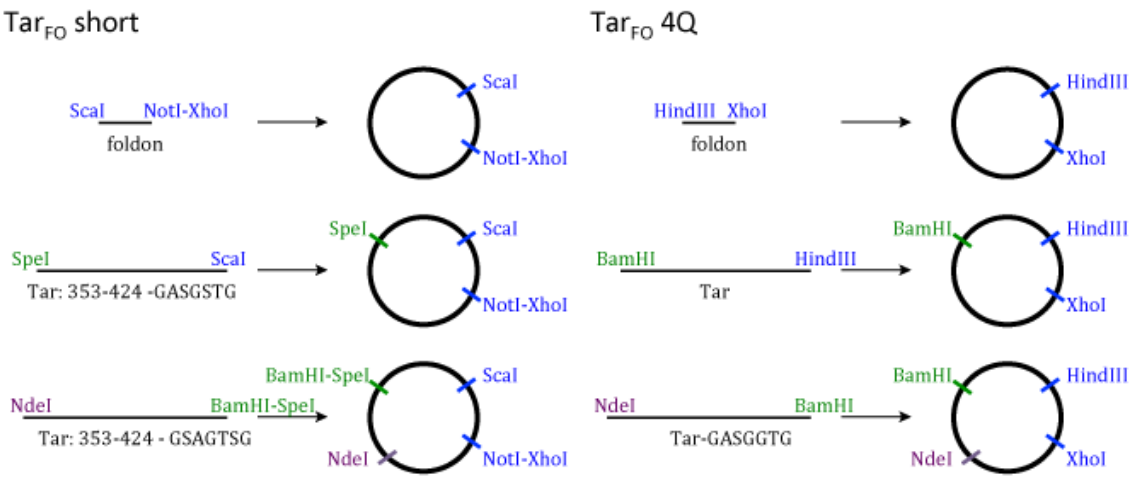
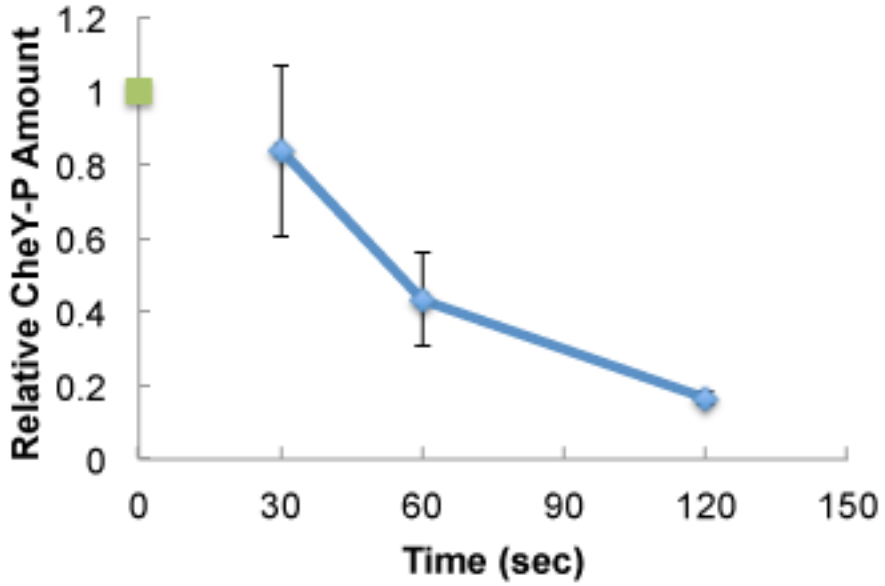
Supporting Information

Preformed soluble chemoreceptor trimers that mimic cellular assembly states and activate CheA autophosphorylation

Anna R. Greenswag, Xiaoxiao Li, Peter P. Borbat, Dipanjan Samanta, Kylie J. Watts, Jack H. Freed and Brian R. Crane



SI Figure 1: Schemes for cloning the Tar$_{FO}$ constructs (not to scale).



SI Figure 2: CheY-P production by CheA in complex with CheW and Tar_{FO} short. 30 min of CheA autophosphorylation followed by CheY addition and quenching after the times indicated. Loss of CheY-P over time cannot be overcome by additional transfer from CheA-P. Lines drawn between time points to aid visualization. Zero time point (green square) represents the amount of CheA-P present after 30 min autophosphorylation. An exponential fit to the CheY-P decay curve ($Y_t = Y_0 e^{-k_{-p}t}$) gives $k_{-p} = 0.020 \pm 0.002$ sec^{-1}; $t_{1/2} = 34$ sec; $R^2 = 0.98$. For the autophosphorylation assay *E. coli* CheA (1 μM), CheW (1 μM), and Tar_{FO} short (1 μM) were allowed to complex at 25 °C for 1 hour prior to γ-^{32}P-ATP exposure for 30 minutes after which CheY (25 μM) was added and the reaction then quenched after the times indicated.