Supplementary Figure Legends

**Fig. 1.** Representative reverse-phase HPLC absorption profile following *in vitro* digestion of GnRH with NEP for 60 min at 37°C. Digests were analysed by HPLC on a 15-60% water/acetonitrile (AcN) gradient over 35 min. Peptide fragments were detected by spectrophotometry at a wavelength of 214 nm.

**Fig. 2.** A, Representative reverse-phase HPLC absorption profile following *in vitro* digestion of PYY 3-36 with NEP over 60 min, 120 min and 240 min at 37°C. Digests were analysed by HPLC on a 15-60% water/acetonitrile gradient over 35 min. Peptide fragments were detected by spectrophotometry at a wavelength of 214 nm; B, Representative reverse-phase HPLC absorption profile following *in vitro* digestion of PYY 3-36 with meprin β over 5, 15 and 30 min at 37°C. Digests were analysed by HPLC on a 15-60% water/acetonitrile gradient over 35 min. Peptide fragments were detected by spectrophotometry at a wavelength of 214 nm.

**Fig. 3.** A, Representative reverse-phase HPLC absorption profile following *in vitro* digestion of PYY 3-36 with KBB or KBB & 100 nmol phosphoramidon for 30 min at 37°C. KBB only and phosphoramidon alone were run as controls. Digests were analysed by HPLC on a 15-60% water/acetonitrile gradient over 35 min. Peptide fragments were detected by spectrophotometry at a wavelength of 214 nm; B, Representative reverse-phase HPLC absorption profile following *in vitro* digestion of PYY 3-36 with KBB or KBB with 50 or 100 nmol actinonin for 30 min at 37°C. KBB only, 50 nmol and 100 nmol actinonin only were run as controls. Digests were analysed by HPLC on a 20-35% water/acetonitrile gradient over 35 min. Peptide fragments were detected by spectrophotometry at a wavelength of 214 nm.