## **Supporting Information**



**Figure S1:** Representative assessment of overall fold. Mean residue ellipticities from far-UV circular dichroism are shown for 10  $\mu$ M gp5<sub> $\beta$ f</sub> (red), gp5<sub>NGIS</sub> (blue), and gp5<sub>NFAL</sub> (green), respectively.



**Figure S2:** Soluble fraction of protein after assembly of  $IAPP_{20-29}/gp5_{\beta f}$  aggregates. (A) Reverse phase HPLC chromatograms of 10  $\mu$ M gp5<sub> $\beta f$ </sub> before (red) and after (blue) aggregate assembly. (B) Statistics of relative integrated areas from repeated experiments such as shown in (A). Fraction of 10  $\mu$ M of indicated construct remaining in solution after aggregation reactions.



**Figure S3:** Size exclusion assessment of scaffolds after assembly of IAPP<sub>20-29</sub>/gp5<sub> $\beta$ f</sub> aggregates. (A) Representative size exclusion profiles of completed reactions of 750  $\mu$ M IAPP<sub>20-29</sub> with 10  $\mu$ M of gp5<sub> $\beta$ f</sub> (red), gp5<sub>NGIS</sub> (blue), or gp5<sub>NFAL</sub> (green). Vertical dotted lines represent elution positions assigned (using sizing standards) to trimer (~37 min) and dimer of trimers (~32 min). Profiles were measured at 280 nm (note, IAPP<sub>20-29</sub> contains no tryptophan or tyrosine). (B) Statistics determined from repeats of such data as (A) in which the relative area of the excluded volume fraction (~22 min) is divided by the area of the entire profile.