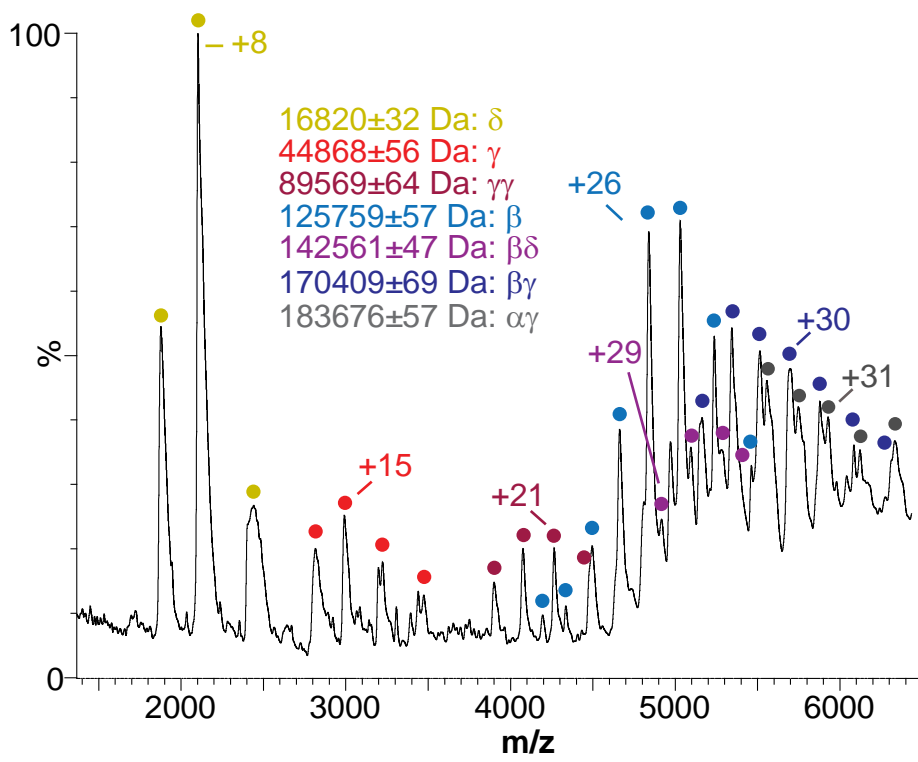
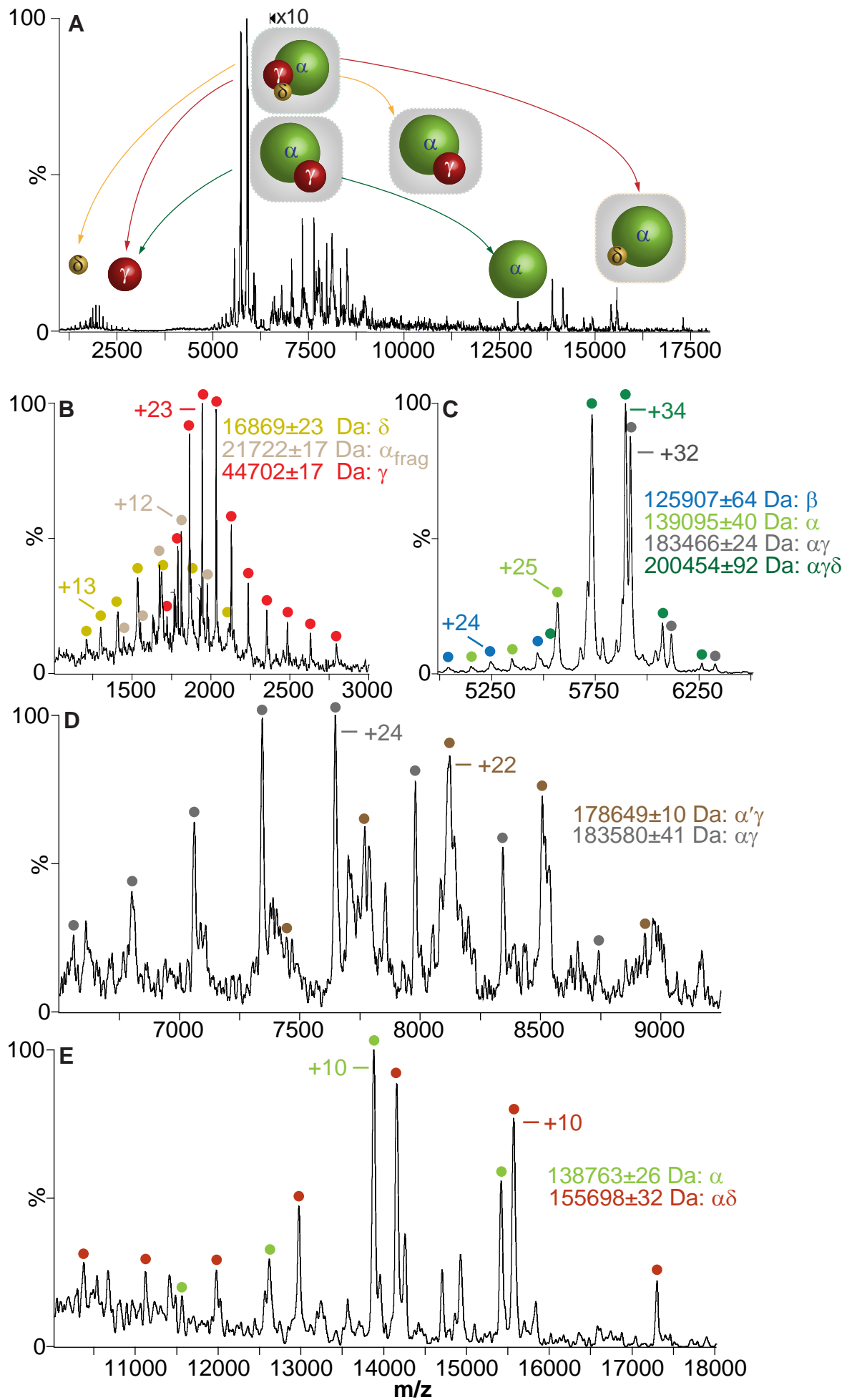


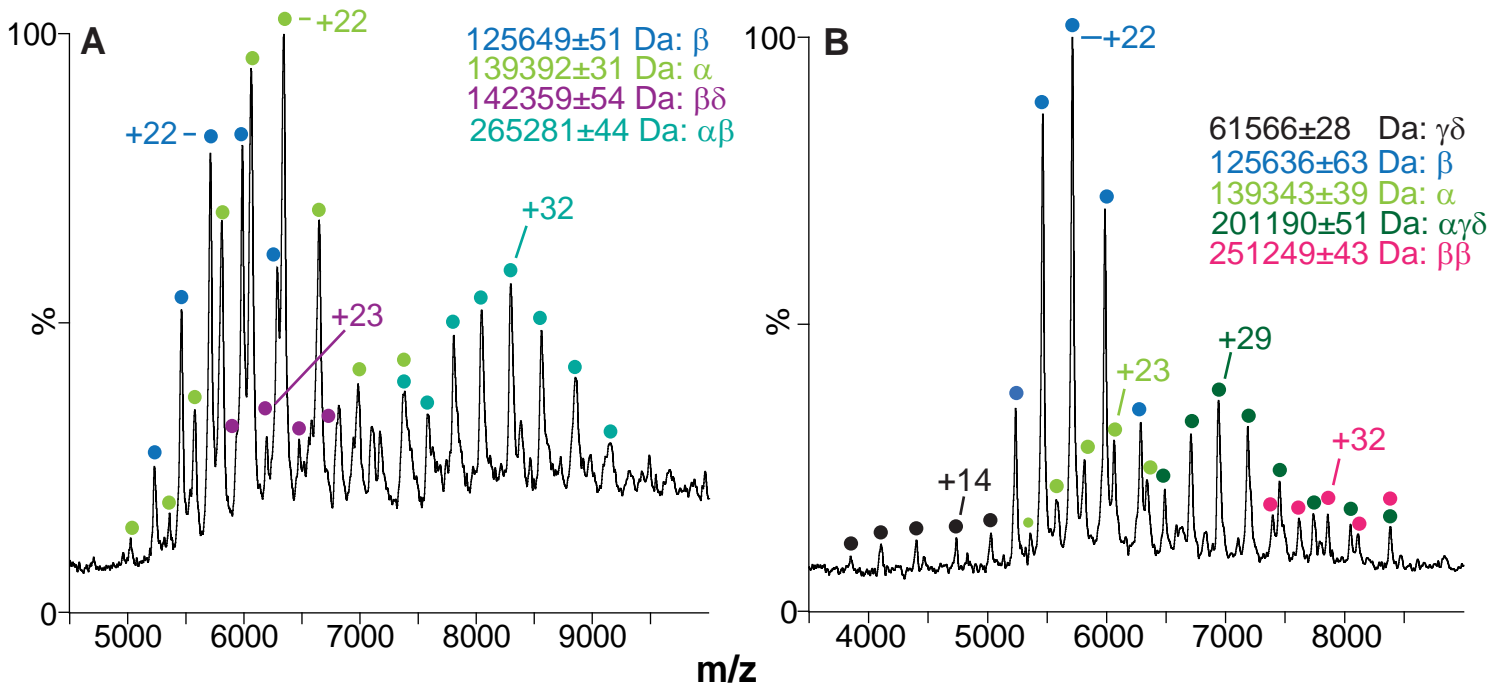
Suppl. Figure 1



Suppl. Figure 2



Suppl. Figure 3



Supplemental Figure Legends

Supplemental Fig. 1. **Nanoelectrospray mass spectrum of non-activated PhK obtained in 20% v/v acetic acid.** Incubation of PhK for 1 hr in 20% (v/v) acetic acid revealed single subunits and several dimeric subcomplexes.

Supplemental Fig. 2. **Tandem mass spectra of $\alpha\gamma\delta$, $\alpha'\gamma\delta$ and $\gamma\delta$ subcomplexes from non-activated PhK obtained in 10% ammonium hydroxide at 5,916 m/z .** **A**, Full spectrum and subcomplex dissociation products. **B**, Low m/z products, which include the γ and δ subunits and a 21 kDa species corresponding to a well characterized proteolytic fragment of the α subunit (α_{frag}) (9). **C**, The m/z region surrounding the isolated parent peaks corresponding to the $\alpha\gamma\delta$ and $\gamma\delta$ subcomplexes. **D**, Stripped $\alpha\gamma$ and $\alpha'\gamma$ dimers resulting from ejection of the δ subunit from $\alpha\gamma\delta$ and $\alpha'\gamma\delta$ subcomplexes. **E**, Region of the spectrum showing species derived from activation and dissociation of the $\alpha\gamma\delta$ trimer.

Supplemental Fig. 3. **Nano-electrospray mass spectra of phospho-activated PhK in the presence of denaturants.** Spectra of PhK after addition of **(A)** 10% (v/v) acetic acid or **(B)** 10% (v/v) ammonium hydroxide.