

## Supporting information:

MS/MS spectrum of the  $m/z$  525.84<sup>2+</sup> ion corresponding to vimentin phosphorylated peptide 69-77. Clear phosphate loss is observed ( $m/z$  476.85<sup>2+</sup>). Peaks marked with \* correspond to dehydroalanine containing y<sup>n</sup>-ions and indicate phosphate location on vimentin Ser 72.

