

Figure S1: Electrospray ionization mass spectroscopy of ^2H , ^{15}N labeled PKA-C grown in media containing 80% $^2\text{H}_2\text{O}$ and deuterated glucose. The inset displays an enlarged portion of the data which was smoothed and deconvoluted. This shows an ionization pattern for an enzyme which is 99% ^{15}N labeled and ~95% deuterated with a standard deviation of 0.358 amu based on the peaks shown.

Table S1: Representative values from the experimental data compared to predicted values based on the PKA-C mass of 42,934.0133 Da (99% ^{15}N , 95% ^2H labeled enzyme).

Charge	Observed Peak (m/z)	Calculated Mass (Da)	Predicted Peak (m/z)
53+	811.0820	42934.9695	811.0829
52+	826.6814	42936.0610	826.6806
51+	842.7777	42931.3004	842.7916
50+	859.6655	42933.9187	859.6674

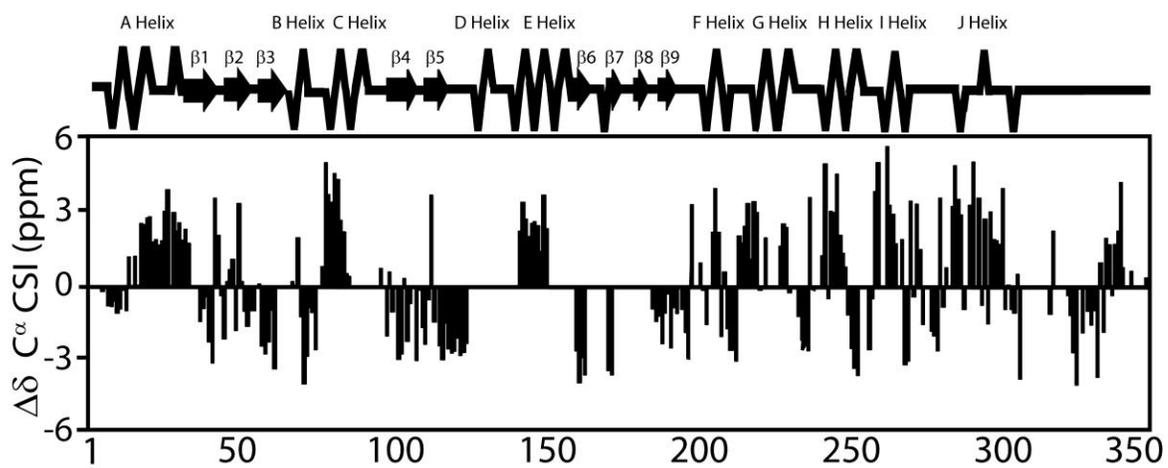


Figure S2: Chemical shift index (CSI) values for C^α resonances assigned in the AMP-PNP bound state of PKA-C