SUPPORTING INFORMATION

Effect of Alkyl Length of Peptide-Polymer Amphiphile on Cargo Encapsulation Stability and Pharmacokinetics of 3-Helix Micelles

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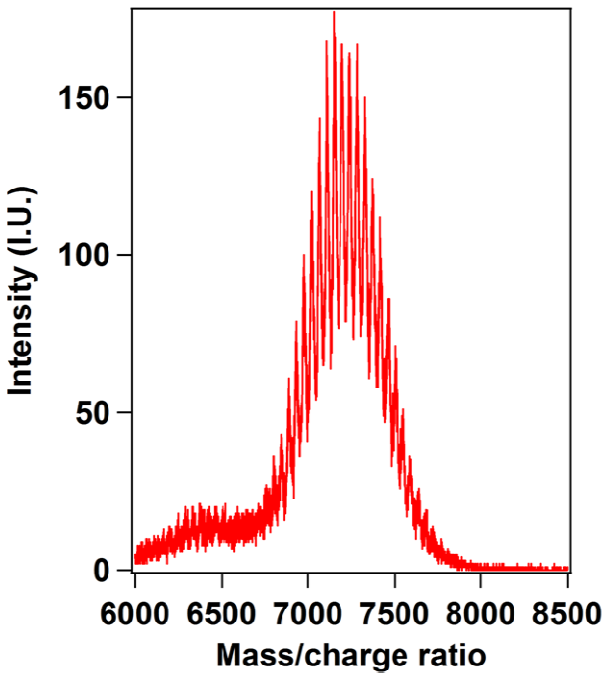

Figure SI1. MALDI-TOF spectrum of 1coi-dC16-P2K-P750, showing average molecular weight of 7150 Da. The distance between neighboring peaks is 44 Da, corresponding to the mass of a PEG repeat unit.

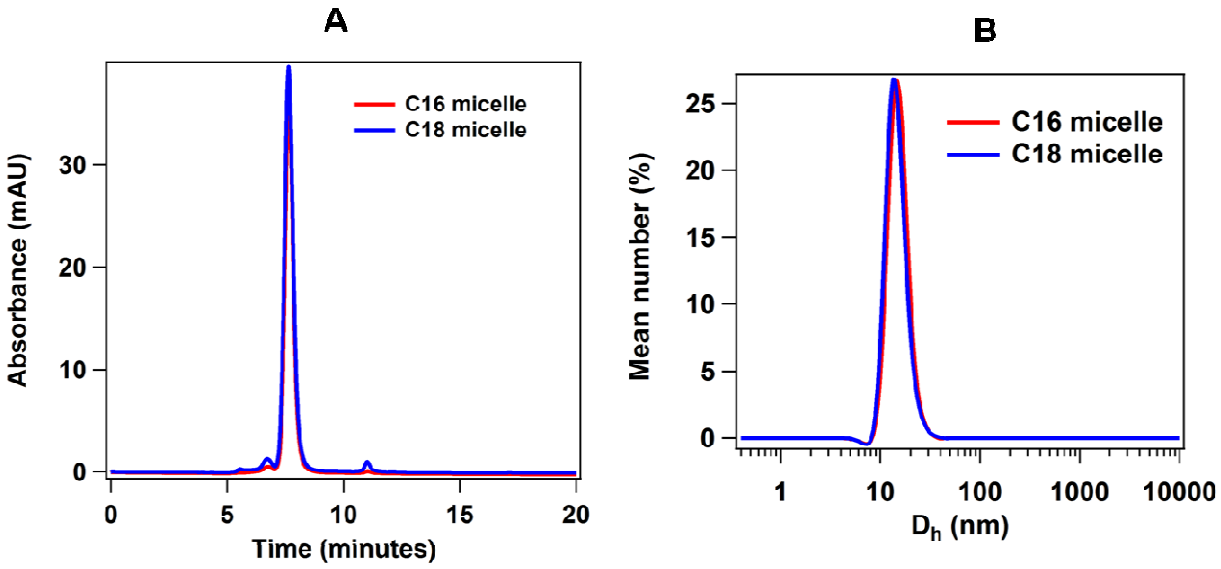

Figure SI2. (A). SEC chromatograms of C16 and C18-micelles (1 mg/ml, injection volume 30 µl), in phosphate buffer (25mM, pH 7.4). Elution is monitored at 220 nm. Both micelles show relative homogeneous distribution with minimal aggregation. (B). DLS measurement for hydrodynamic diameter of C16 and C18-micelles in phosphate buffer (25mM, pH 7.4) showing a size of ~ 15 nm.

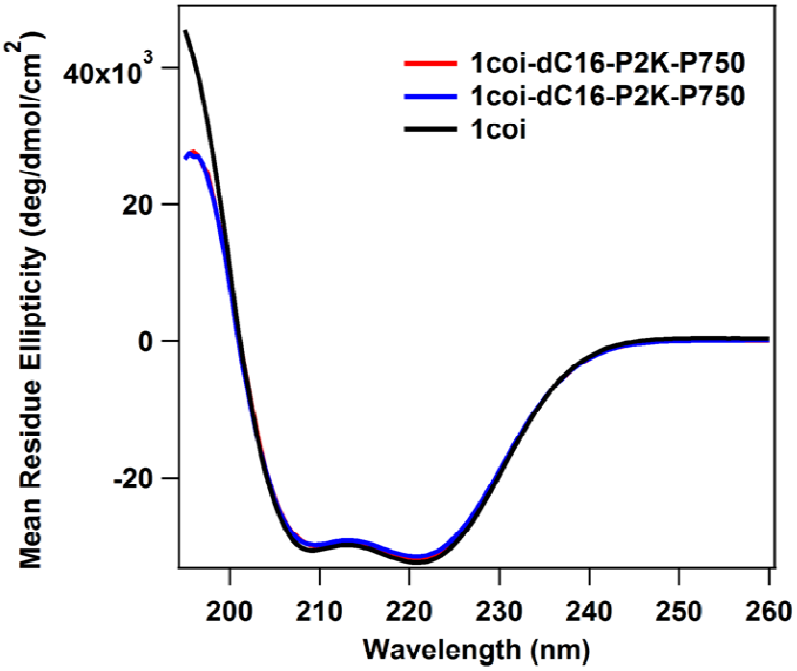

Figure SI3. CD spectrum of 1coi-dC16-P2K-P750 and 1coi-dC18-P2K-P750 micelles (peptide concentration, 200 μM) in phosphate buffer (25mM, pH 7.4). α-helical conformation is maintained, with helicity ~ 82% for both conjugates, at a level similar to 1coi alone. The ratio between the ellipticity for both conjugates at 208 and 222 nm is ~1.04, indicating that coiled-coil tertiary structure of the peptide is maintained after conjugation of hydrophobic alkyl chains.

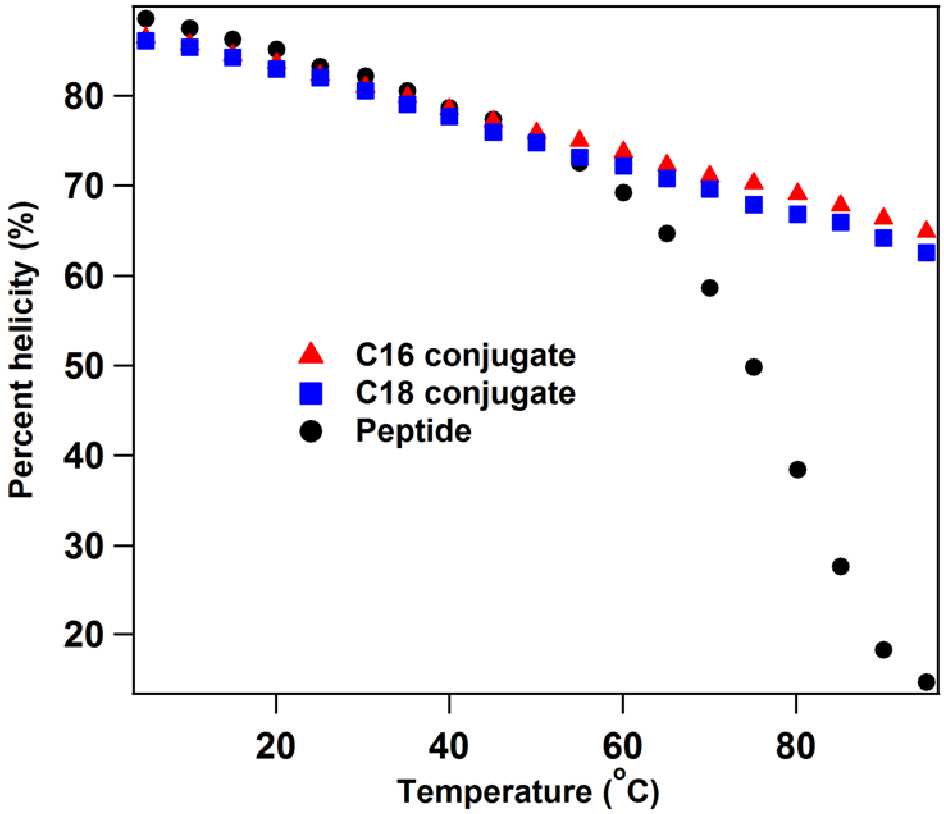

Figure SI4. Peptide helicity as function of temperature for 1coi, 1coi-dC16-P2K-P750, and 1coi-dC18-P2K-P750 (peptide concentration of 200 μM), in phosphate buffer (25mM, pH 7.4). The melting curves indicate that peptide structure is significantly stabilized after conjugation with alkyl tails.