

Supplementary Table S1. Chemical composition of the Ussing chamber buffers.

Item	Inulin Flux Buffer ¹		Bicarbonate Containing		Bicarbonate-Free	
	Serosal	Mucosal	Serosal	Mucosal	Serosal	Mucosal
CaCl ₂	1.0	1.0	-	-	-	-
Ca-gluconate	-	-	1.0	1.0	1.0	1.0
MgCl ₂	1.3	1.3	-	-	-	-
Mg-gluconate	-	-	1.3	1.3	1.3	1.3
NaCl	15.6	15.6	-	-	-	-
Na-gluconate	-	-	50.6	50.6	69.6	34.6
KCl	5.5	5.5	-	-	-	-
K-gluconate	-	-	5.5	5.5	5.5	5.5
NaH ₂ PO ₄	0.6	0.6	0.6	0.6	0.6	0.6
Na ₂ HPO ₄	2.4	2.4	2.4	2.4	2.4	2.4
Acetic Acid	10.0	10.0	-	-	-	-
Na-Acetate	12.1	12.1	-	-	-	-
L-Glutamine	1.0	1.0	1.0	1.0	1.0	1.0
HEPES-free acid	10.0	10.0	10.0	10.0	10.0	10.0
Na-Propionate	9.1	9.1	-	-	-	-
Na-Butyrate	3.9	3.9	-	-	-	-
NaOH	10.0	10.0	-	-	-	-
NaHCO ₃	24.0	24.0	24.0	24.0	-	-
Glucose	-	-	10.0	10.0	10.0	10.0
Acetazolamide	-	-	-	-	0.1	0.1
Na-nitrate	-	-	-	-	-	40.0
Gluconic Acid	-	20.0	-	20.0	-	1.0
Inulin	-	1.0	-	-	-	-
Mannitol	120.0	99.0	110.0	90.0	120.0	109.0
Penicillin G, mg/L	60.0	60.0	60.0	60.0	60.0	60.0
Kanamycin, mg/L	100.0	100.0	100.0	100.0	100.0	100.0
Fluorocytosine, mg/L	50.0	50.0	50.0	50.0	50.0	50.0
pH	7.4	6.2	7.4	6.2	7.4	6.2

¹The inulin flux buffers were also used for the ergovaline flux experiments. The inulin flux serosal buffer, without antibiotics was used as the buffer for transporting the tissue to the laboratory.