Supporting Information

Colon-available Mango (Poly)phenols Exhibit Mitigating Effects on the Intestinal Barrier Function in Human Intestinal Cell Monolayers Under Inflammatory Conditions

Gema Pereira-Caro[1,2*], Salud Cáceres-Jiménez[3], Alicia Moreno-Ortega[1,2], Sara Dobani[4,5], Kirsty Pourshahidi[4], Chris I. R. Gill[4], Pedro Mena[5,6], Daniele Del Rio[5,6], José Manuel Moreno-Rojas[1,2], Giuseppe Taurino[6], Ovidio Bussolati[6,7], Tahani M. Almutairi[8], Alan Crozier[8,9], Massimiliano G. Bianchi[6,7*]

[1]Department of Agroindustry and Food Quality, Andalusian Institute of Agricultural and Fisheries Research and Training (IFAPA), Alameda del Obispo, Córdoba, Spain

[2]Foods for Health Group, Instituto Maimónides de Investigación Biomédica de Córdoba (IMIBIC), Córdoba, Spain.

[3]Departamento de Bromatología y Tecnología de los Alimentos, Campus Rabanales, Ed. Darwin-anexo Universidad de Córdoba, Córdoba, Spain

[4]Nutrition Innovation Centre for Food and Health (NICHE), Ulster University, Coleraine, UK

[5] Human Nutrition Unit, Department of Food and Drug, University of Parma, Parma, Italy

[6] Microbiome Research Hub, University of Parma, Parma, Italy

[7] Laboratory of General Pathology, Department of Medicine and Surgery, University of Parma, Parma, Italy

[8]Department of Chemistry, King Saud University Riyadh, Saudi Arabia

[9]School of Medicine, Dentistry and Nursing, University of Glasgow, Glasgow, UK

*Corresponding authors:

Dra. Gema Pereira-Caro (mariag.pereira@juntadeandalucia.es)

Dr. Massimiliano Bianchi (massimiliano.bianchi@unipr.it)

Table S1. Age of the six ileostomy participants in the study.

Volunteer ID	**Age**
S02	34
S04	65
S05	56
S07	42
S08	33
S10	53

Table S2. Primers used for studies of gene expression.

Gene	Forward	Reverse	T (°C)	Amplicon Size (bp)	Amplification efficiency (%)
Interleukin-8	5' ACT GAG AGT GAT TGA GAG TGG AC 3′	5' AAC CCT CTG CAC CCA GTT TTC 3'	59 °C	127	105 ± 5
Nitric oxide synthase 2	5' TCT GTT CAA GAC CAA ATT CCA CC 3'	5' CGG GGA CTC ATT CTG CTG C 3'	58 °C	151	110 ± 8
Mucin 2	5’ GAG GGC AGA ACC CGA AAC C 3’	5’ GGC GAA GTT GTA GTC GCA GAG 3’	59 °C	117	101 ± 5
Ribosomal Protein L15	5’ GCA GCC ATC AGG TAA GCC AAG 3’	5’ AGC GGA CCC TCA GAA GAA AGC 3’	57 °C	100	104 ± 5

Table S3. (Poly)phenols presented in ileal fluid from six subjects pre- (0 h) and post-mango intake (4-8 h). Data is expressed in nmol as mean value ± SD.

	S02		S04		S05		S07		S08		S10	
	0 h	**4-8 h**	**0 h**	**4-8 h**	**0 h**	**4-8 h**	**0 h**	**4-8 h**	**0 h**	**4-8 h**	**0 h**	**4-8 h**
Cinnamic acids												
4′-Hydroxy-3′-methoxycinnamic acid	8 ± 0.2	65 ± 0.3*	865 ± 50	37 ± 2	257 ± 4	41 ± 2	339 ± 20	15 ± 0.1	135 ± 4	16 ± 0.1	118 ± 6	122 ± 4
3′-Methoxycinnamic acid-*O*-hexoside	12 ± 0.4	3 ± 1	<LQ	<LQ	96 ± 24	<LQ	136 ± 3	4 ± 0.3	<LQ	<LQ	7 ± 2	46 ± 2 *
4′-Hydroxy-3′,5′-dimethoxycinnamic acid	2.4 ± 0.1	46 ± 1*	165 ± 3	11 ± 0.2	116 ± 12	119 ± 1	35 ± 1	3.7 ± 0.1	74 ± 3	188 ± 3 *	44 ± 5	368 ± 2 *
3,5-dimethoxycinnamic acid hexoside 1	0.9 ± 0.1	<LQ	<LQ	<LQ	<LQ	<LQ	0.9 ± 0.1	9 ± 2 *	<LQ	<LQ	2 ± 1	15 ± 0 *
3′,4′-Dihydroxycinnamic acid	16 ± 1	5 ± 0.5	118 ± 2	26 ± 0.4	2.8 ± 0.3	2 ± 0.1	11 ± 0.2	3.5 ± 0.4	82 ± 1	16 ± 1	38 ± 2	9.1 ± 0.4
3′-Methoxycinnamic acid-4′-glucuronide	13 ± 1	9 ± 0.8	247 ± 66	<LQ	<LQ	6.7 ± 0.1*	<LQ	7.9 ± 0.3 *	<LQ	17 ± 2 *	5 ± 0.6	11 ± 0.3 *
4′-Hydroxycinnamic acid-3′-sulfate	67 ± 2	10 ± 0.3	<LQ	16 ± 0.4*	<LQ	1.2 ± 0.1*	<LQ	15 ± 3 *	<LQ	55 ± 0 *	1.5 ± 0.1	9.9 ± 0.3 *
3′-Methoxycinnamic acid-4′-sulfate	1299 ± 49	962 ± 119	2027 ± 739	731 ± 4	<LQ	22 ± 0.7*	1207 ± 136	3068 ± 115 *	4702 ± 498	1926 ± 17	2958 ± 363	975 ± 25
Total cinnamic acids	**1418±54**	**1100 ± 123**	**3422 ± 860**	**821 ± 7**	**472 ± 40**	**192 ± 4**	**1729±160**	**3126 ± 121** *	**4993 ± 506**	**2218 ± 23**	**3173 ± 380**	**1555 ± 34**
Phenylpropanoic acids												
3-(4′-Hydroxy-3′-methoxyphenyl)propanoic acid	22 ± 1	<LQ	<LQ	62 ± 1 *	6089 ± 872	<LQ	<LQ	<LQ	<LQ	<LQ	<LQ	16 ±0.1
3-(3′-Hydroxy-4′-methoxyphenyl)propanoic acid	<LQ	<LQ	<LQ	17 ± 0.4 *	<LQ	35 ± 1 *	<LQ	<LQ	<LQ	14 ±0.3	<LQ	25 ± 2 *
3-(3′-Hydroxyphenyl)propanoic acid-4′-glucuronide	652 ± 12	559 ± 39 *	<LQ	<LQ	<LQ	57 ± 2 *	104 ± 32	379 ± 40 *	<LQ	205 ± 4 *	<LQ	286 ± 9 *

3-(4′-Hydroxyphenyl)propanoic acid-3′-glucuronide	384 ± 35	547 ± 21	7961 ± 130	493 ± 29	<LQ	323 ± 15 *	527 ± 96	3402 ± 109 *	<LQ	1146 ± 94 *	<LQ	10735 ± 124
3-(4′-Methoxyphenyl)propanoic acid-3′-glucuronide	20 ± 1	32 ± 10	102 ± 1	99 ± 7	65 ± 4	48 ± 2	11 ± 4	<LQ	111 ± 5	<LQ	114 ± 14	<LQ
3-(3′-Hydroxyphenyl)propanoic acid-4′-sulfate	<LQ	<LQ	<LQ	<LQ	<LQ	117 ± 12 *	194 ± 42	215 ± 50	<LQ	511 ± 25 *	<LQ	330 ± 30
3-(4′-Hydroxyphenyl)propanoic acid-3′-sulfate	2248 ± 143	629 ± 27	<LQ	4630 ± 164 *	7139 ± 2740	73 ± 0.1	2391 ± 467	228 ± 20	2689 ± 545	636 ± 16	1601 ± 289	<LQ
Total phenylpropanoic acids	**3326 ± 192**	**1767 ± 97**	**8063 ± 131**	**5301 ± 202**	**13293 ± 3615**	**653 ± 32**	**3227 ± 641**	**4224 ± 220**	**2800 ± 550**	**2512 ± 140**	**1715 ± 303**	**11392 ± 165**
Phenylacetic acids												
Phenylacetic acid	214 ± 2	<LQ	1416 ± 10	<LQ	<LQ	<LQ	<LQ	<LQ	6123 ± 217	<LQ	5734 ± 31	<LQ
3′-Hydroxyphenylacetic acid-4′-sulfate	<LQ	1554 ± 15 *	<LQ	<LQ	415 ±6	143 ± 1	<LQ	902 ± 14 *	<LQ	626 ± 9 *	2904 ± 51	1643 ± 15
3′-Methoxyphenylacetic acid-4′-sulfate	1626 ± 156	530 ± 75	<LQ	<LQ	<LQ	144 ± 9 *	1562 ± 1	577 ± 136	<LQ	<LQ	1396 ± 313	<LQ
4′-Methoxyphenylacetic acid-3′-sulfate	206 ± 14	210 ± 56	<LQ	<LQ	115 ± 4	37 ± 1	150 ± 5	140 ± 30	<LQ	176 ± 6 *	1167 ± 419	776 ± 93
Total phenylacetic acids	**2046 ± 171**	**2294 ± 146**	**1416 ± 10**	**<LQ**	**530 ± 10**	**324 ± 11**	**1712 ± 6**	**1619 ± 180**	**6123 ± 217**	**802 ± 15**	**11201 ± 814**	**2419 ± 108**
Benzoic acids												
3,4,5-Trihydroxybenzoic acid	1.6 ±0.1	685 ± 31 *	13 ± 9	3052 ± 92 *	7.5 ± 0.4	2459 ± 79 *	15 ±1	5592 ± 952 *	<LQ	2562 ± 52 *	0.8 ± 0.1	1765 ± 200 *
Trihydroxybenzoic acid	<LQ	<LQ	1.2 ± 0.1	160 ± 1 *	0.5 ± 0.1	<LQ	0.8 ± 0.2	21 ± 3 *	2.8 ± 0.1	<LQ	<LQ	<LQ
3,4-dihydroxy-5-(3,4,5-trihydroxybenzoyloxy)benzoic acid	<LQ	11 ± 2 *	<LQ	4.3 ± 0.1 *	<LQ	3 ± 5 *	<LQ	21 ± 1 *	<LQ	34 ± 1 *	<LQ	10 ± 1 *
3,5-Dihydroxy-4-methoxybenzoic acid	<LQ	<LQ	<LQ	4.8 ± 0.2 *	<LQ	46 ± 1 *	<LQ	<LQ	<LQ	<LQ	<LQ	<LQ
Dihydroxybenzoic acid-sulfate 2	0.1 ± 0.1	307 ± 7 *	<LQ	42 ± 1 *	<LQ	71 ± 1 *	<LQ	646 ± 17 *	<LQ	196±0.5 *	<LQ	193 ± 1 *
3-Hydroxy-4-methoxybenzoic acid-5-sulfate	<LQ	<LQ	<LQ	896 ± 17 *	<LQ	137 ± 2 *	<LQ	2454 ± 28 *	<LQ	467 ± 4 *	<LQ	1336 ± 1261

5-Hydroxy-3-methoxybenzoic acid-4-sulfate	<LQ	489 ± 5 *	<LQ	23 ± 1 *	<LQ	34 ± 0.4 *	<LQ	271 ± 5 *	<LQ	49 ± 2 *	<LQ	60 ± 2 *
3,4-Dihydroxybenzoic acid	28 ± 3	<LQ	504 ± 47	918 ± 41 *	<LQ	137 ± 14 *	<LQ	403 ± 52 *	125 ± 5	1750 ± 19 *	202 ± 29	515 ± 56 *
4-Hydroxybenzoic acid	11 ± 1	<LQ	296 ± 6	53 ± 3	85 ± 3	86 ± 2	41 ± 1	<LQ	<LQ	<LQ	<LQ	58 ± 4 *
Hydroxybenzoic acid-hexoside 1	71 ± 4	87 ± 13	42 ± 30	267 ± 17 *	<LQ	3 ± 1	7 ± 5	245 ± 27 *	37 ± 3	638 ± 23 *	<LQ	340 ± 64 *
3-Hydroxybenzoic acid-4-sulfate	64 ± 7	<LQ	50 ± 17	<LQ	<LQ	<LQ	<LQ	254 ± 8 *	<LQ	556 ± 13 *	1116 ± 59	380 ± 27 *
Total benzoic acids	**176 ± 15**	**1579 ± 59** *	**906 ± 109**	**5420 ± 173** *	**93 ± 3**	**2976 ± 105** *	**64 ± 7**	**9653 ± 1093** *	**165 ± 9**	**6252 ± 114** *	**1319 ± 88**	**4657 ± 1613** *
Hydroxybenzenes												
1,2,3-Trihydroxybenzene	7.6 ± 0.1	61 ± 0.6 *	33 ± 10	352 ± 33 *	24 ± 6	495 ± 27 *	4.4 ± 0.2	45 ± 1 *	<LQ	132 ± 7 *	34 ± 3	12 ± 6
Methylbenzene-sulfate 1	0.3 ± 0.1	<LQ	1.6 ± 0.2	<LQ	<LQ	<LQ	4.8 ± 1	<LQ	6.4 ± 0.3	<LQ	<LQ	<LQ
Methylbenzene-sulfate 2	13 ± 0.2	60 ± 0.1 *	14 ± 8	0.3 ± 0.1	<LQ	<LQ	26 ± 4	1.6 ± 0.1	110 ± 2	1.1 ± 0.1	131 ± 1	11 ± 0.1
Dihydroxybenzene-sulfate 3	<LQ	1.8 ± 0.4	<LQ	22 ± 1	<LQ	91 ± 1	<LQ	4 ± 3	<LQ	46 ± 1	<LQ	22 ± 0.1
Hydroxy-methylbenzene-sulfate 1	6.3 ± 0.1	9.5 ± 0.2 *	<LQ	2.6 ± 0.2 *	8.2 ± 0.5	<LQ	<LQ	3.6 ± 0.1 *	0.8 ± 0.1	74 ± 8	92 ± 1	6 ± 2
Hydroxy-methylbenzene-sulfate 2	<LQ	11 ± 0.5 *	<LQ	0.7 ± 0.1 *	4.4 ± 0.1	0.7 ± 0.1	<LQ	2 ± 0.1 *	<LQ	82 ± 8	5.7 ± 0.1	28 ± 4
Total hydroxybenzenes	**27 ± 0.4**	**143 ± 2** *	**49 ± 19**	**378 ± 34** *	**37 ± 6**	**587 ± 28** *	**35 ± 5**	**56 ± 4** *	**117 ± 3**	**335 ± 25**	**263 ± 5**	**79 ± 12**
Galloyl derivatives												
Mono-galloyl-glucoside 1	<LQ	6 ± 4	<LQ	9 ± 0.2 *	<LQ	16 ± 0.1 *	<LQ	68 ± 1 *	<LQ	6.1 ± 0.1 *	<LQ	<LQ
Mono-galloyl-glucoside 2	<LQ	1.9 ± 0.9	<LQ	<LQ	<LQ	<LQ	<LQ	5.3 ± 0.3 *	<LQ	8 ± 0.5 *	<LQ	32 ± 1 *
Tetra-galloyl-glucoside 1	<LQ	0.1 ± 0.1	<LQ	0.7 ± 0.1 *	<LQ	0.4 ± 0.1 *	<LQ	4.4 ± 0.2 *	<LQ	3.4 ± 0.2 *	<LQ	0.4 ± 0.1 *
Tetra-galloyl-glucoside 2	<LQ	6 ± 1	<LQ	3.8 ± 0.3 *	<LQ	1.8 ± 0.2 *	<LQ	15 ± 2 *	<LQ	9.2 ± 0.1 *	<LQ	1.3 ± 0.1 *
Penta-galloyl-glucoside	<LQ	1.5 ± 0.3 *	<LQ	3.9 ± 0.4 *	<LQ	1.9 ± 0.1 *	<LQ	14 ± 0.3 *	<LQ	5.3 ± 0.2 *	<LQ	1.8 ± 0.1 *
Total galloyl derivatives	**<LQ**	**15 ± 8** *	**<LQ**	**17 ± 1** *	**<LQ**	**20 ± 0.5** *	**<LQ**	**106 ± 5** *	**<LQ**	**31.9 ±1** *	**<LQ**	**36 ± 1.5** *
Total (poly)phenols	**6993±432**	**6798±435**	**13856±1129**	**11937±417**	**14425±3674**	**4752±180**	**6867±819**	**18784±1623** *	**14198±1285**	**12151±318**	**17671±1590**	**20138±1933**

S02 is volunteer 2; S04 is volunteer 4; S05 is volunteer 5; S07 is volunteer 7; S08 is volunteer 8; and S10 is volunteer 10.

* 4-8 h post-mango intake was significantly higher than pre-mango intake ($p < 0.05$)

Table S4. UHPLC–HRMS based identifications of (poly)phenols compounds and related compounds in ileal fluid collected 0 and 4-8 h after mango puree consumption. RT, retention time; [M-H]- Exp, experimental exact mass; Δ, mass error.

RT (min)	Compounds	Chemical Structure	[M-H]- Exp. (m/z)	Δ (ppm)	MSIMI [a]	Quantified as
	Cinnamic acids					
11.5	4′-Hydroxy-3′-methoxycinnamic acid	$C_{10}H_9O_4$	193.0495	2.72	1	Standard
8.6	3′-Methoxycinnamic acid-*O*-hexoside	$C_{16}H_{19}O_9$	355.1023	1.98	2	4′-Hydroxy-3′-methoxycinnamic acid
9.4	3′,4′-Dihydroxycinnamic acid	$C_9H_7O_4$	179.0338	-0.59	1	Standard
11.5	4′-Hydroxy-3′,5′-dimethoxycinnamic acid	$C_{11}H_{11}O_5$	223.0600	-0.05	1	Standard
8.6	3,5-Dimethoxycinnamic acid hexoside 1	$C_{17}H_{21}O_{10}$	385.1129	2.58	2	4′-Hydroxy-3′,5′- dimethyoxycinnamic acid
8.6	3′-Methoxycinnamic acid-4′-glucuronide	$C_{16}H_{17}O_{10}$	369.0816	2.76	1	Standard
8.8	4′-Hydroxycinnamic acid-3′-sulfate	$C_9H_7O_7S$	258.9907	1.40	2	3′-Methoxycinnamic acid-4′-sulfate
9.0	3′-Methoxycinnamic acid-4′-sulfate	$C_{10}H_90_7S$	273.0063	1.66	1	Standard
	Phenylpropanoic acids					
11.1	3-(4′-Hydroxy-3′-methoxyphenyl)propanoic acid	$C_{10}H_{11}O_4$	195.0652	3.46	1	Standard
11.6	3-(3′-Hydroxy-4′-methoxyphenyl)propanoic acid	$C_{10}H_{11}O_4$	195.0652	-1.30	1	Standard
7.1	3-(3′-Hydroxyphenyl)propanoic acid-4′-glucuronide	$C_{15}H_{17}O_{10}$	357.0816	3.10	2	3-(4′-Methoxyphenyl)propanoic acid-3′-glucuronide
8.1	3-(4′-Hydroxyphenyl)propanoic acid-3′-glucuronide	$C_{15}H_{17}O_{10}$	357.0816	2.60	2	3-(4′-Methoxyphenyl)propanoic acid-3′-glucuronide

9.7	3-(4′-Methoxyphenyl)propanoic acid-3′-glucuronide	$C_{16}H_{19}O_{10}$	371.0973	1.61	1	Standard
7.9	3-(3′-Hydroxyphenyl)propanoic acid-4′-sulfate	$C_9H_9O_7S$	261.0063	1.27	2	3-(4′-Hydroxyphenyl)propanoic acid-3′-sulfate
8.4	3-(4′-Hydroxyphenyl)propanoic acid-3′-sulfate	$C_9H_9O_7S$	261.0063	1.62	1	Standard
	Phenylacetic acids					
9.4	Phenylacetic acid	$C_8H_7O_2$	135.0440	-0.71	1	Standard
7.3	3′-Hydroxyphenylacetic acid-4′-sulfate	$C_8H_7O_6S$	230.9957	0.03	2	3-(4′-Hydroxyphenyl)propanoic acid-3′-sulfate
6.6	3′-Methoxyphenylacetic acid-4′-sulfate	$C_9H_9O_7S$	261.0063	1.39	2	3-(4′-Hydroxyphenyl)propanoic acid-3′-sulfate
7.3	4′-Methoxyphenylacetic acid-3′-sulfate	$C_9H_9O_7S$	261.0063	1.50	2	3-(4′-Hydroxyphenyl)propanoic acid-3′-sulfate
	Benzoic acids					
3.2	3,4,5-Trihydroxybenzoic acid	$C_7H_5O_5$	169.0131	-0.40	1	Standard
2.4	Trihydroxybenzoic acid	$C_7H_5O_5$	169.0131	0.49	2	3,4,5-Trihydroxybenzoic acid
8.7	3,4-Dihydroxy-5-(3,4,5-trihydroxybenzoyloxy)benzoic acid	$C_{14}H_9O_9$	321.0241	1.10	2	3,4,5-Trihydroxybenzoic acid
4.5	Dihydroxybenzoic acid-sulfate 2	$C_7H_5O_8S$	248.9705	0.75	2	3-Hydroxy-4-methoxybenzoic acid-5-sulfate
8.0	3,5-Dihydroxy-4-methoxybenzoic acid	$C_8H_7O_5$	183.0287	0.44	1	Standard
8.4	4-Hydroxybenzoic acid	$C_7H_5O_3$	137.0233	-0.66	1	Standard
6.7	3,4-Dihydroxybenzoic acid	$C_7H_5O_4$	153.0182	0.29	1	Standard
4.5	3-Hydroxybenzoic acid-4-sulfate	$C_7H_5O_7S$	232.975	0.78	2	3-Hydroxy-4-methoxybenzoic acid-5-sulfate
6.9	3-Hydroxy-4-methoxybenzoic acid-5-sulfate	$C_8H_7O_8S$	262.9856	2.27	1	Standard
7.2	5-Hydroxy-3-methoxybenzoic acid-4-sulfate	$C_8H_7O_8S$	262.9856	1.32	2	3-Hydroxy-4-methoxybenzoic acid-5-sulfate
4.7	Hydroxybenzoic acid hexoside 1	$C_{13}H_{15}O_8$	299.0767	3.76	2	3,4-Dihydroxybenzoic acid
	Hydroxybenzenes					

3.5	1,2,3-Trihydroxybenzene	$C_6H_5O_3$	125.0233	-2.72	1	Standard
8.2	Methylbenzene-sulfate 1	$C_7H_7O_5S$	203.0002	3.00	2	1-hydroxybenzene-2-sulfate
9.4	Methylbenzene-sulfate 2	$C_7H_7O_5S$	203.0002	1.97	2	1-hydroxybenzene-2-sulfate
4.9	Dihydroxybenzene-sulfate 3	$C_6H_5O_6S$	204.9801	-0.07	2	1-hydroxybenzene-2-sulfate
3.4	Hydroxy-methylbenzene-sulfate 1	$C_7H_7O_6S$	218.9957	2.17	2	1-hydroxybenzene-2-sulfate
4.2	Hydroxy-methylbenzene-sulfate 2	$C_7H_7O_6S$	218.9957	2.85	2	1-hydroxybenzene-2-sulfate
	Galloyl derivatives					
2.6	Mono-galloyl glucoside 1	$C_{13}H_{15}O_{10}$	331.0659	1.27	2	Penta-galloyl glucoside
6.6	Mono-galloyl glucoside 2	$C_{13}H_{15}O_{10}$	331.0659	1.31	2	Penta-galloyl glucoside
9.9	Tetra-galloyl glucoside 1	$C_{34}H_{27}O_{22}$	787.0994	2.04	2	Penta-galloyl glucoside
10.7	Tetra-galloyl glucoside 2	$C_{34}H_{27}O_{22}$	787.0994	2.04	2	Penta-galloyl glucoside
11.2	Penta-galloyl glucoside	$C_{41}H_{31}O_{26}$	939.1098	1.87	1	Standard

[a] Metabolite Standards Initiative Metabolite Identification (MSIMI) levels (Sumner *et al.,* 2007). Reference compounds were available for all compounds identified at MSIMI level 1.

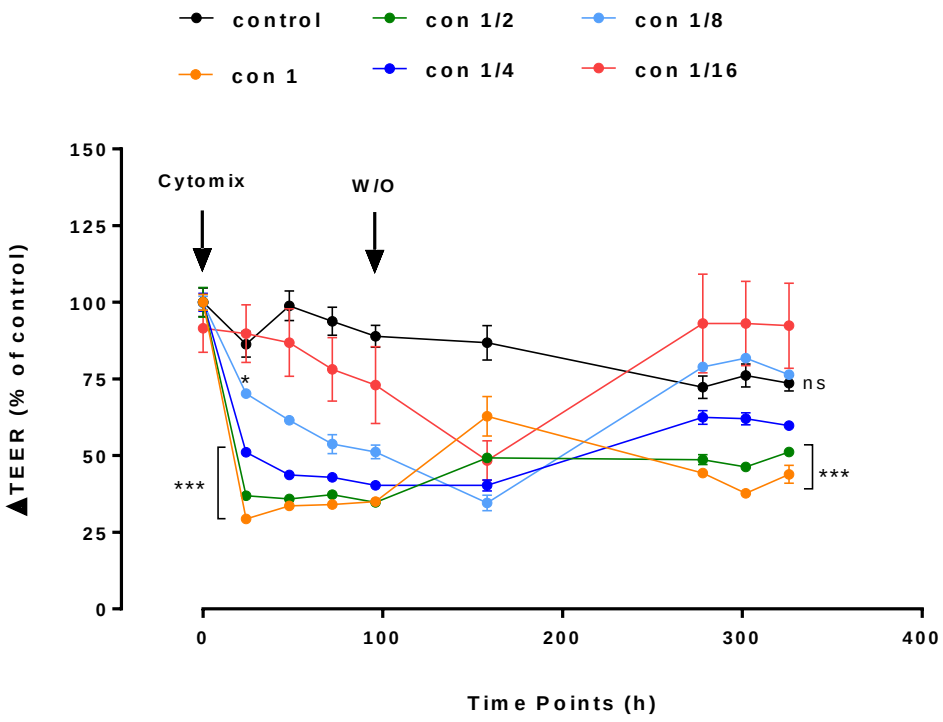

Figure S1. Effect of cytomix on trans epithelial electric resistance (TEER) in polarized Caco-2/HT29-MTX co-culture. After 21 days of culture in trans well insert, serial dilutions of the concentration 1 (TNF-α 100 ng/mL, IFN-γ 50 ng/mL, LPS 10 µg/mL) of the cytomix mixture in DMEM were tested to monitor the minimal effective doses on the epithelial barrier function. After 96 h of incubation, the basolateral medium was replaced with fresh medium w/o cytomix. TEER was determined every 24 h and expressed as changes relative to cells cultured in the absence of cytomix (Control). Two-way ANOVA with a Bonferroni's multiple comparisons; * $p<0.05$, ***$p<0.001$ vs control at the same time point.

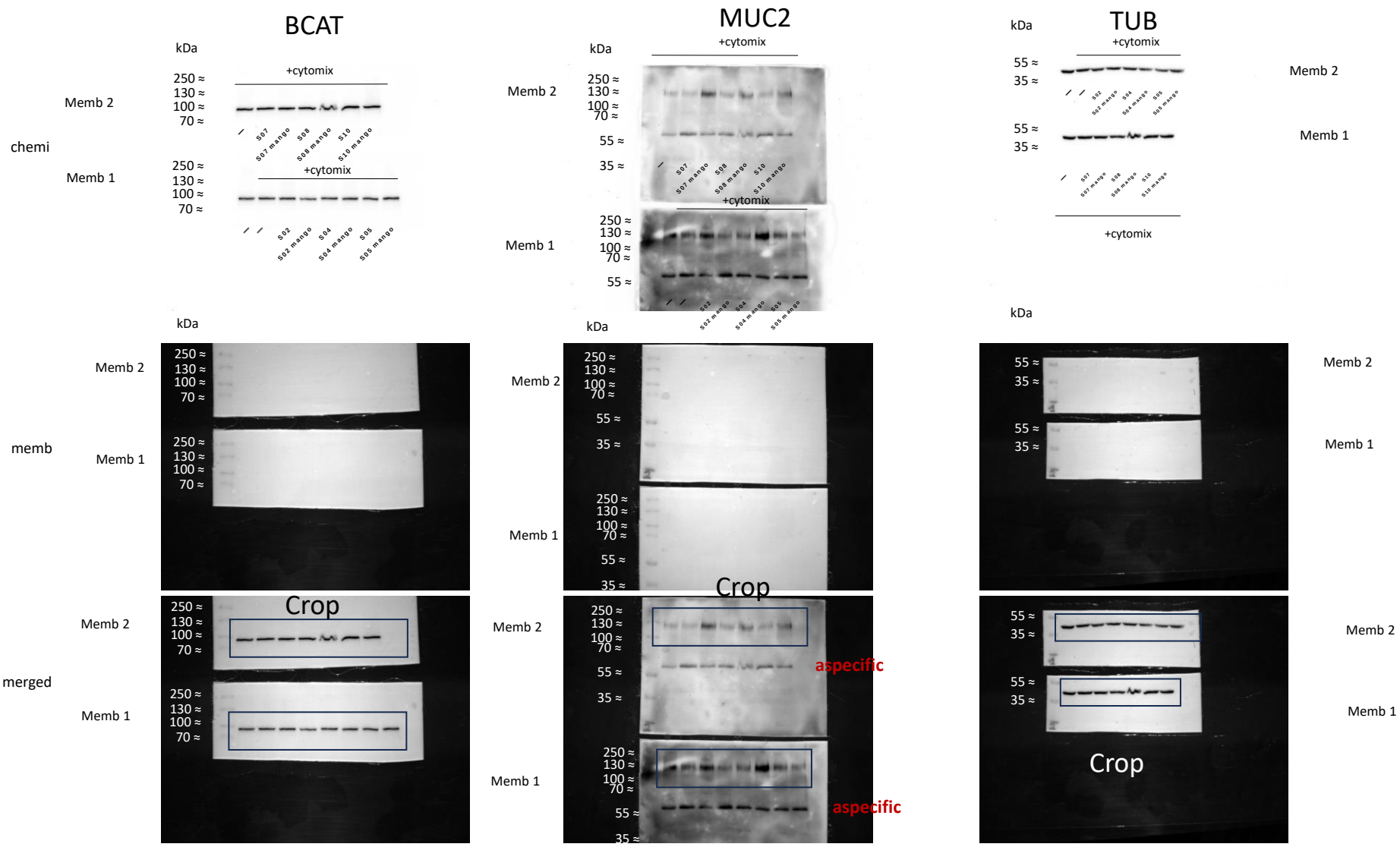
BCAT
MUC2
TUB
chemi
memb
merged
Memb 2
Memb 1
kDa
+cytomix
250 ≈
130 ≈
100 ≈
70 ≈
55 ≈
35 ≈
S07
S07 mango
S08
S08 mango
S10
S10 mango
S02
S02 mango
S04
S04 mango
S05
S05 mango
Crop
aspecific

Figure S2. MUC2 and BCAT expression profile in Caco-2/HT29 monolayers. The images report the original results concerning the expression of BCAT, MUC2 and that of the housekeeping Tubulin. In upper, middle and bottom panels line are reported chemiluminescence, acquisition of membranes with white light and both merged signals, respectively. The exposure times for chemiluminescence were automatically selected by the iBright FL1500 automated system software (Life Technology, Thermo Fisher, Milan, Italy) to avoid saturation of the signals. For the complete description of the protocol followed see M&M.