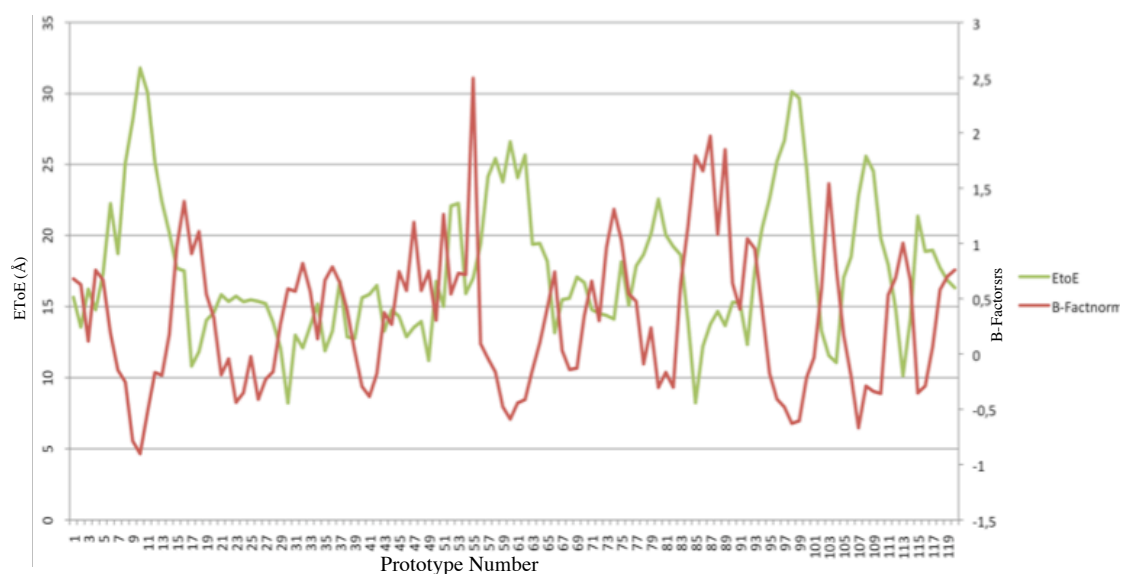


#### Supplementary material IV:

We computed the end-to-end distance (EToE) and compared with B-factors and flexibility classes. As illustrated in the figures below, we observed that the two properties are anti-correlated ( $p=-0.65$  for B-factor<sub>norm</sub>, and  $-0.63$  for Flexibility Classes). The absolute value is smaller than the corresponding one computed between B-factor<sub>norm</sub> and LSP RMSF that reaches 0.77 (or 0.74 between B-Factor and Flexibility classes). However, although most extended structures (e.g. LSPs 1 to 16) are mainly associated with the rigid class, LSPs (13 to 49) with rather short end-to-end distances can cover the three classes of flexibility.

Figure S1: Comparison of End-To-End distance for each LPS with B-fact<sub>norm</sub> (a) or flexibility classes (b).

(a)



(b)

