Figure S2: Properties of Ato-nCap and Ato-nCry. A) Release studies of Cy5-oligo from Ato-nCap in the presence and absence of trypsin. **B)** Gating strategy of flow cytometry of Ato-nCap and Ato-nCry. Binding/uptake is shown by Cy5 and release by using the cell tracker CMFDA.

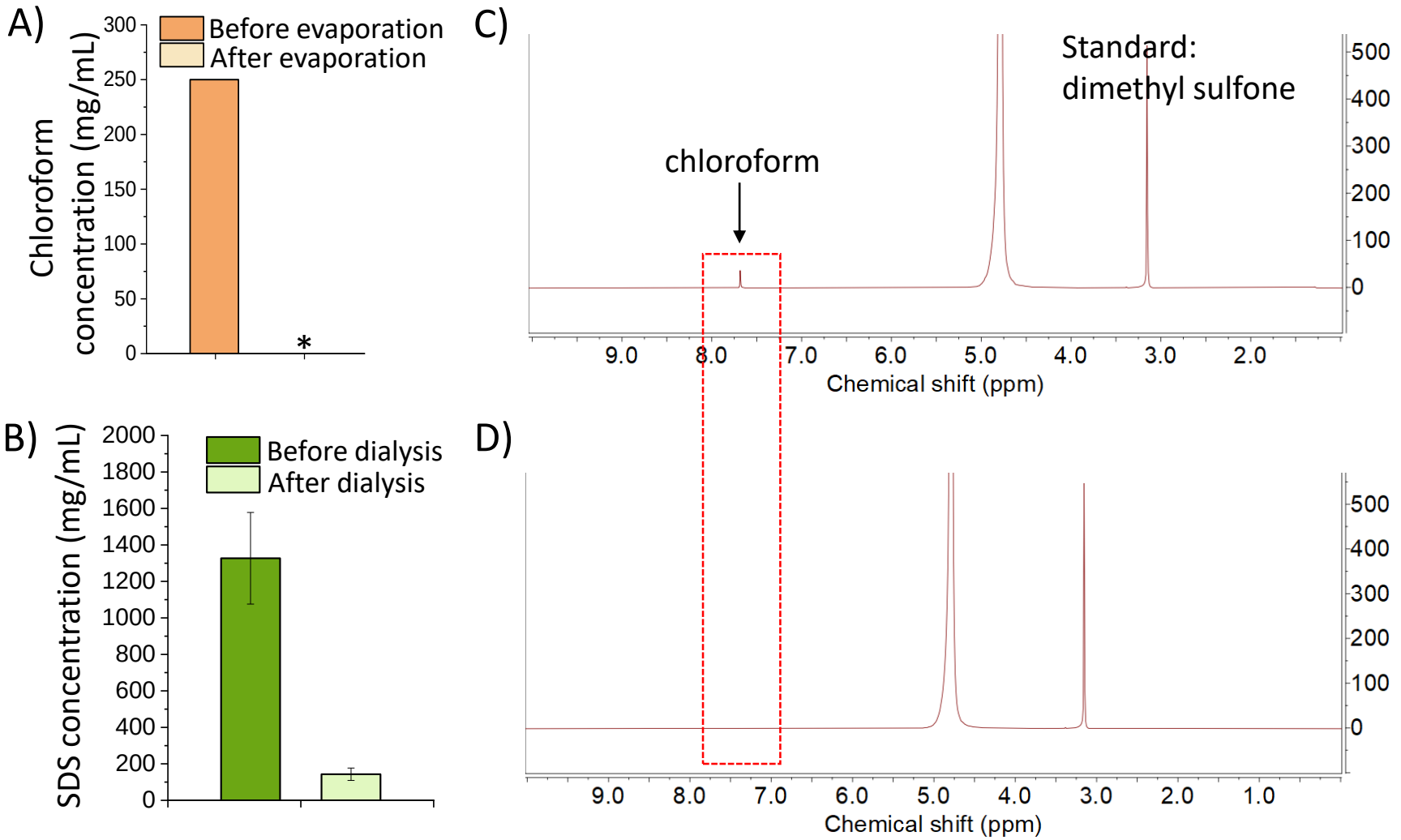

Figure S3: **A)** Concentration of chloroform before and after the solvent evaporation process obtained using ^{1}H-NMR studies. **B)** SDS concentration in the dispersion before and after dialysis of the dispersion after human serum albumin addition. SDS was quantified using a carbocyanine dye, stains-all. ^{1}H-NMR spectra of nanocrystal dispersion **C)** before and **D)** after solvent evaporation process. NMR measurements were performed by diluting 100 μL of nanocrystal dispersion with 500 μL D_2O containing 10 mg mL^{-1} dimethyl sulfone as standard.

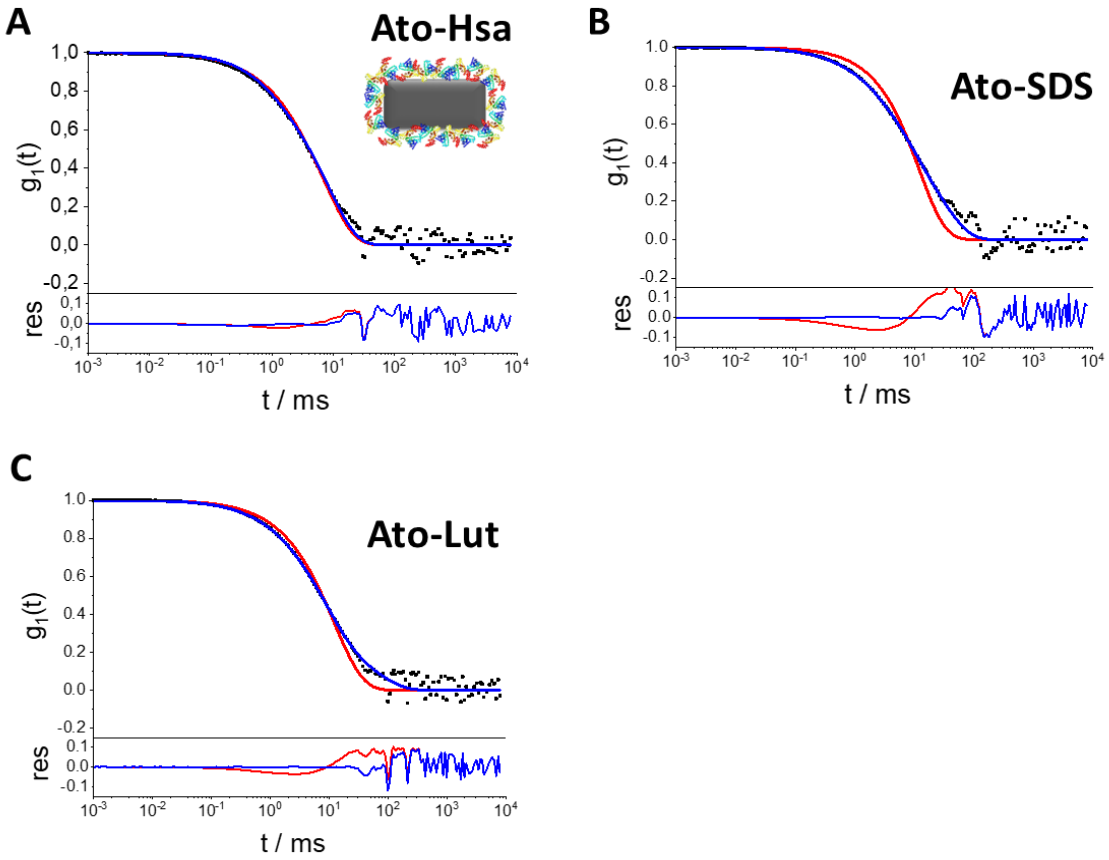

Figure S4: Autocorrelation functions (ACFs) of **A)** HSA-Ato-nCry and **B)** Ato-nCry stabilized with SDS and **C)** with Lutensol AT50 in human plasma at 37 °C. Upper graph: ACFs of Ato-nCry in human plasma, including data points, forced fit of ACFs of Ato-nCry and proteins (red curve), and fit with additional aggregate function (blue curve). Lower graphs: corresponding residuals resulting from the difference between data and the two fits. Scattering angle: 30°.

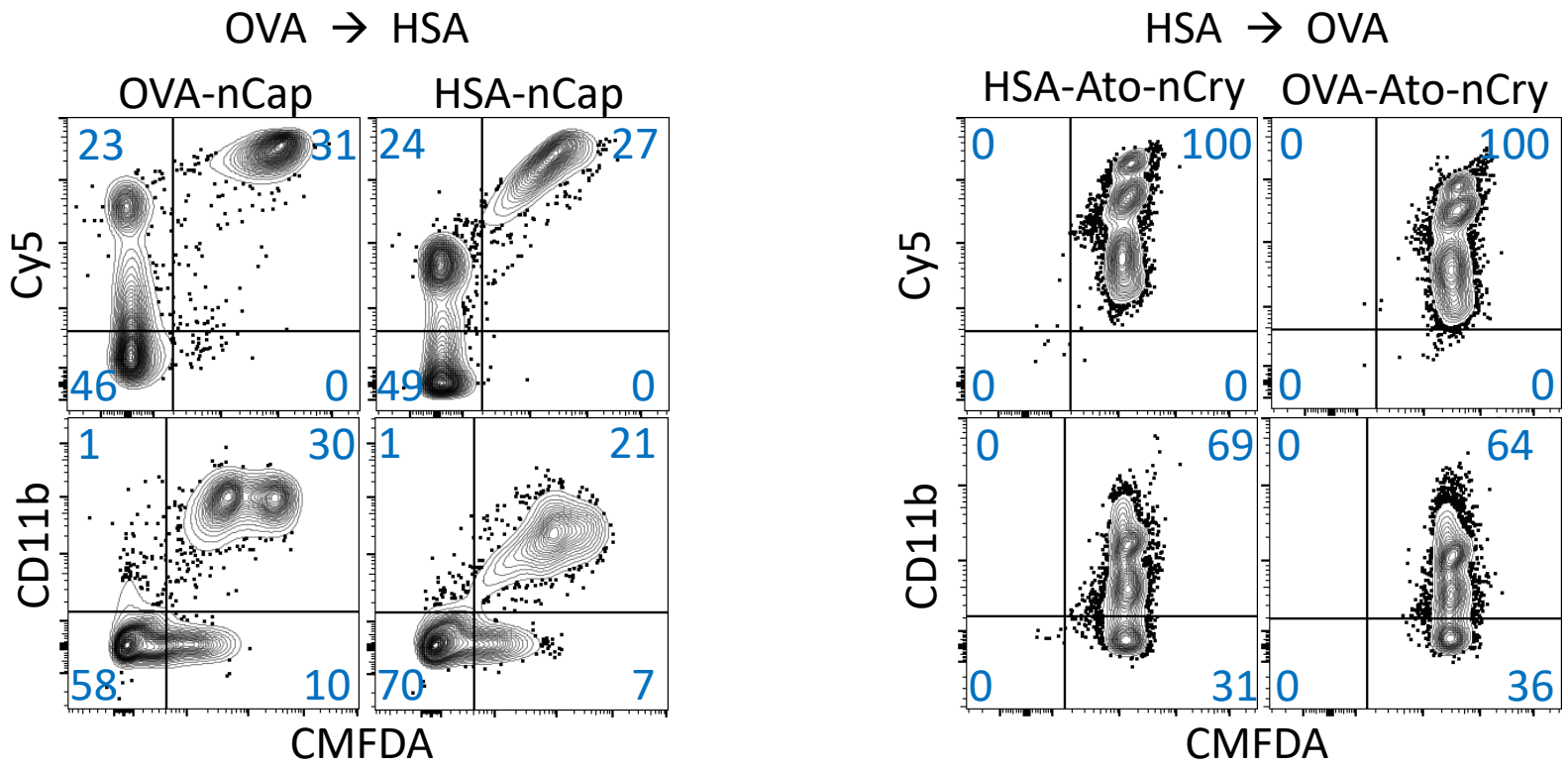

Figure S5: Ato-nCap and Ato-nCry uptake and intracellular opening in immune cells is not determined by the envelope protein. OVA-nCap and HSA-nCap as well as HSA-coated and OVA-coated Ato-nCry were incubated with PBMC for 10 h (5 µM nanocarrier substance) and Cy5 and CMFDA fluorescence were determined by flow cytometry. Numbers indicate cell frequencies in gates. Flow cytometric plots are representative of two independent experiments.

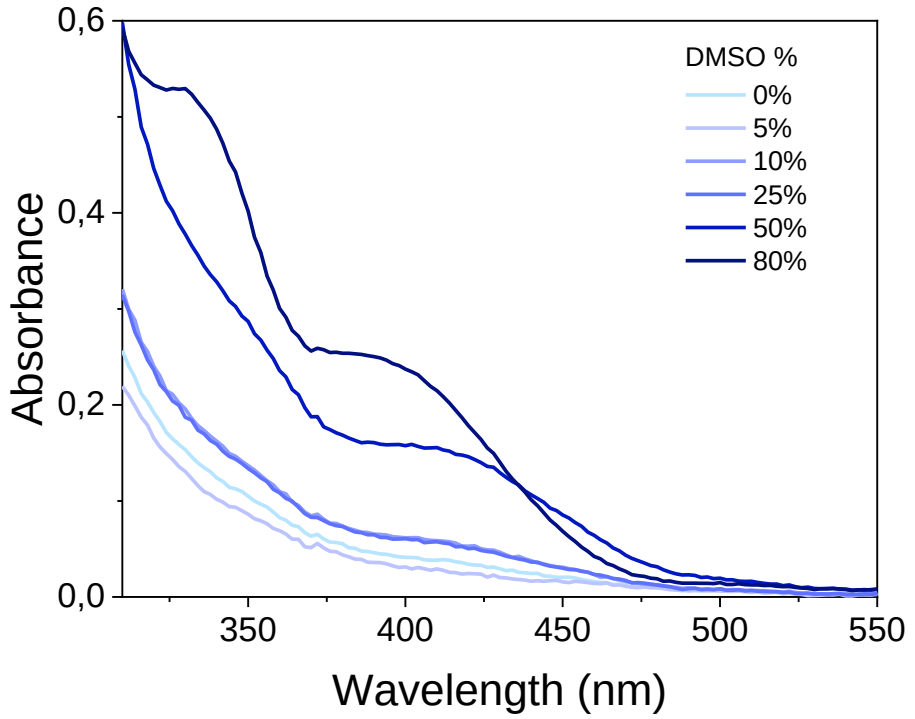

Figure S6: To check the effect of different % of DMSO in the dissolution or release of Atovaquone from Ato-nCry, 0, 5, 10, 25, 50, and 80% DMSO solutions of Ato-nCry (0.2 mg/mL) were shaken at 500 rpm at 37 °C for 1 h. To extract the dissolved or released Ato, the samples were centrifuged at 10,000 rpm for 20 min and absorbance spectra of the supernatant were recorded.