

***In vitro* simulated semi-dynamic gastrointestinal digestion: evaluation of the effects of processing on whey proteins digestibility and allergenicity**

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Table S1 Individual sera of the pool used for the ELISA IgE inhibition test (na: data not available).

Patient	Age (years)	IgE (kU/L) Cow milk	IgE (kU/L) Casein	IgE (kU/L) β -LG	IgE (kU/L) α -LA
1	2	na	12.1	17.2	33.9
2	1	35.5	37.7	3.7	22.5
3	1	>100	>100	>100	>100
4	2	30.9	14.7	23.7	0.7
5	7	41.0	34.0	12.0	14.0

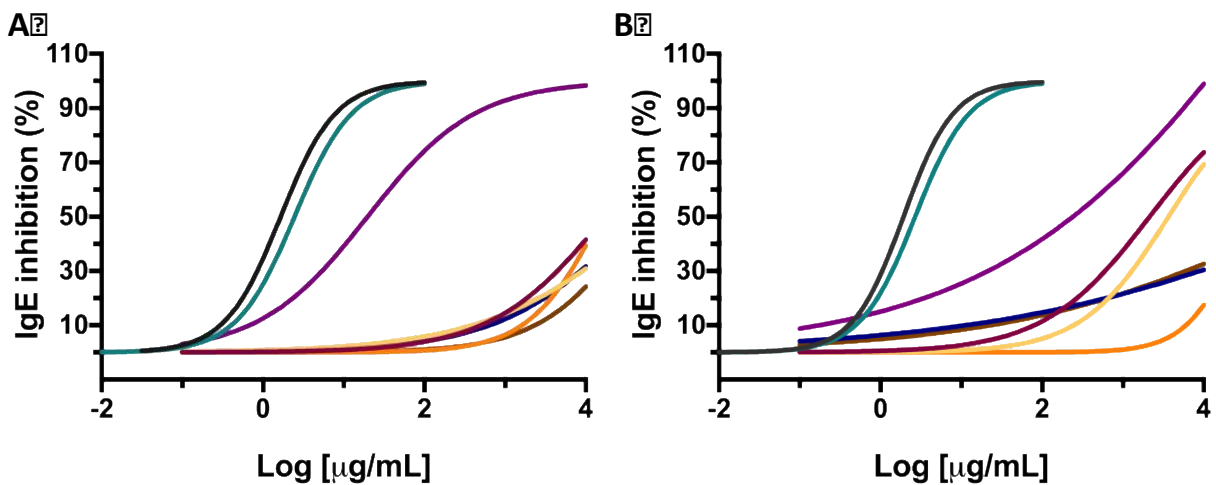


Figure S1 Inhibition curves obtained for all the samples related to CW (A) and WPI (B). In the graph are presented the curves of the reference antigen (black), the undigested protein (light green), gastric fraction 1 (G1, purple), gastric fraction 3 (G3, red), gastric fraction 5 (G5, yellow), intestinal fraction 1 (I1, orange), intestinal fraction 3 (I3, blue), intestinal fraction 5 (I5, brown).

Table S2 MS ions of the synthesised peptides identified from the HPLC-MS spectra.

	MS calculated ions	MS identified ions
Unreacted peptide (<i>R. T.</i> 61.2 min)	1468.8 [M+H] ⁺ ; 734.9 [M+2H] ²⁺ ; 490.29 [M+3H] ³⁺ ; 367.97 [M+4H] ⁴⁺	1470.6 [M+H] ⁺ ; 735.15 [M+2H] ²⁺
Mono-Lactosylated peptide (<i>R. T.</i> 59.6 min)	1792.87 [M+H] ⁺ ; 896.94 [M+2H] ²⁺ ; 598.27 [M+3H] ³⁺ ; 448.97 [M+4H] ⁴⁺	1794.57 [M+H] ⁺ ; 897.25 [M+2H] ²⁺
Di-Lactosylated peptide (<i>R. T.</i> 58.9 min)	2116.87[M+H] ⁺ ; 1058.94 [M+2H] ²⁺ ; 706.27 [M+3H] ³⁺ ; 529.97 [M+4H] ⁴⁺	1059.74 [M+2H] ²⁺ ; 706.7 [M+3H] ³⁺

R.T., HPLC retention time

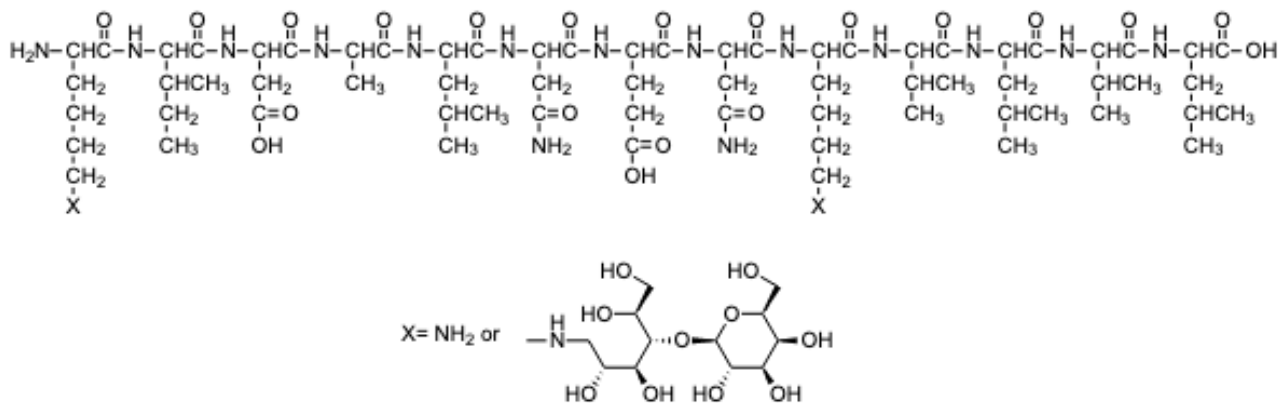


Figure S2 Peptide sequence KIDALNENKVLVL. Lactose can bind one or two lysine residues.