



Supplementary Figure 2 Ubiquitin can be phosphorylated in vivo. **(A)** MS/MS (fragmentation) spectrum matched to a tryptic peptide from ubiquitin with a phosphorylated serine 57; *b*- and *y*-type ions are labeled. During fragmentation, the loss of phosphoric acid (98 Da) is common from phosphoserine residues. In this case, the loss of phosphoric acid from the precursor ion and y_7 fragment ion resulted in peaks indicated as $[M-H_3PO_4+2H]^{2+}$ and $[y_7-H_3PO_4+H]^+$, respectively. **(B)** MS/MS spectrum corresponding to the same phosphopeptide generated by solid phase peptide synthesis.