

Supplementary Figure 1

MALDI-TOF mass spectrometry and analytical HPLC of purified fluorescein-labeled peptides. **A.** Analytical HPLC of Tailpiece₁₉₄₆₋₂₀₀₀. **B.** Mass spectrum of Tailpiece₁₉₄₆₋₂₀₀₀. **C.** Analytical HPLC of Tailpiece₁₉₅₄₋₂₀₀₀. **D.** Mass spectrum of Tailpiece₁₉₅₄₋₂₀₀₀.

Supplementary Figure 2

In-vitro self-assembly of IIC-Rod₁₂₉₆₋₁₈₅₄. IIC-Rod₁₂₉₆₋₁₈₅₄, was expressed and purified from E. coli as described in Experimental Procedures. 0.1 mg/ml protein was dialyzed against different NaCl concentrations and the extent of assembly was calculated as the percentage of IIC-Rod₁₂₉₆₋₁₈₅₄ remaining in the supernatant after high speed centrifugation. Results are averages \pm S.D. of at least three independent experiments.

Supplementary Figure 3

Secondary structural analysis of IIC-Rod₁₂₉₆₋₁₈₅₄ in the presence of tailpiece peptides. **A.** Fingerprint region of the TOCSY spectra of the positively charged Tailpiece₁₉₄₆₋₁₉₆₇ in the presence (red) and absence (black) of IIC-Rod₁₂₉₆₋₁₈₅₄. Note that the spectra of the Tailpiece₁₉₄₆₋₁₉₆₇ in the presence of IIC-Rod₁₂₉₆₋₁₈₅₄ is not visible as it sedimented out of solution. **B.** Fingerprint region of the TOCSY spectra of the negatively charged Tailpiece₁₉₆₈₋₂₀₀₀ in the presence (red) and absence (black) of IIC-Rod₁₂₉₆₋₁₈₅₄.

Supplementary Figure 4

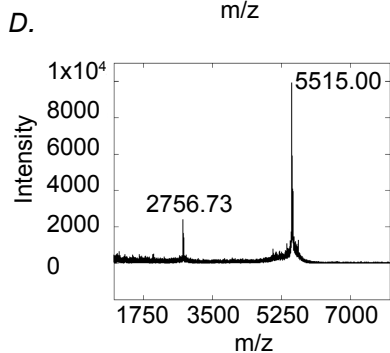
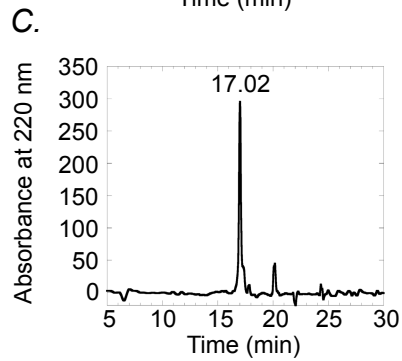
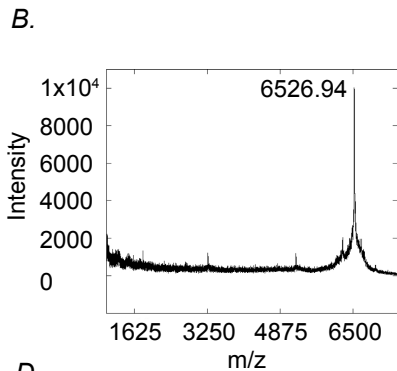
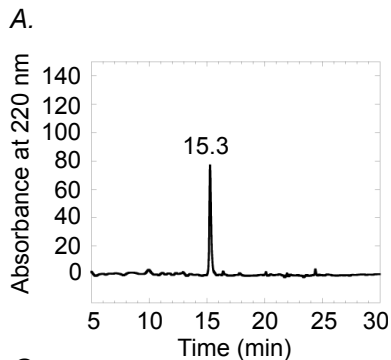
Secondary structural analysis of IIC-Rod₁₂₉₆₋₁₈₅₄ with the traditional Tailpiece₁₉₅₄₋₂₀₀₀. CD spectra of IIC-Rod₁₂₉₆₋₁₈₅₄ incubated with increasing concentrations of the Tailpiece₁₉₅₄₋₂₀₀₀. Brown, IIC-Rod₁₂₉₆₋₁₈₅₄ only; blue, IIC-Rod₁₂₉₆₋₁₈₅₄ and Tailpiece₁₉₅₄₋₂₀₀₀ at 1:1 ratio; red, 1:2 ratio; green, 1:4 ratio and orange, 1:10 ratio.

Supplementary Figure 5

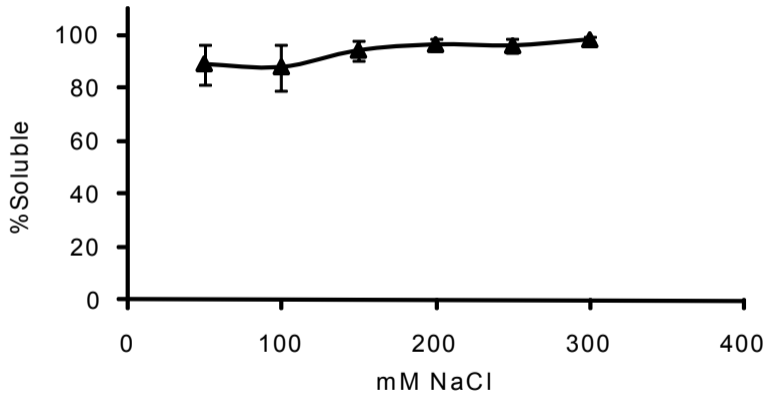
CD experiments assessing the stability over time of IIC-Rod₁₂₉₆₋₁₈₅₄ in the presence of the positively charged Tailpieces at 1:1 ratio **A.** IIC-Rod₁₂₉₆₋₁₈₅₄ with Tailpiece₁₉₄₆₋₁₉₅₂. **B.** IIC-Rod₁₂₉₆₋₁₈₅₄ with Tailpiece₁₉₅₃₋₁₉₆₇. Brown line, IIC-Rod₁₂₉₆₋₁₈₅₄ alone; Black line, IIC-Rod₁₂₉₆₋₁₈₅₄ and Tailpiece(s) that were collected after 0 minutes; Red line, after 1

min.; Blue line, after 5 min.; Green line, after 10 min.; Magenta line after 15 min.; Light blue line after 30 min.; Light green line, after 1 h and Orange line, after 2 h.

Supplementary Figure 1

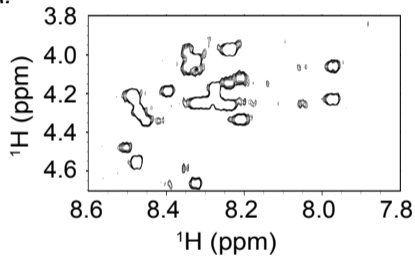


Supplementary Figure 2

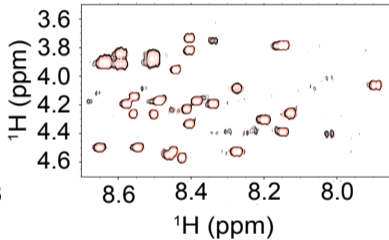


Supplementary Figure 3

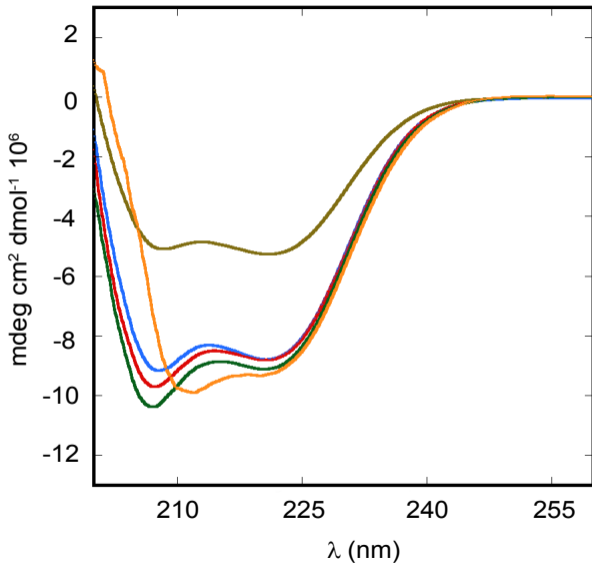
A.



B.

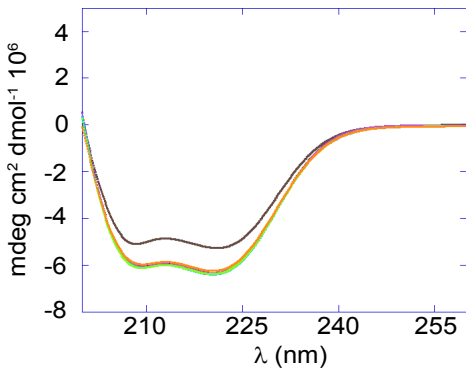


Supplementary Figure 4



Supplementary Figure 5

A.



B.

