

**Additional file 1:** Smoothed kernel density of the cohesion radius of the FreSCO GLY-ILE-ARG from the permuted protein structures. One sample Kolmogorov-Smirnov test does not reject the null hypothesis that this data is derived from a normal distribution with a mean of 4.29 and a standard deviation of 0.0064 with a P-value of 0.9997.

