



Supplementary Fig. S3. SAXS spectra for control and indexing of the identified liquid-crystalline lipid phases. (A) Spectra for SUVs in buffer, individual peptides in buffer, and buffer-only controls. For improved visualization, spectra have been manually offset in the vertical direction by scaling each trace by a multiplicative factor. Linear regressions of indexed reflections for phases induced by (B) UL31⁽²²⁻⁴²⁾, (C) UL31⁽⁴¹⁻⁵⁰⁾, (D) UL34⁽¹⁷⁴⁻¹⁹⁴⁾, (E) UL31⁽²²⁻⁴²⁾/ UL34⁽¹⁷⁴⁻¹⁹⁴⁾, and (F) UL31⁽⁴¹⁻⁵⁰⁾/ UL34⁽¹⁷⁴⁻¹⁹⁴⁾. (B–F) Vertical dotted reference lines denote indexed reflections. Each plotted point corresponds to an indexed peak, with its associated lattice indicated by the marker symbol (circle = *Im3m* cubic, diamond = *Pn3m* cubic, triangle = hexagonal). Colors of each regression correspond to the same ch P/L values in Fig. 7. Calculated lattice parameters and NGC values for the identified phases are provided in Supplementary Fig. S4.