

Figure S1. SCFA and BCFA standard curves based on peak area and concentration. Linearity was assessed using R^2 ; all were above 0.99.

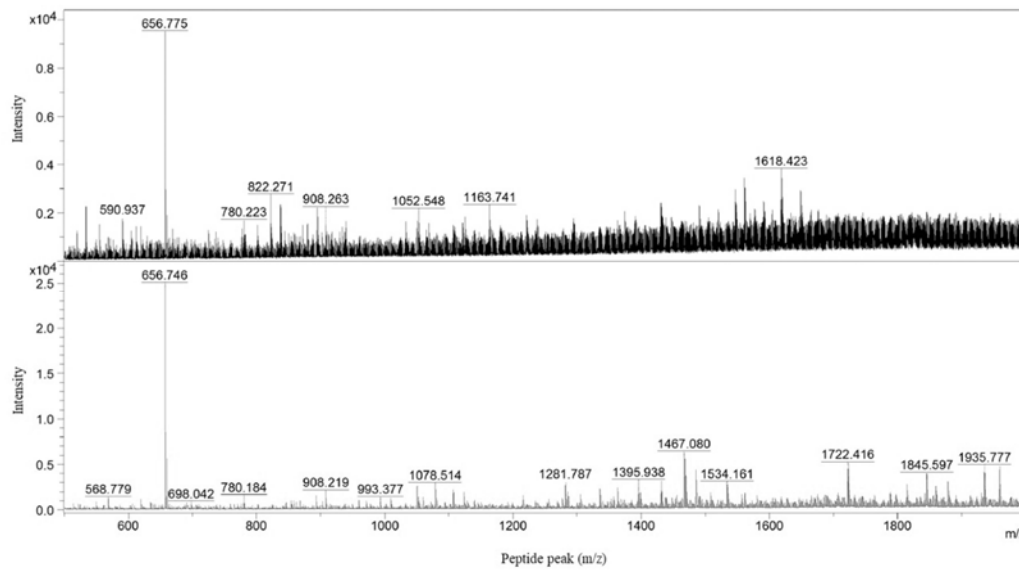


Figure S2. Peptide profile and content. Lower molecular mass chromatograms (500-2000 m/z) of CHs before upper GI digestion. Top chromatogram CH-GL, bottom chromatogram CH-OPT.

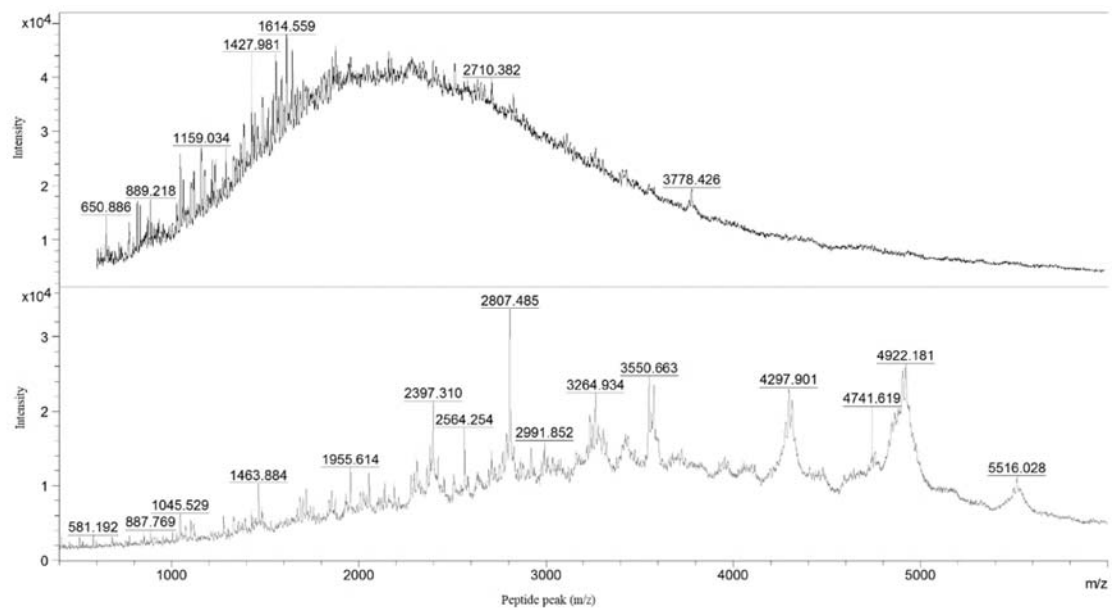


Figure S3. Peptide profile and content. Higher molecular mass chromatograms (100-5000 m/z) of CHs before upper GI digestion. Top chromatogram CH-GL, bottom chromatogram CH-OPT.

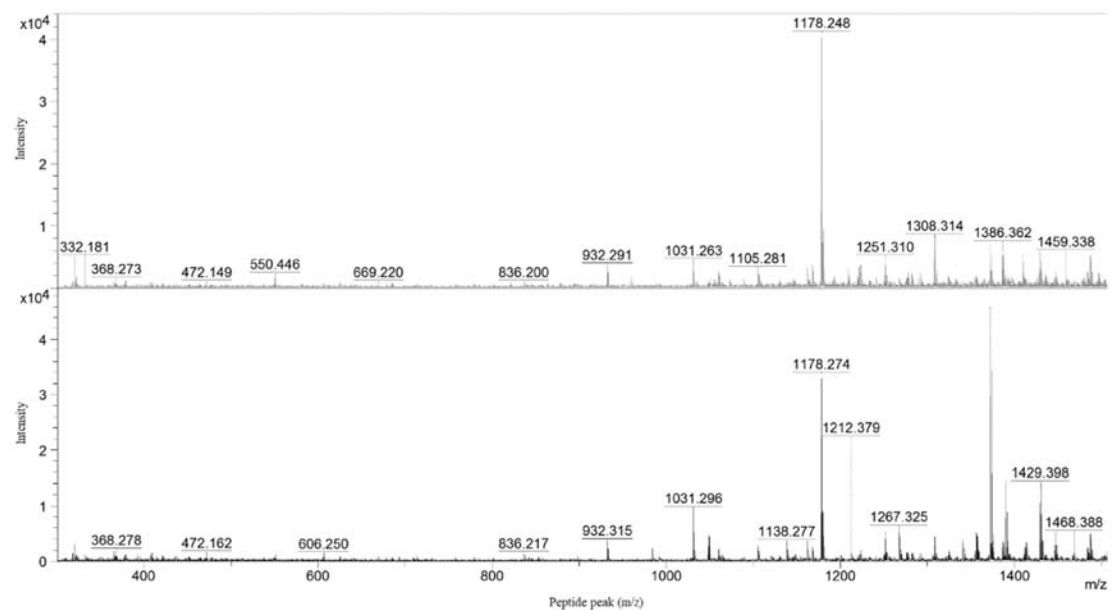


Figure S4. Peptide profile and content. Lower molecular mass chromatograms (300-1500 m/z) of CHs after upper GI digestion. Top chromatogram CH-GL, bottom chromatogram CH-OPT.

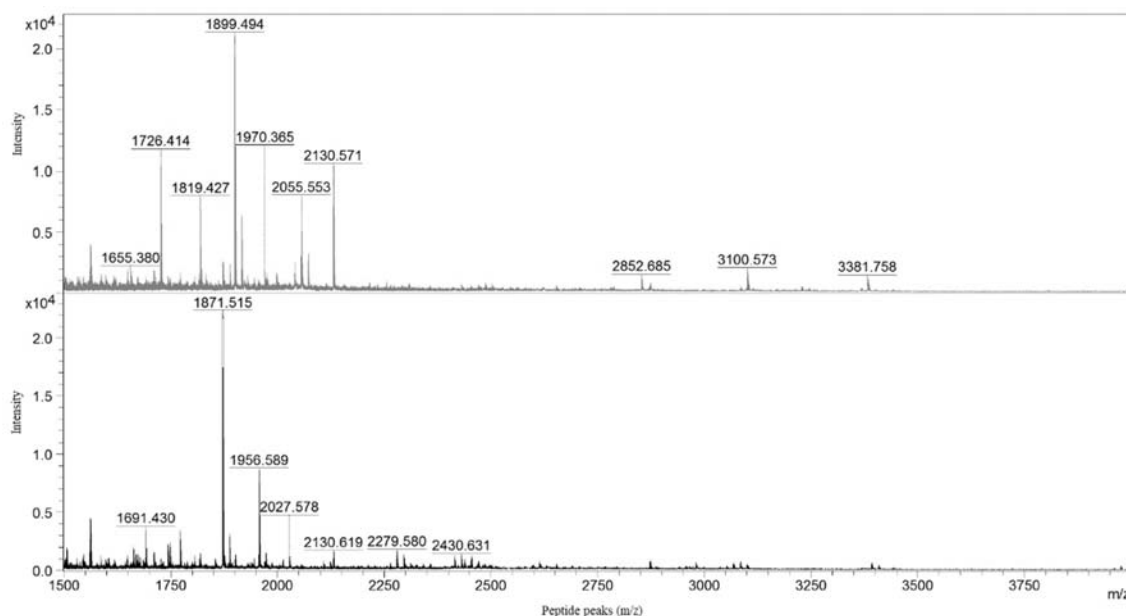


Figure S5. Peptide profile and content. Higher molecular mass chromatograms (1500-4000 m/z) of CHs after upper GI digestion. Top chromatogram CH-GL, bottom chromatogram CH-OPT.

Table S1. List of the peptide sequences from CH-GL and CH-OPT before upper intestinal digestion. Each letter is indicative of an amino acid.

Peptide Sequences		
CH-GL	CH-OPT	Shared sequences
AAGPTGPIGSR	AGPAGPAGPAGPR	AGPSGPAGPTGAR
AGPPGADGQPGAK	GPAGPAGPAGPR	GPAGPAGPRG
AGPSGPSGLPGER	GPAGPAGPAGPRG	GRPGPIGPA
AGPSGPSGLPGERG	GPAGPQGPR	
AIGSPGAGKD	GPAGPQGPRG	
ARGSDGSVGPVGPA	GPMGPGSPRG	
AVGPAGKDGEAGAQ	GPRGPSGPQG	
AVGPAGPRGPAGPSGPAGKDGR	GPVGAPGRP	
AVGPRGPSGPQG	GPVGAPGRPG	
DGAPGKDGVRG	GSPGPQGPPGSIGPQ	
FDGDFYR	GSPGPQGPPGSIGPQG	
FSGLDGAKGD	PAGPQGPRG	
GAAGPTGPIGSR	SGPPGPPGPA	
GADGAPGKDGVRG	SPGPQGPPGSIGPQ	
GADGAPGKDGVRGL	VGSPGPAGPRG	
GDRGEAGPAGPAGPAGPR	VPGPMGPGSPR	
GDRGETGPAGPA	VPGPMGPGSPRG	
GDRGETGPAGPAGPIGPVGAR		
GDRGETGPAGPS		
GEGGPQGPRGS		
GEGGPQGPRGSEGPQG		
GEPGKQGPSGASGE		

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GKDGEAGAQQPPGPAGPA
GKSGDRGETGPAGPA
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GKSGDRGETGPAGPAGPIGPVG
GKSGDRGETGPAGPAGPIGPVGAR
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GPVGPSGPPGKD
GQGDPRPGIPA
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ISVPGPMGPPSGPR
LDGAKGDAGPAGPK
LGPVGNPGPAGPAGPR
LMGPRGPPG
PGDKGEAGPSGPAGPTGA
PGPAGPAGPR
QGDPRPGIPA
RGPRGDQGPVGR
SGDRGETGPAGPA
SGDRGETGPAGPS
TAGPSGPSGLPGERG
TGPAGPAGPIGPVGAR
VGPAGPRGPA
VGPAGPRGPAGPS
VGPAGPRGPAGPSGPAGKDGR
VGPRGPSGPQG
VMGPAGSRG
VQGPPGPAGPR
VQGPPGRPGPQ
VVGLPGQR

Table S2. List of the peptide sequences from CH-GL and CH-OPT after upper intestinal digestion.

Peptide Sequences		
CH-GL	CH-OPT	Shared Sequences
AAGPPGPTGPAGPPGFP GAVGAK	AAGEPGKAGER	AAGAPGPQGPVGPVGK
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AFLSIHS	AAGLPGPKGDRGDAGPK	AGAPGAPGSQGAPGLQG MPGER
AGPPGLLGPPGPR	AAGPSGNLPGASR	AGAPGPQGPVGPVGK
AGPPGPTGPAGPPGFPG	AAGPTGPIGSR	AGEAGKPGER
ANGIPGPIGPPGPR	AAGPTGPIGSRG	AGLPGVAGAPGLPGPR
APGAPGPVGA	AAGQPGAKGER	AGPPGFPGAPGPK
AVGPAGAVGPR	ADGPAGAPGTPGPQG	AGPPGPTGPAGPPGFPGA VGAK
DARPNWPWQ	AGAPGIPGGK	AGPPGPTGPAGPPGFPGA VGAKGEGGPQGPR
DGANGIPGIPPPGPR	AGAPGIPGGKGD SGAPGER	AGPSGPSGLPGER
DGATGAAGPPGPTGPAGPPGFPGA VGAK	AGAPGLPGPR	AGPSGPSGLPGERG
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DGRPGPIGPA	AGEPGRDGNPGSDGLPGR	DKGEPGDKGPR
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DLSFLPQPPQE	AGPAGPKGEPGSPGENGAPQMGR	EVGPRGLPGEPGP
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DQGLVSQDLFS	AGPIGSAGPPGFPG	FQGPGEPEPGASGPMG PR
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DRGETGPAGPAGPIGPVGA	AGPPGADGQPGAK	GAAGEPGKAGER
DTEYFGTIGITPAQD	AGPPGESGR	GAAGLPGVAGAPGLPGP R
DTGSSNLWVPS	AGPPGPAGPAGPPGP	GANGAPGIAGAPGFPGA R
DTVQVGGISDTNQIFG	AGPPGPPGPAGK	GAPGDRGEPGPPGPAGF
EFGFDGDFYR	AGPPGPSGPPGEK	GAPGPQGPVGPVGK
EFGFDGDFYRA	AGPTGPIGSR	GAPGTAGPSGPSGLPGER
EGICKPGAP	AGPTGPIGSRG	GARGEPPAGLPGPGE
EGPVGLPGIDGR	AGQPGAKGER	GDGGPPGATGFPGAAG
EGPVGLPGIDGRPGPI	AGRPGEAGLPAGK	GDRGETGPAGPAGPIGPV

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EGPVGLPGIDGRPGPIGPAGAR	AKGDPPGR	GEPGNIGFPGPK
EGSPGLPGIPPPGVR	AKGEPGDAGAK	GEPGPAGAVGPAGAVGP R
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ERGPPGPMGPPGLAGPPGESGR	APGPKGAR	GEPGPAGLPGPPG
ETGPAGPAGPIGPV	AQGPPGPAGPAGER	GEPGPAGLPGPPGE
ETGPAGPAGPIGPVG	ARGEPGAGLPGPPGER	GEPGPAGLPGPPGER
ETGPAGPAGPIGPVGA	ARGPAGPQGPR	GEPGLGIAGPPGAR
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FDNIWDQGLVSQ	ARGPSGPQGSPGPPGPK	GERGPPGESGAAGPTGPI GS
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PGTPGLPGFKGIR	GLAGPPGESGR	
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RPGPPGPPGPK	GLPGPPGER	
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VGGISDTNQIFG	GPAGAPGTPGPQG	
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VPGPMGPSGPRG	GPAGPPGPIGN	
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	GVQGPPGPAGPR	
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	LSGPVGPPGNPGANGLPGAK	
	LTGSPGSPGPDGK	
	LVGEPGPAGSK	
	NAGPPGPPGPAGK	
	NGDDGEAGKPGRPGE	
	NGDDGEAGKPGRPGERGPPGPQG	
	NGDDGEAGKPGRPGERGPPGPQGA	
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	PGLPGPSGEPGKQGPPSGASGER	
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	QPGLPGPR	
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	RGETGPAGPSGAPGPAGSR	
	RGFPPER	
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	RGPPGPPGK	
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	RGPSGPQGPPSGPPGPK	
	RGVPGPPGAVGPA	
	RGVQGPPGPAGPR	
	SAGIPGPFGR	
	SFLPQQPEK	
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	SGAAGPTGPIGSR	
	SGAPGVPGIAGPR	
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	SPGPQGPPGSIGPQ	
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	VAGPKGPAGE	
	VAGPKGPAGER	
	VAGPPGPSGPPGEK	
	VDGAPGKDGPR	
	VGAPGPAGAR	
	VGEPGPAGSK	
	VGEPGPAGSKGESGNKGEPGAVGQP GPPGPSGEEK	
	VGNPGPAGPAGPR	
	VGPAVAGPR	
	VGPAKDGEGAGAQ	
	VGPPGPPGPAGEK	
	VGPPGPSGN	
	VGPPGPSGNAGPPGPPGPAGK	

	VGPPGPSGNAGPPGPPGPAGKE	
	VGPSGPPGKD	
	VGQPGPPGPSGEEGK	
	VGSPGPAGPR	
	VQGPPGPAGPR	
	VQGPPGPAGPRG	
	VVGAPGTAGPSGSLPGER	
	VVGLPGQR	
	VVGLPGQRGER	

Table S3. DPPH and FRAP for CH-GL and CH-OPT at times 0, 8, 16 and 24 h for each colonic region.

Time (h)	CH-GL		CH-OPT	
	DPPH	FRAP	DPPH	FRAP
Ascending colon				
0	24.00±6.05	440.82±270.11	17.53±0.68	273.39±2.49
8	24.05±2.05	392.93±92.98	18.63±2.03	315.14±56.17
16	27.68±2.63	454.30±50.21	28.25±0.85*	370.81±43.24
24	29.10±1.20	424.08±28.36	26.88±1.28*	390.69±73.07
Transverse colon				
0	20.65±8.75	431.06±247.33	15.40±0.45	236.11±55.67
8	21.20±3.85	392.00±40.91	21.58±3.93	255.00±31.81
16	24.08±0.43	328.78±74.38	16.13±1.28	297.74±1.99
24	17.55±4.25	292.52±66.95	23.73±0.03	323.09±55.17
Descending colon				
0	29.35±9.85	520.32±304.04	22.50±1.10	245.05±26.84
8	24.25±11.45	699.77±99.49	19.98±0.43	170.49±39.77
16	28.28±9.43	309.25±110.65	21.15±0.50	247.54±42.25
24	20.68±3.73	492.42±71.59	19.55±0.01	278.36±23.36

Values are expressed as mean ± SEM in mM. DPPH is reported in mM Trolox Eq. FRAP is reported in μM ascorbic acid equivalents. Within a column, * symbol indicates significant differences from control (Time 0 h) (p<0.05).