

**Figure S6.** Phosphorylation of P4 residue prevents processing at filaggrin cleavage site. Representative chromatograms are shown for cleavage reactions. Synthetic oligopeptide substrates representing the P2-Leu mutant HIV-1 MA/CA cleavage site (VSQLY↓PIVQ) (a), the cleavage site of SASP14 in pro-FLG (GSFLY↓QVSTH) (b), and the P4-Ser phosphorylated variant of pro-FLG cleavage site (c) were applied. Arrows indicate substrates and cleavage products: S, substrate; <sub>p</sub>S, phosphorylated substrate; P1, product 1; P2, product 2. Samples shown in the chromatograms are labelled: substrate control, red; enzyme control, black; enzyme+substrate, green.

