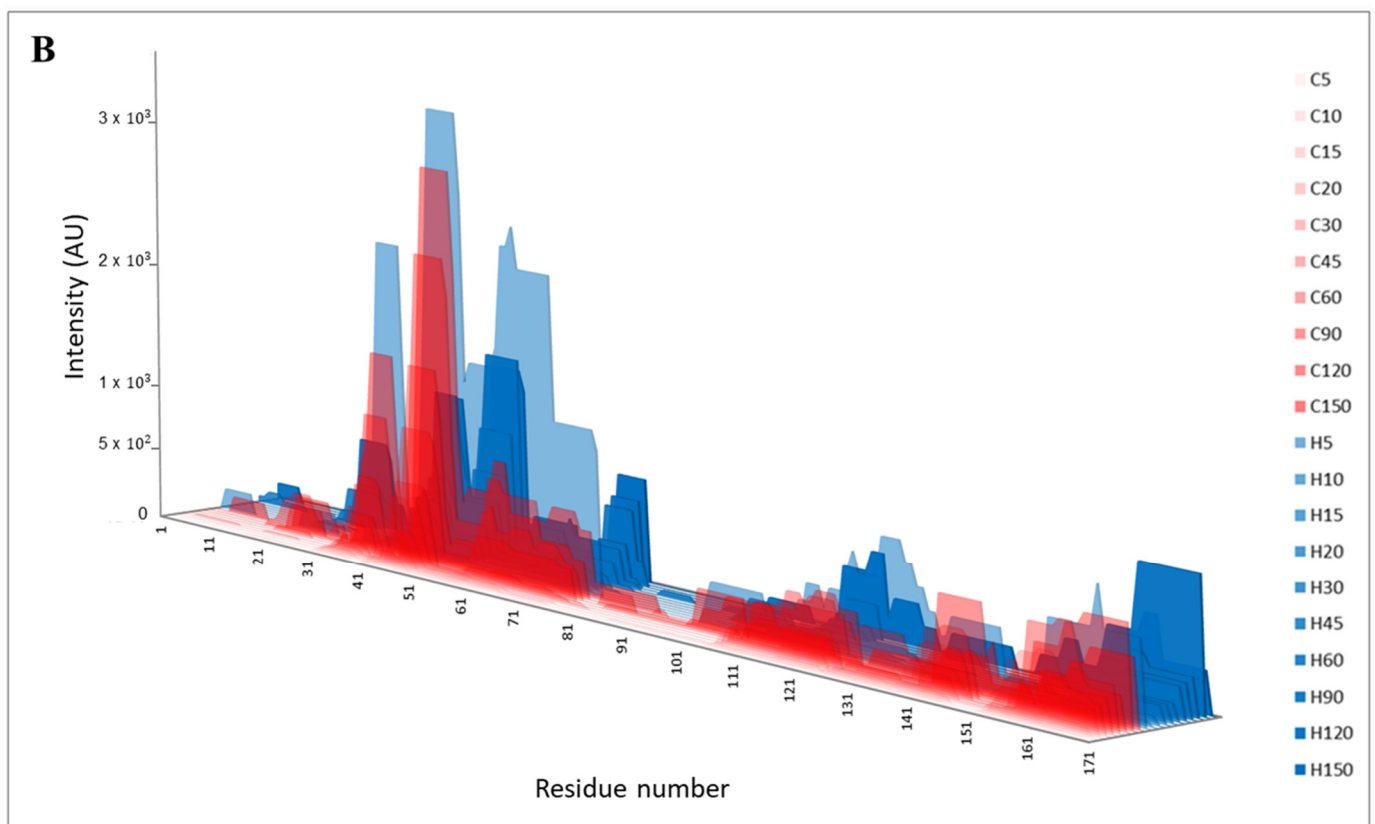
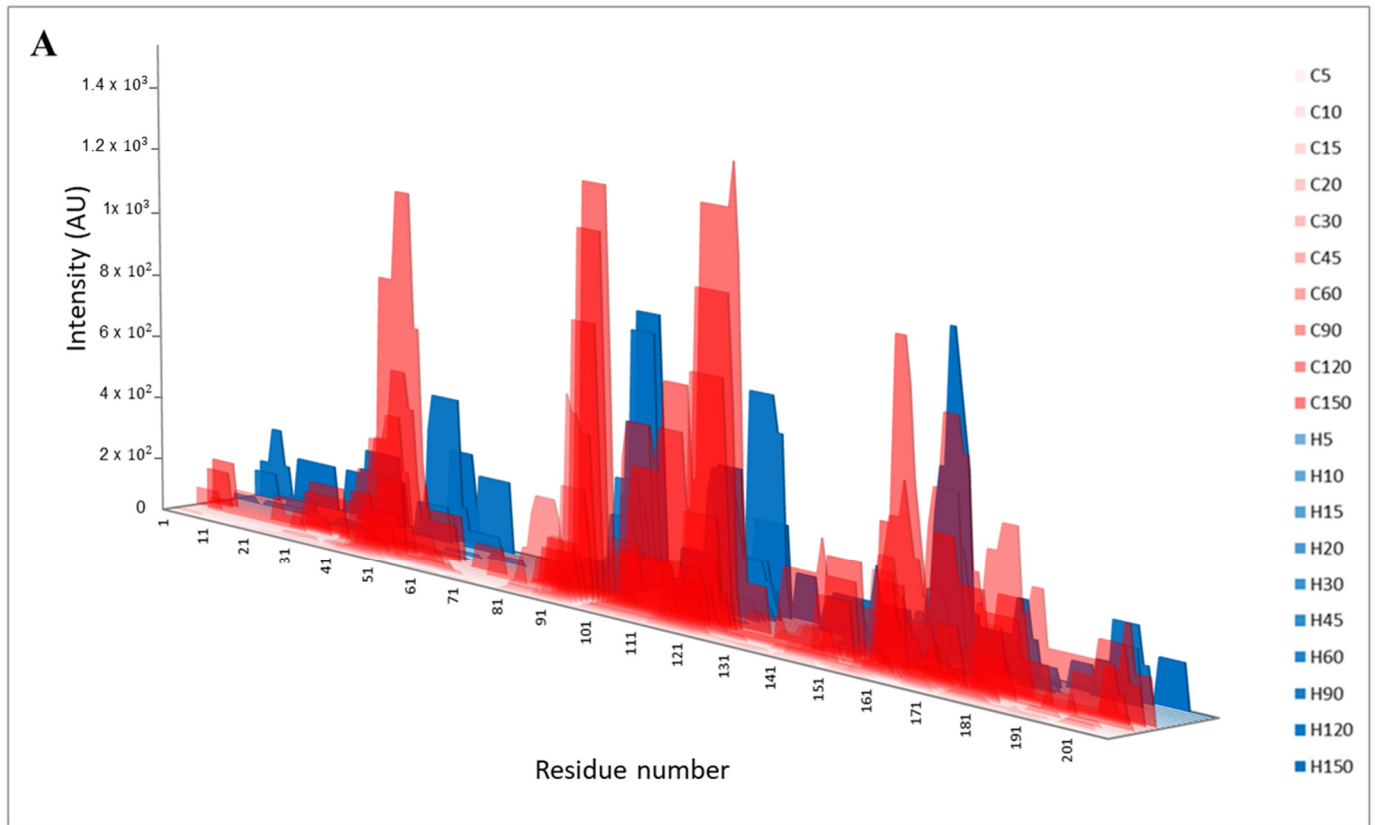
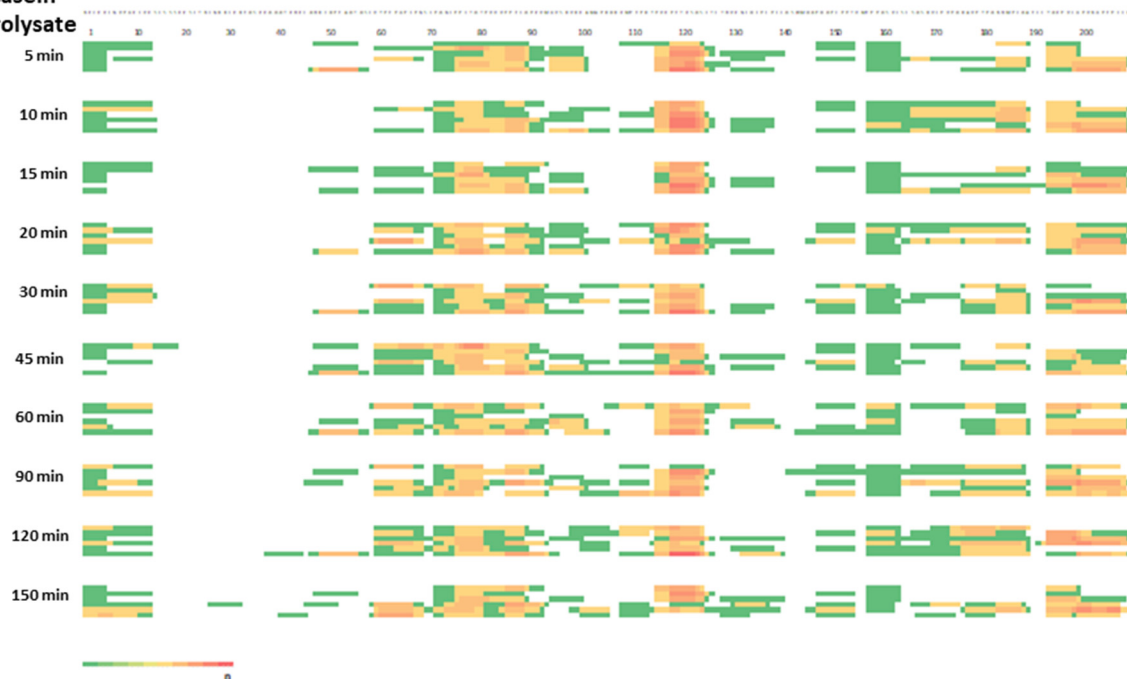
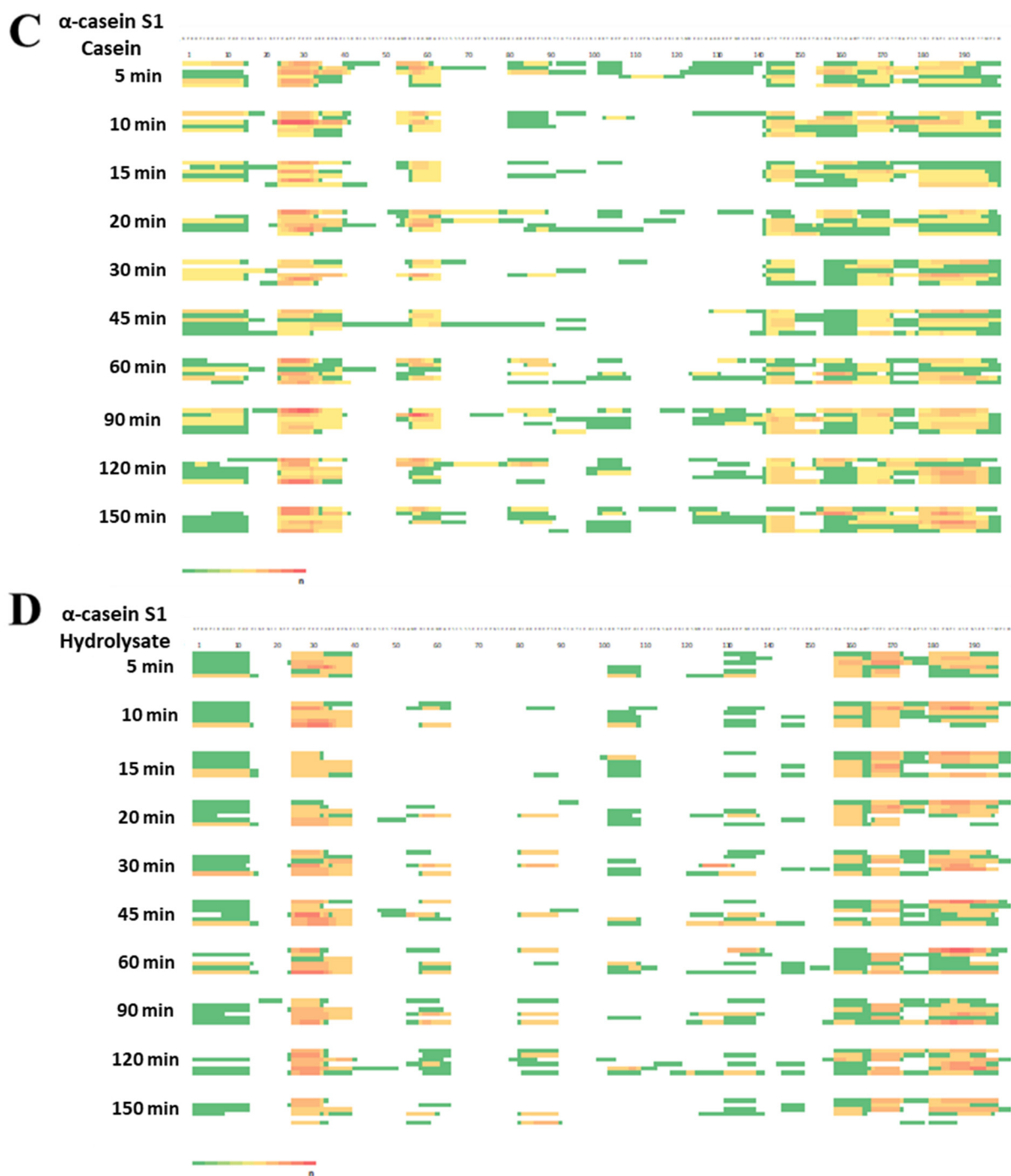


**Figure S1.** Electrophoretic profile of pig duodenal effluents at different times of digestion after intake of casein (A) and hydrolysate (B) compared with the undigested substrate.

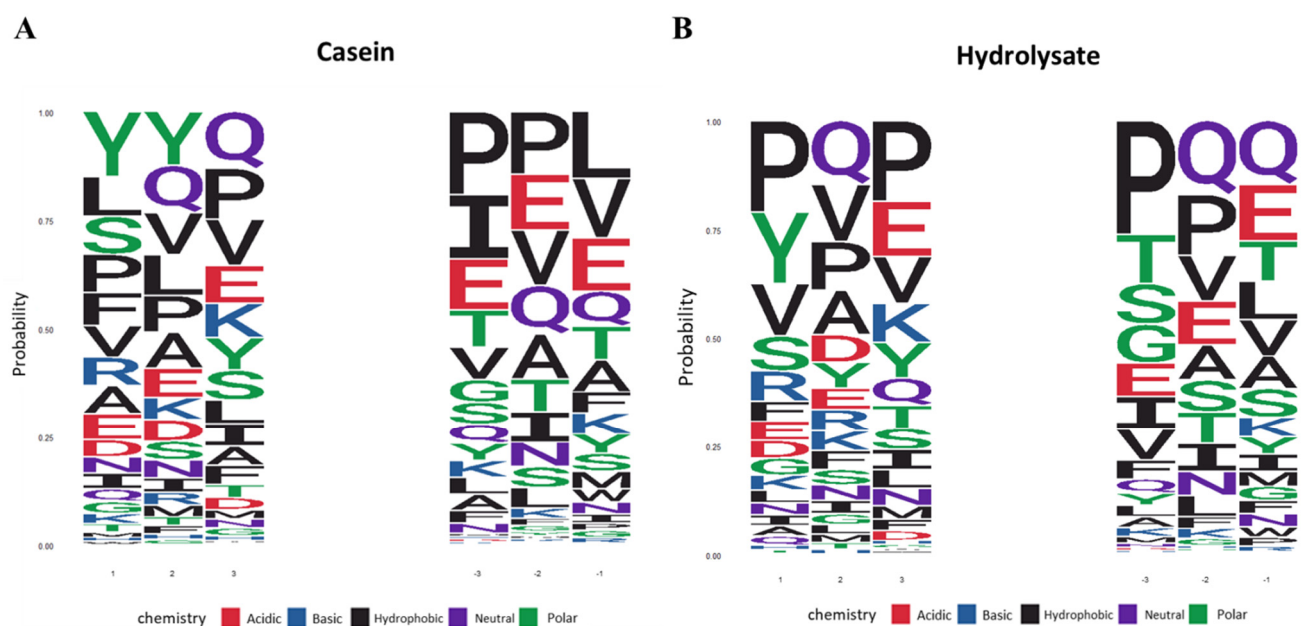


**Figure S2.** Identified peptides in pig duodenal digests after intake of casein (C) or hydrolysate (H) over collection time represented by area graphs. The height (Y-axis) is proportional to the sum of the identified peptide intensities. Profile peptides from  $\alpha_{s1}$ -casein (A) and  $\kappa$ -casein (B).

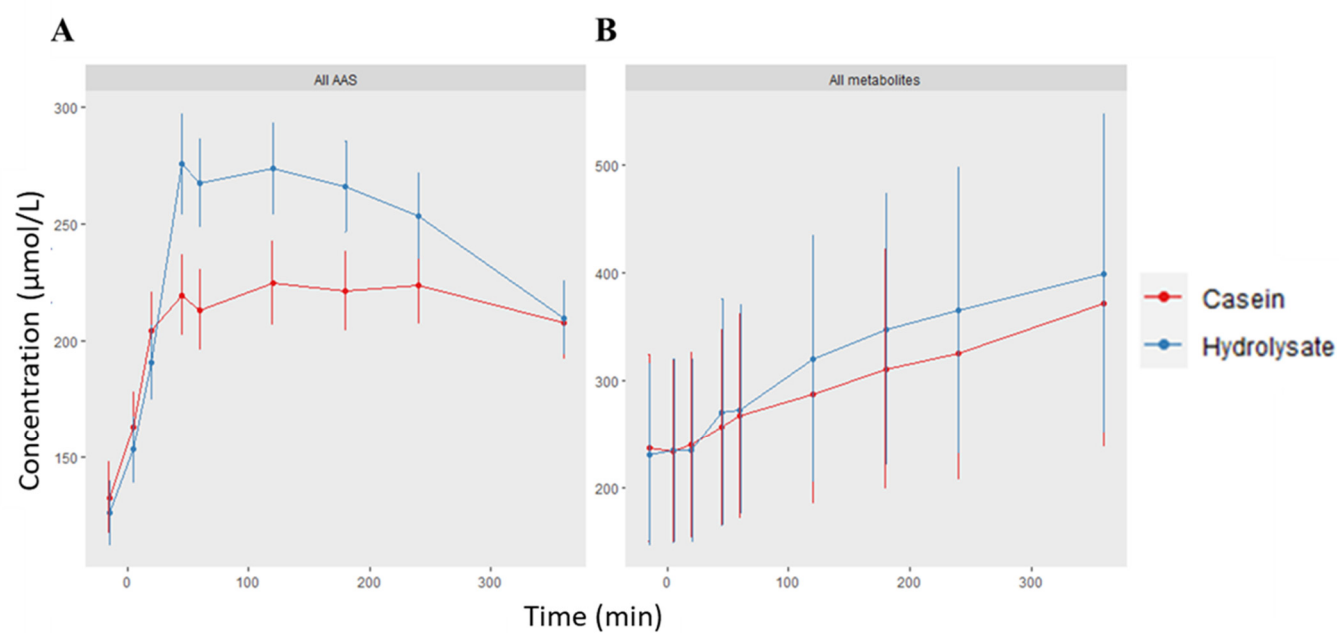
**A** **$\beta$ -casein  
Casein****B** **$\beta$ -casein  
Hydrolysate**



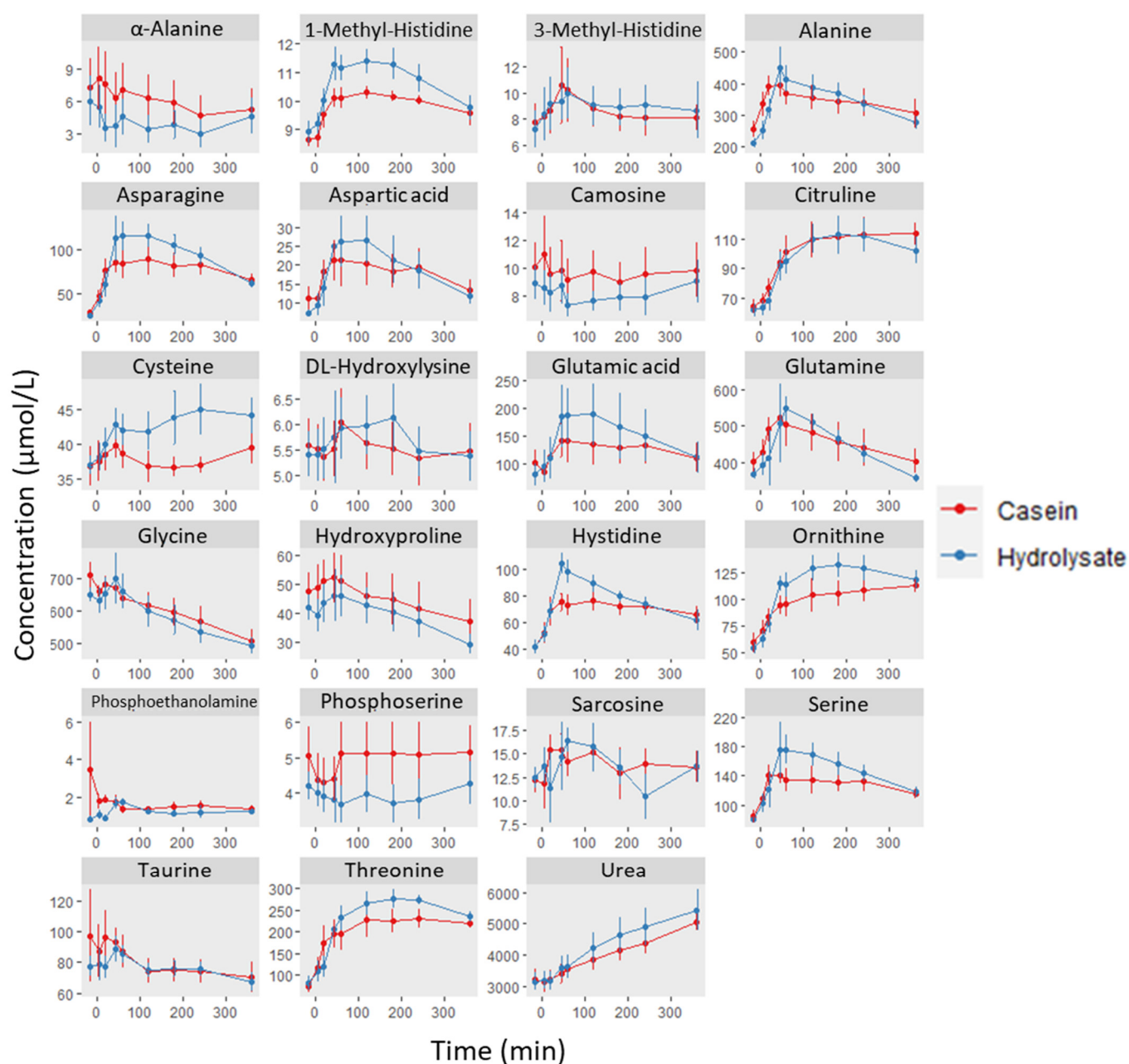
**Figure S3.** Alignment of peptides identified in pig duodenal effluents ( $n=6$ ) collected at different times of digestion after intake of casein (A, C) or hydrolysate (B, D) and represented as heatmaps of  $\beta$ -casein (A, B) and  $\alpha_{s1}$ -casein (C, D). Each line at each time point represents a different subject ( $n=6$ ).



**Figure S4.** SeqLogo analysis of terminal amino acid residues corresponding to the peptides identified in pig duodenal effluents ( $n=6$ ) at basal (-15 min), 5, 10, 15, 20, 30, 45, 60, 90, 120, and 150 min after intake of casein (A) or hydrolysate (B).



**Figure S5.** Total amino acids (A) and metabolites (B) determined in plasma at baseline (-15 min) and 5, 20, 45, 60, 120, 180, 240 and 360 min after intake of casein or hydrolysate in the pig model ( $n=6$ ).



**Figure S6.** Concentration of amino acids in plasma of pigs ( $n=6$ ) at baseline (-15 min) and 5, 20, 45, 60, 120, 180, 240 and 360 min after intake of casein or hydrolysate.

**Table S1.** Pig endogenous proteins identified in duodenal effluents.

<b>Protein</b>	<b>Accession number<sup>1</sup></b>	<b>Function</b>
Pancreatic triacylglycerol lipase	P00591	Digestive enzymes
Lipoprotein lipase	P49923	
Pepsin A	P00791	
Chymotrypsin-like elastase family member 2A	P08419	
Pancreatic alpha-amylase		
Trypsin	P00761	
Dipeptidyl peptidase 4	P22411	
Carboxypeptidase A1	P09954	
Aminopeptidase	P15145	
Pro-glucagon	P01274	Enteroendocrine regulation
Appetite-regulating hormone (Ghrelin)	Q9GKY5	
Gastrin-releasing peptide	P63153	
Gastrin/cholecystokinin type B receptor	A0A287A2K5	
Mucin-5AC	A0A4X1UGK3	Lubrication, maintenance of integrity of tissue lining
Serum albumin	P08835	Maintenance of colloid osmotic pressure (from plasma into stomach and intestine)

<sup>1</sup>Compiled from the UniProtKB Protein Database