## Supporting Information



Figure S.1. Residue stability of holo CRP residues for A and B subunit, respectively. The CRP samples and color codes are: T158A- subunit A (red); T158A- subunit B (green); H159L-subunit A (blue) and H159L-subunit B (black), respectively





Figure S.2. Residue stability of holo CRP residues for A and B subunit, respectively. The samples and color codes are: WT (black); K52N (red); H159L (green) and K52N/H159L (blue), respectively. The WT traces were reused between Figs 5 and S.2 to facilitate reader comprehension.

Figure S.3



Figure S.3. Residue stability of holo CRP residues for A and B subunit, respectively. The CRP samples and color codes are: WT (black); K101E (red); and K52N/H159L/K101E(green), respectively. The WT traces were reused between Figs.5 and S.3 to facilitate reader comprehension.





Figure S.4. Residue stability of holo CRP residues for A and B subunit, respectively. The CRP samples and color codes are: WT (black); E58A (red); and E58K(blue), respectively. The WT traces were reused between Figs 5 and S.4 to facilitate reader comprehension



Figure S.5. Residue stability of holo CRP residues for A and B subunit, respectively. The CRP samples and color codes are: WT (black); E58A/K52N/H159L/K101E (red); and E58K/K52N/H159L/K101E (blue), respectively. The WT traces were reused between Figs 5 and S.5 to facilitate reader comprehension.



Figure S.6. Connectivity map (RSC) of H159Land K101E subunit A, respectively. The false color scale indicates positive and negative connectivity between residues. Positive connectivity indicates the folding-unfolding reactions of these residues are synchronize at the same time scale whereas negative connectivity indicates asynchronization between these residues.



Figure S.7. Connectivity map (RSC) of H159Land K101E subunit B, respectively. The false color scale indicates positive and negative connectivity between residues. Positive connectivity indicates the folding-unfolding reactions of these residues are synchronize at the same time scale whereas negative connectivity indicates asynchronization between these residues.



Figure S.8. Connectivity map (RSC) of H159L/K52N and K101E/H159L/K52N subunit A, respectively. The false color scale indicates positive and negative connectivity between residues. Positive connectivity indicates the folding-unfolding reactions of these residues are synchronize at the same time scale whereas negative connectivity indicates asynchronization between these residues.



Figure S.9. Connectivity map (RSC) of H159L/K52N and K101E/H159L/K52N subunit B, respectively. The false color scale indicates positive and negative connectivity between residues. Positive connectivity indicates the folding-unfolding reactions of these residues are synchronize at the same time scale whereas negative connectivity indicates asynchronization between these residues.



Figure S.10. Connectivity map (RSC) of E58A and E58K subunit A, respectively. The false color scale indicates positive and negative connectivity between residues. Positive connectivity indicates the folding-unfolding reactions of these residues are synchronize at the same time scale whereas negative connectivity indicates asynchronization between these residues.



Figure S.11. Connectivity map (RSC) of E58A and E58K subunit B, respectively. The false color scale indicates positive and negative connectivity between residues. Positive connectivity indicates the folding-unfolding reactions of these residues are synchronize at the same time scale whereas negative connectivity indicates asynchronization between these residues.



Figure S.12. Connectivity map (RSC) of E58A/H159L/K52N/K101E and E58K/ H159L/K52N/K101E subunit A, respectively. The false color scale indicates positive and negative connectivity between residues. Positive connectivity indicates the folding-unfolding reactions of these residues are synchronize at the same time scale whereas negative connectivity indicates asynchronization between these residues.



Figure S.13. Connectivity map (RSC) of E58A/H159L/K52N/K101E and E58K/ H159L/K52N/K101E subunit B, respectively. The false color scale indicates positive and negative connectivity between residues. Positive connectivity indicates the folding-unfolding reactions of these residues are synchronize at the same time scale whereas negative connectivity indicates asynchronization between these residues.