Supplementary information for

## Unveiling the inhibition mechanism of host-defense peptide cathelicidin LL-37 on the amyloid aggregation of human islet amyloid polypeptide

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Figure S1. Variations of the secondary structure propensities of LL37 monomer as a function of time. (A) Helix, (B)  $\beta$ -sheet, (C) coil and bend, and (D) turn structures.



Figure S2. Secondary structure contents of the monomeric LL37 peptide.



Figure S3. Secondary structure propensities of each LL37 residue for the LL37 monomer and dimer. (A)  $\beta$ -sheet; (B) coil and bend; (C) turn structure.



**Figure S4. Secondary structure propensities of each residue**. (A) Coil and bend, and (B) propensities of each hIAPP residue for the system with hIAPP:LL37=1:1 and monomeric hIAPP. (C) Coil and bend, and (D) propensities of each LL37 residue for the system with hIAPP:LL37=1:1 and monomeric LL37.



**Figure S5.** (A) Dimerization propensities of hIAPP-hIAPP, LL37-LL37, and hIAPP-LL37 systems. (B) Ensemble-averaged Number of hydrogen bonds for the systems with hIAPP-hIAPP, LL37-LL37, and hIAPP-LL37.



Figure S6. Inter-peptide contact frequency between each hIAPP residue during the dimerization of hIAPP peptides.