**Fig. S1** Cytotoxicity was detected by LDH in the presence or absence of antagonists or agonists. Relative LDH release (%) was calculated as after exposure to chemicals (at 70 min) vs. KHB (at 20 min, as 100%). Values are expressed as mean  $\pm$  SEM (n = 6~8). "\*" represents significant differences P < 0.05.

Fig. S2 PepT1 was not involved in SPH-induced CCK release from the porcine duodenal tissues.

(A–D) The mucosal tissues were perfused with KHB (0–20 min, Baseline 1), 1% SPH/Cefalexin (20–50 min), KHB + 4-AMBA (50–70 min, Baseline 2), and 1% SPH/Cefalexin + 4-AMBA (70–100 min). The perfusate was collected every 10 min to determine the CCK concentrations. Values are expressed as mean  $\pm$  SEM (n = 6~8). "\*" indicates a significant difference between the baseline and the stimulant, and "#" means a significant difference between the stimulants (P < 0.05 by Tukey test).