

Supplementary Figure S1. Full membranes of Western blotting for Figure 2.

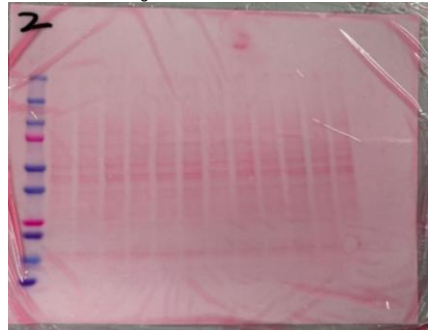
Bands (Membranes) in the manuscript

ImageQuant; AS 500 was used to capture chemiluminescence. Color picture and Monochrome pictures will be generated automatically. Monochrome pictures were analysed by ImageJ.

The membrane was cut in blotting, so ponceau staining was also shown here to confirm that pieces are from same membrane.

Lane order:	Control	TNF- α /IFN- γ 10ng/ml	TNF- α /IFN- γ 10ng/ml+ acetate 2mM	TNF- α /IFN- γ 10ng/ml+ propionat e 2mM	TNF- α /IFN- γ 10ng/ml+ butyrate 2mM	TNF- α /IFN- γ 10ng/ml+ succinat e 2mM	Control	TNF- α /IFN- γ 10ng/ml	TNF- α /IFN- γ 10ng/ml+ acetate 2mM	TNF- α /IFN- γ 10ng/ml+ propionat e 2mM	TNF- α /IFN- γ 10ng/ml+ butyrate 2mM	TNF- α /IFN- γ 10ng/ml+ succinat e 2mM
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Ponceau S staining



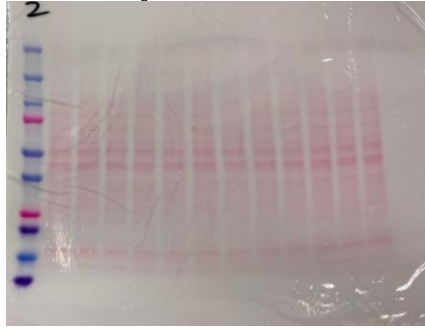
GAPDH ~36kDa Rabbit CST 5174S



CLDN-1 ~22kDa Rabbit Thermo 51-9000



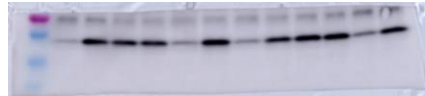
Ponceau S staining



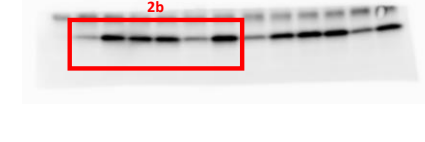
GAPDH ~36kDa Rabbit CST 5174S 1: 2000



CLDN2 ~22kDa Mouse Thermo 32-5600 1:400

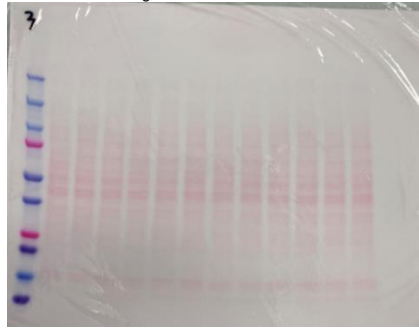


Occludin ~65kDa Mouse Thermo 331500 1:1000

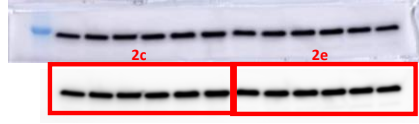


ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500

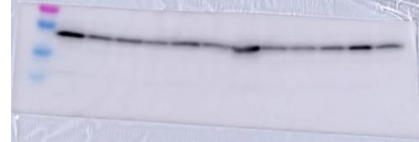
Ponceau S staining



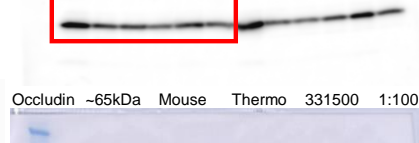
GAPDH ~36kDa Rabbit CST 5174S 1: 2000



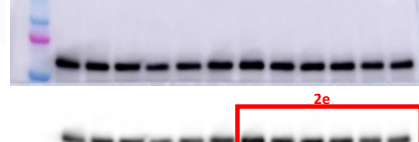
CLDN-3 ~22kDa Rabbit Thermo 34-1700 1:500



Occludin ~65kDa Mouse Thermo 331500 1:1000

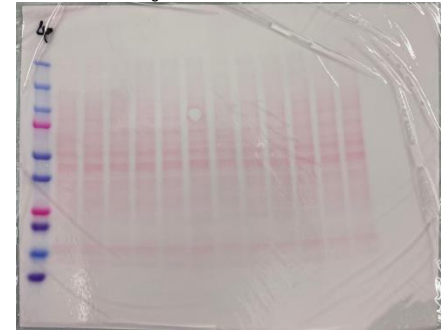


ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500

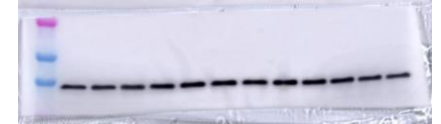


ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500

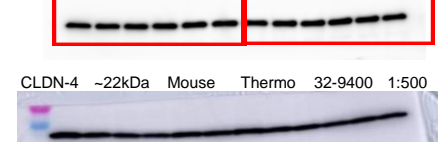
Ponceau S staining



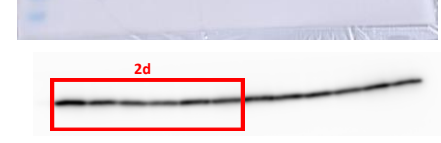
GAPDH ~36kDa Rabbit CST 5174S 1: 2000



CLDN-4 ~22kDa Mouse Thermo 32-9400 1:500



Occludin ~65kDa Mouse Thermo 331500 1:1000



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500

First experiment

	TNF- α	TNF- α	TNF- α	TNF- α		TNF- α	TNF- α	TNF- α	TNF- α
	/IFN- γ	/IFN- γ	/IFN- γ	/IFN- γ		/IFN- γ	/IFN- γ	/IFN- γ	/IFN- γ
TNF- α	10ng/ml+	10ng/ml+	10ng/ml+	10ng/ml+	TNF- α	10ng/ml+	10ng/ml+	10ng/ml+	10ng/ml+
/IFN- γ	acetate	propiona	butyrate	succinat	/IFN- γ	acetate	propiona	butyrate	succinat
Control	10ng/ml	2mM	te 2mM	2mM e 2mM	Control	10ng/ml	2mM	te 2mM	2mM e 2mM

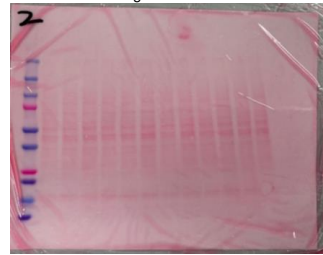
The membrane was cut in blotting, so ponceau staining was also shown here to confirm that pieces are form same membrane.

Ponceau S staining



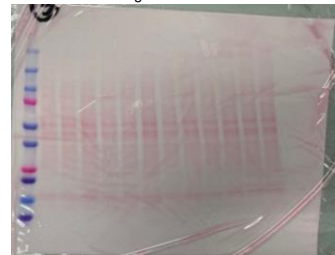
GAPDH ~36kDa Rabbit CST 5174S 1: 2000

Ponceau S staining



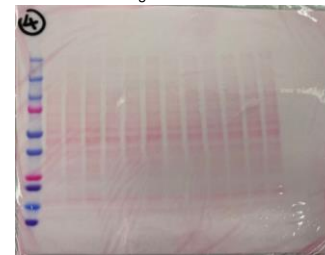
GAPDH ~36kDa Rabbit CST 5174S 1: 2000

Ponceau S staining



GAPDH ~36kDa Rabbit CST 5174S 1: 2000

Ponceau S staining



GAPDH ~36kDa Rabbit CST 5174S 1: 2000



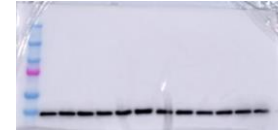
CLDN-4 ~22kDa Mouse Thermo 32-9400 1:500



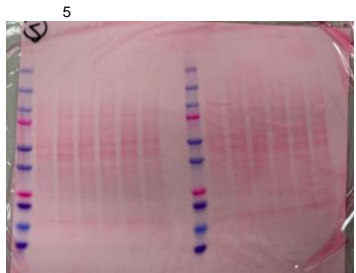
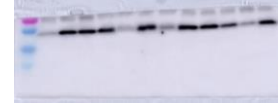
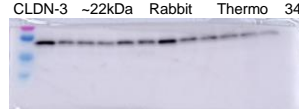
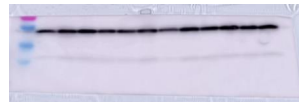
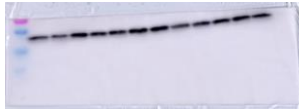
CLDN-1 ~22kDa Rabbit Thermo 51-9000 1:250



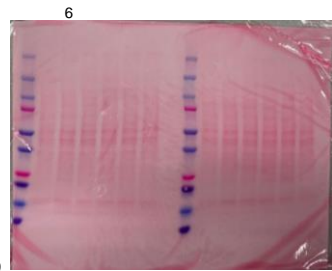
CLDN-3 ~22kDa Rabbit Thermo 34-1700 1:500



CLDN2 ~22kDa Mouse Thermo 32-5600 1:400



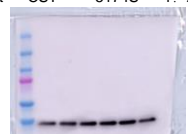
GAPDH ~36kDa Rabbit CST 5174S 1: 2000



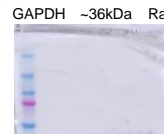
GAPDH ~36kDa Rabbit CST 5174S 1: 2000



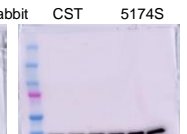
CLDN-1 ~22kDa Rabbit



CLDN-4 ~22kDa Mouse



CLDN2 ~22kDa Mouse



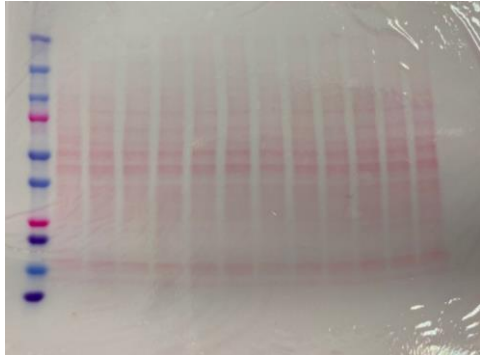
CLDN-3 ~22kDa Rabbit

Second repeat

	TNF- α	TNF- α	TNF- α	TNF- α		TNF- α	TNF- α	TNF- α	TNF- α
	/IFN- γ	/IFN- γ	/IFN- γ	/IFN- γ		/IFN- γ	/IFN- γ	/IFN- γ	/IFN- γ
	10ng/ml+	10ng/ml+	10ng/ml+	10ng/ml+		10ng/ml+	10ng/ml+	10ng/ml+	10ng/ml+
TNF- α	acetate	propionat	butyrate	succinat	Control	acetate	propionat	butyrate	succinat
/IFN- γ	2mM	e 2mM	2mM	e 2mM	Control	2mM	e 2mM	2mM	e 2mM
Control	10ng/ml	2mM	e 2mM	2mM	e 2mM	10ng/ml	2mM	e 2mM	2mM

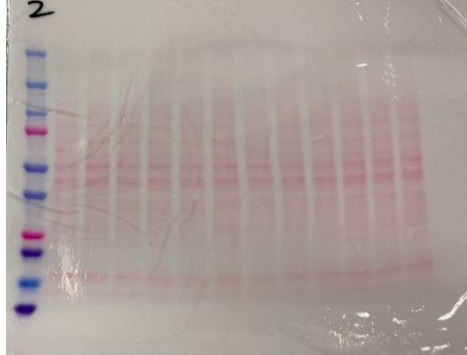
The membrane was cut in blotting, so ponceau staining was also shown here to confirm that pieces are form same membrane.

Ponceau S staining



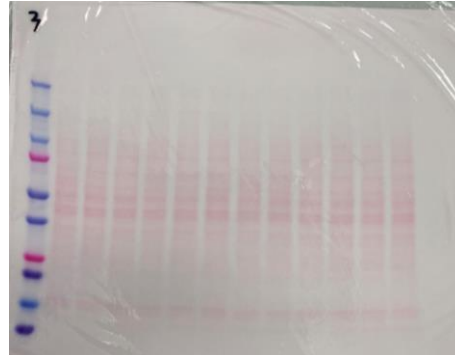
GAPDH ~36kDa Rabbit CST 5174S 1: 2000

Ponceau S staining



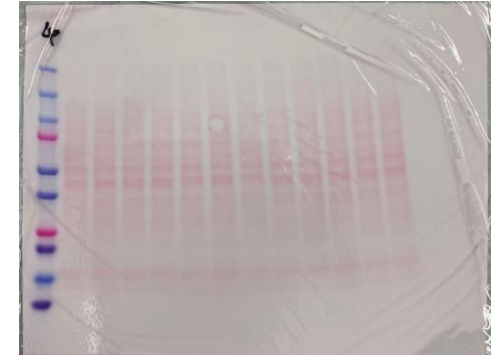
GAPDH ~36kDa Rabbit CST 5174S 1: 2000

Ponceau S staining



GAPDH ~36kDa Rabbit CST 5174S 1: 2000

Ponceau S staining



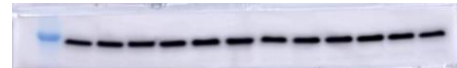
GAPDH ~36kDa Rabbit CST 5174S 1: 2000



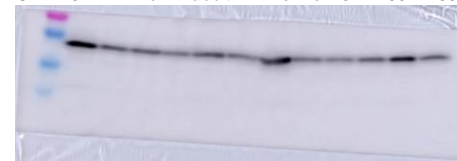
CLDN-1 ~22kDa Rabbit Thermo 51-9000 1:250



CLDN2 ~22kDa Mouse Thermo 32-5600 1:400



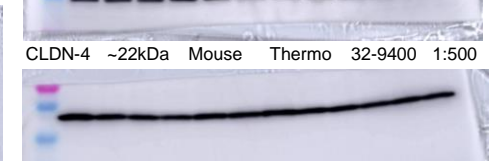
CLDN-3 ~22kDa Rabbit Thermo 34-1700 1:500



Occludin ~65kDa Mouse Thermo 331500 1:1000



CLDN-4 ~22kDa Mouse Thermo 32-9400 1:500



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500

Third repeat

	TNF- α		TNF- α			
	//IFN- γ		//IFN- γ			
	TNF- α	10ng/ml+	TNF- α	10ng/ml+		
	//IFN- γ	butyrate	//IFN- γ	butyrate		
Control	10ng/ml	2mM	Control	10ng/ml	2mM	PC1 PC2

The membrane was cut in blotting, so ponceau staining was also shown here to confirm that pieces are from same membrane.

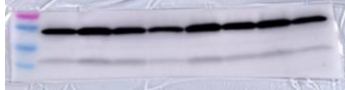
Ponceau S staining



GAPDH ~36kDa Rabbit CST 5174S 1: 2000



CLDN-1 ~22kDa Rabbit Thermo 51-9000 1:250



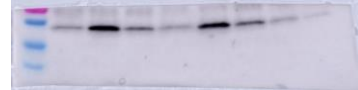
Ponceau S staining



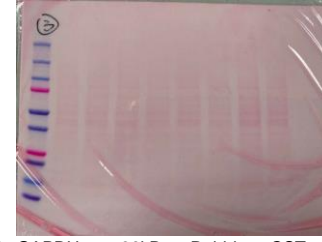
GAPDH ~36kDa Rabbit CST 5174S 1: 2000



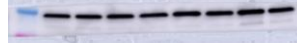
CLDN2 ~22kDa Mouse Thermo 32-5600 1:250



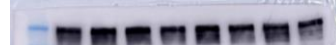
Ponceau S staining



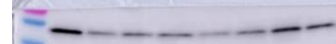
GAPDH ~36kDa Rabbit CST 5174S 1: 2000



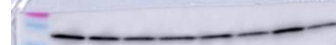
ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



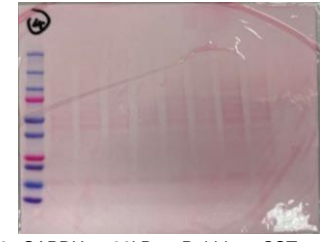
CLDN-3 ~22kDa Rabbit Thermo 34-1700 1:500



CLDN-4 ~22kDa Mouse Thermo 32-9400 1:500



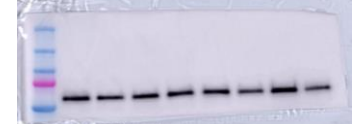
Ponceau S staining



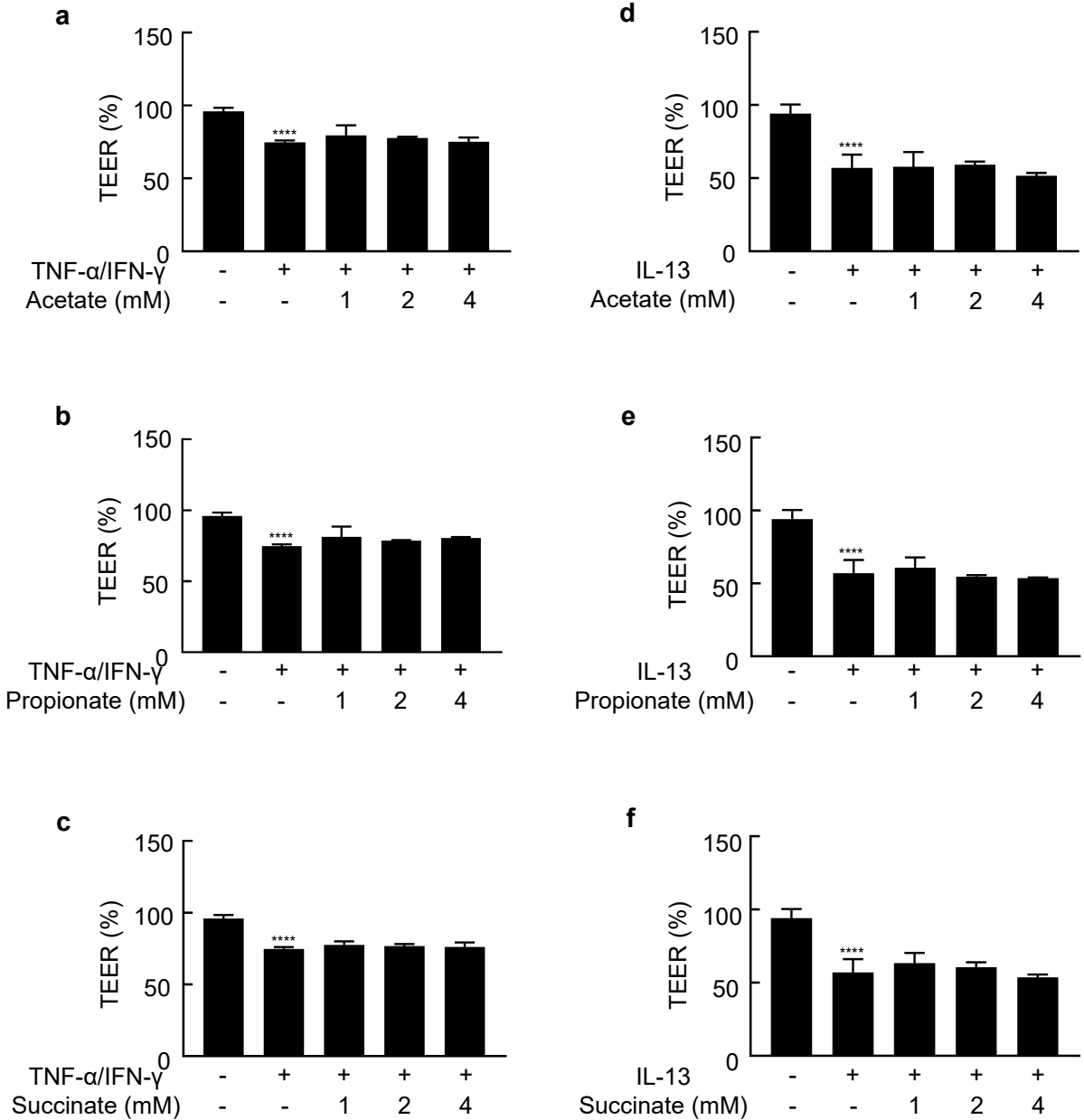
GAPDH ~36kDa Rabbit CST 5174S 1: 2000



Occludin ~65kDa Mouse Thermo 331500 1:1000



Supplementary Figure S2. The effect of different concentrations of acetate, propionate and succinate on TNF- α /IFN- γ - and IL-13-induced barrier dysfunction. **** $p < 0.0001$ compared to medium-treated control.



Supplementary Figure S3. Full membranes of Western blotting for Figure 4.

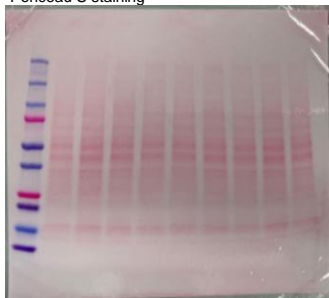
Bands (Membranes) in the manuscript

ImageQuant; AS 500 was used to capture chemiluminescence. Color picture and Monochrome pictures will be generated automatically. Monochrome pictures were analysed by ImageJ.

The membrane was cut in blotting, so ponceau staining was also shown here to confirm that pieces are from same membrane.

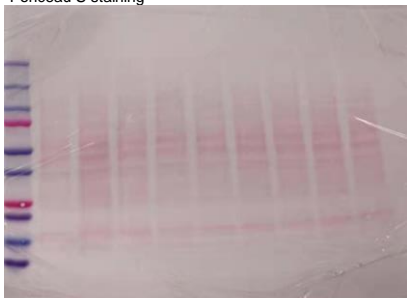
Lane order:	Control	IL-13 10ng/ml	IL-13 10ng/ml+ butyrate 2mM	Control	IL-13 10ng/ml	IL-13 10ng/ml+ butyrate 2mM	Control	IL-13 10ng/ml	IL-13 10ng/ml+ butyrate 2mM
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Ponceau S staining



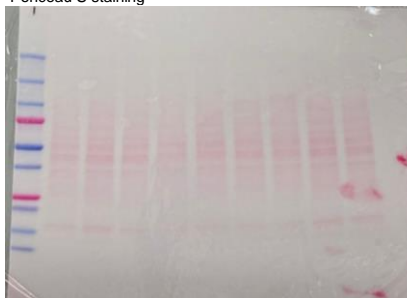
GAPDH ~36kDa Rabbit CST 5174S

Ponceau S staining



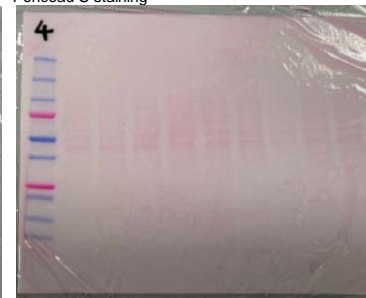
GAPDH ~36kDa Rabbit CST 5174S 1:2000

Ponceau S staining

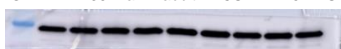


GAPDH ~36kDa Rabbit CST 5174S 1:2000

Ponceau S staining



GAPDH ~36kDa Rabbit CST 5174S 1:2000



Occludin ~65kDa Mouse Thermo 331500



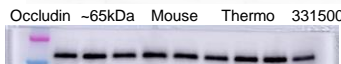
Occludin ~65kDa Mouse Thermo 331500 1:1000



CLDN-3 ~22kDa Rabbit Thermo 34-1700 1:500



CLDN-4 ~22kDa Mouse Thermo 32-9400 1:500



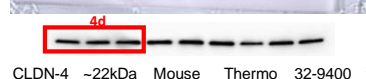
Occludin ~65kDa Mouse Thermo 331500 1:1000



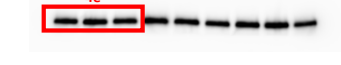
Occludin ~65kDa Mouse Thermo 331500 1:1000



CLDN-3 ~22kDa Rabbit Thermo 34-1700 1:500



CLDN-4 ~22kDa Mouse Thermo 32-9400 1:500



CLDN-1 ~22kDa Rabbit Thermo 51-9000 1:250



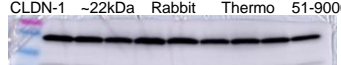
CLDN-1 ~22kDa Rabbit Thermo 51-9000 1:250



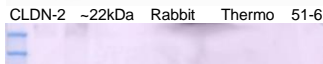
CLDN-3 ~22kDa Rabbit Thermo 34-1700 1:500



CLDN-4 ~22kDa Mouse Thermo 32-9400 1:500



CLDN-1 ~22kDa Rabbit Thermo 51-9000 1:250



CLDN-2 ~22kDa Rabbit Thermo 51-6100 1:250



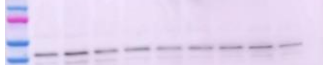
CLDN-3 ~22kDa Rabbit Thermo 34-1700 1:500



CLDN-4 ~22kDa Mouse Thermo 32-9400 1:500



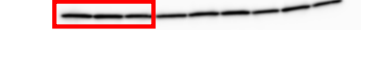
CLDN-1 ~22kDa Rabbit Thermo 51-9000 1:250



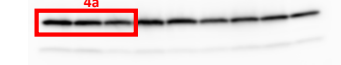
CLDN-2 ~22kDa Rabbit Thermo 51-6100 1:250



CLDN-3 ~22kDa Rabbit Thermo 34-1700 1:500



CLDN-4 ~22kDa Mouse Thermo 32-9400 1:500



CLDN-1 ~22kDa Rabbit Thermo 51-9000 1:250



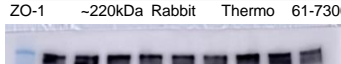
CLDN-2 ~22kDa Rabbit Thermo 51-6100 1:250



CLDN-3 ~22kDa Rabbit Thermo 34-1700 1:500



CLDN-4 ~22kDa Mouse Thermo 32-9400 1:500



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



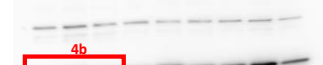
ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



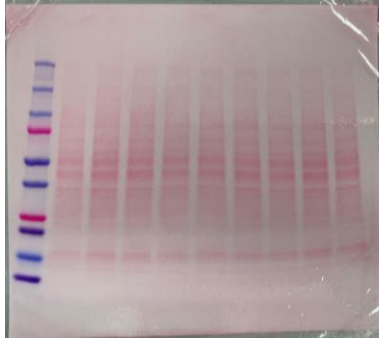
ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500

First experiment

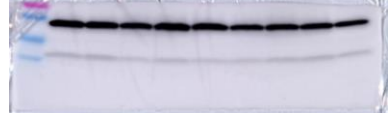
Lane IL-13 10ng/ml+ butyrate 2mM Control
 order: Control 10ng/ml 2mM Control 10ng/ml 2mM
 Ponceau S



Occludin ~65kDa Mouse Thermo 331500 1:1000



CLDN-1 ~22kDa Rabbit Thermo 51-9000 1:250



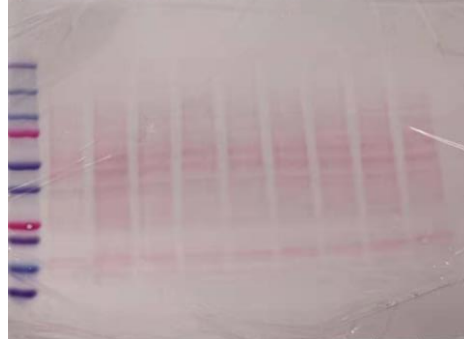
ZO-1 ~220kDa Rabbit Thermo 61-7300 1:500



GAPDH ~36kDa Rabbit CST 5174S 1: 2000



IL-13 10ng/ml+ butyrate 2mM Control 10ng/ml 2mM
 IL-13 10ng/ml+ butyrate 2mM Control 10ng/ml 2mM
 Ponceau S staining



CLDN-2 ~22kDa Rabbit Thermo 51-6100 1:250



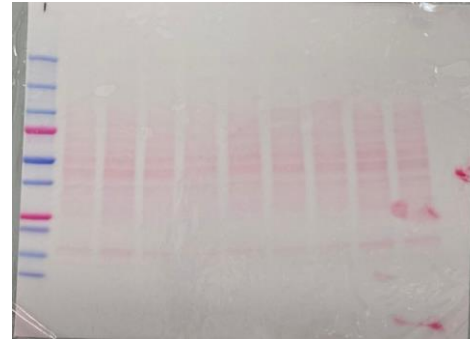
GAPDH ~36kDa Rabbit CST 5174S 1:1000



GAPDH ~36kDa Rabbit CST 5174S 1:1000



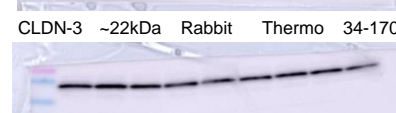
Ponceau S staining



GAPDH ~36kDa Rabbit CST 5174S 1: 2000



CLDN-3 ~22kDa Rabbit Thermo 34-1700 1:500



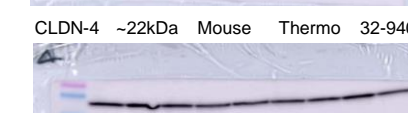
GAPDH ~36kDa Rabbit CST 5174S 1:1000



GAPDH ~36kDa Rabbit CST 5174S 1: 2000



CLDN-4 ~22kDa Mouse Thermo 32-9400 1:500



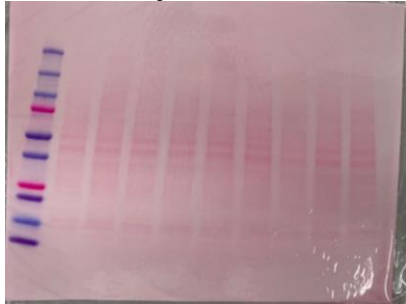
GAPDH ~36kDa Rabbit CST 5174S 1:1000



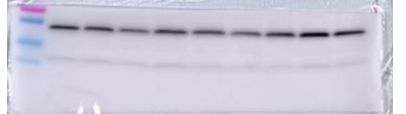
Second repeat

		IL-13 10ng/ml+			IL-13 10ng/ml+		IL-13 10ng/ml+	
Lane	IL-13	butyrate	Control	IL-13	butyrate	Control	IL-13	butyrate
order:	Control	10ng/ml	2mM	10ng/ml	2mM	Control	10ng/ml	2mM

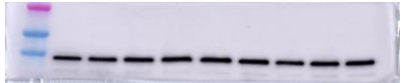
Ponceau S staining



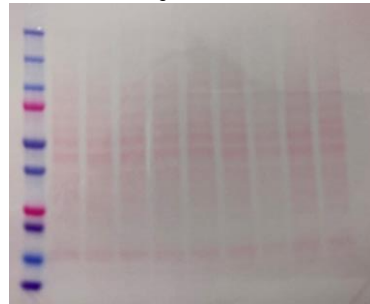
CLDN-1 ~22kDa Rabbit Thermo 51-9000 1:250



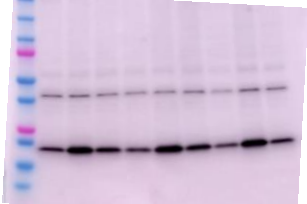
GAPDH ~36kDa Rabbit CST 5174S 1: 2000



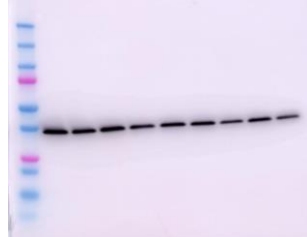
Ponceau S staining



CLDN-2 ~22kDa Rabbit Thermo 51-6100 1:250

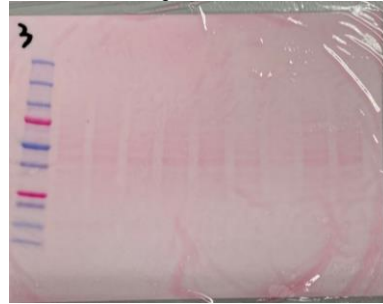


GAPDH ~36kDa Rabbit CST 5174S 1:1000



Occludin ~65kDa Mouse Thermo 331500 1:1000

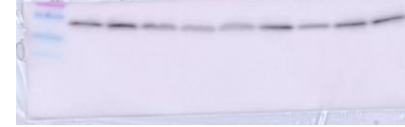
Ponceau S staining



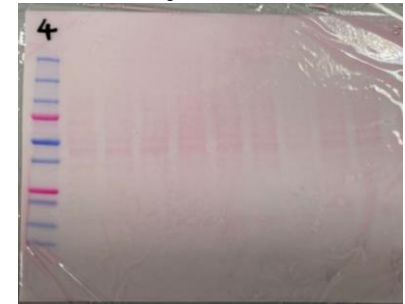
GAPDH ~36kDa Rabbit CST 5174S 1: 2000



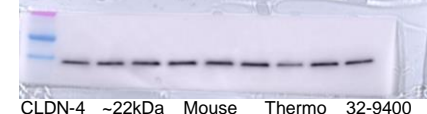
CLDN-3 ~22kDa Rabbit Thermo 34-1700 1:500



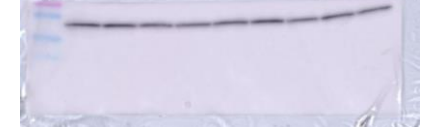
Ponceau S staining



GAPDH ~36kDa Rabbit CST 5174S 1: 2000



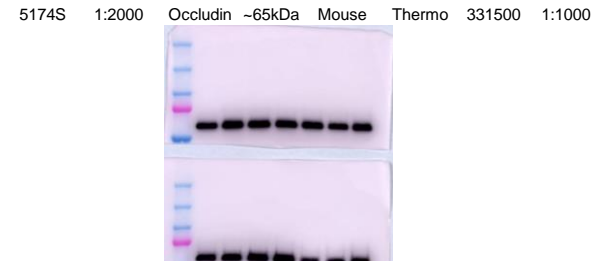
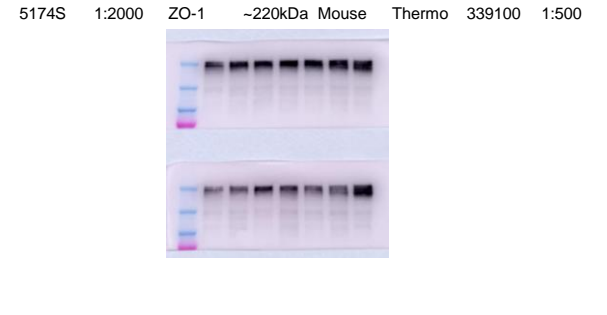
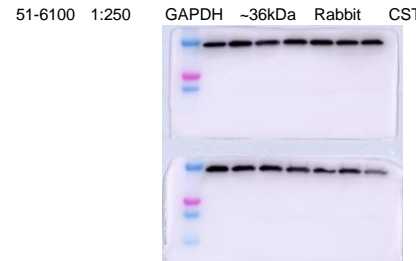
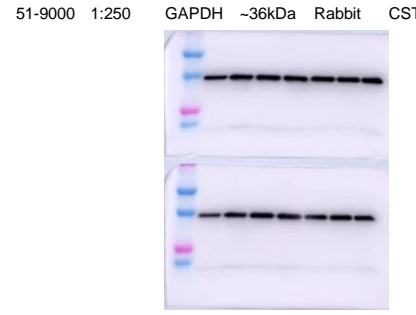
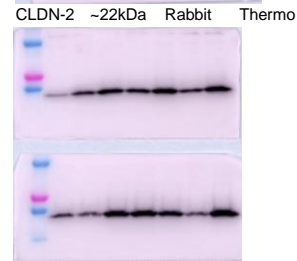
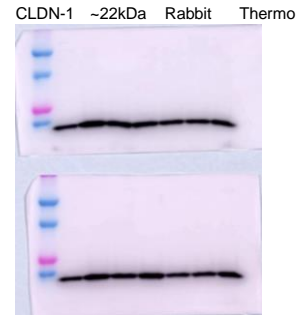
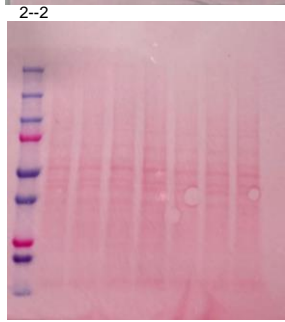
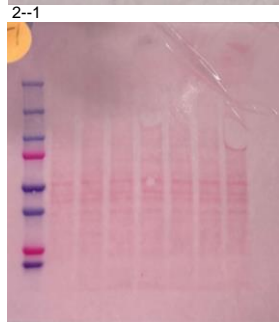
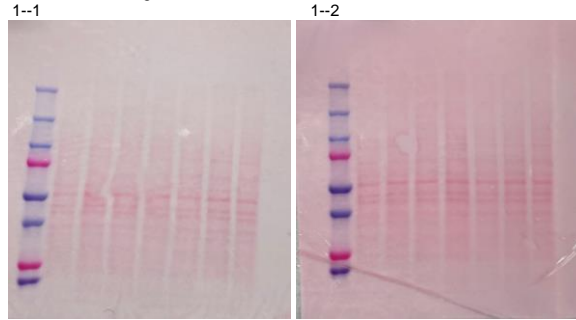
CLDN-4 ~22kDa Mouse Thermo 32-9400 1:500



Third repeat

Lane order:	Positive control	Control	IL-13 10ng/ml	IL-13 10ng/ml+ acetate 2mM	IL-13 10ng/ml+ propionate 2mM	IL-13 10ng/ml+ butyrate 2mM	IL-13 10ng/ml+ succinate 2mM	Positive control	Control	IL-13 10ng/ml	IL-13 10ng/ml+ acetate 2mM	IL-13 10ng/ml+ propionate 2mM	IL-13 10ng/ml+ butyrate 2mM	IL-13 10ng/ml+ succinate 2mM
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Ponceau S staining



CLDN-1	~22kDa	Rabbit	Thermo	51-9000	1:250	GAPDH	~36kDa	Rabbit	CST	5174S	1:2000	ZO-1	~220kDa	Mouse	Thermo	339100	1:500
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CLDN-2	~22kDa	Rabbit	Thermo	51-6100	1:250	GAPDH	~36kDa	Rabbit	CST	5174S	1:2000	Occludin	~65kDa	Mouse	Thermo	331500	1:1000
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