

Supplementary Figures

Figure S1

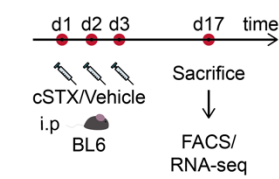


Figure S1: The experimental setup for 6-OHDA and vehicle treatment.

Figure S2

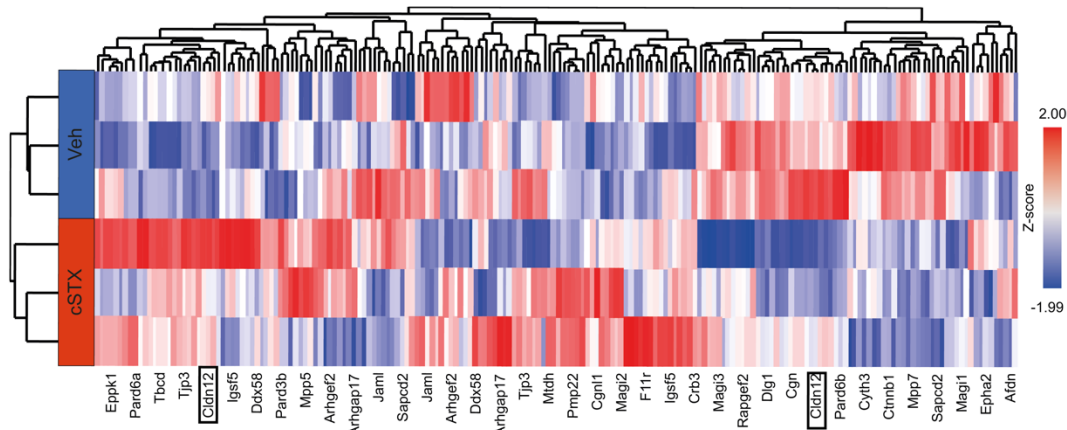


Figure S2: The heatmap analysis showing transcriptional differences in genes related to tight junction in cSTX compared to vehicle- treated mice

Figure S3A

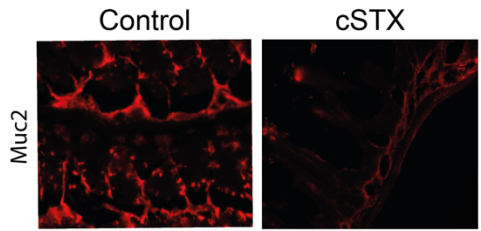


Figure S3B

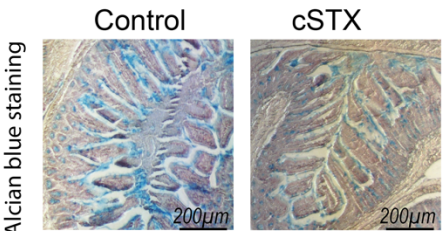


Figure S3A: Diminished Muc2 protein expression in cSTX compared to control mice (A).

Figure S3B: Reduced numbers of alcian blue positive goblet cells in cSTX compared to control mice (B).

Figure S4A

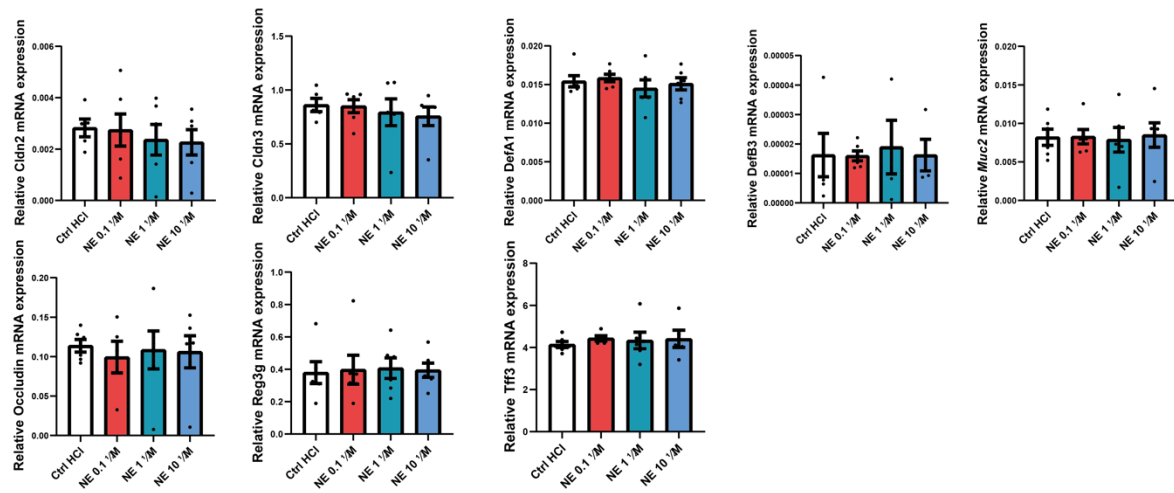


Figure S4A: mRNA levels of Cldn2, Cldn3, Defa1, DefB3, Muc2, Ocln, Reg3g, and Tff3 showing no changes after 72 hours of stimulation with on norepinephrine stimulated organoids, compared with the vehicle-stimulated organoids.

Figure S4B

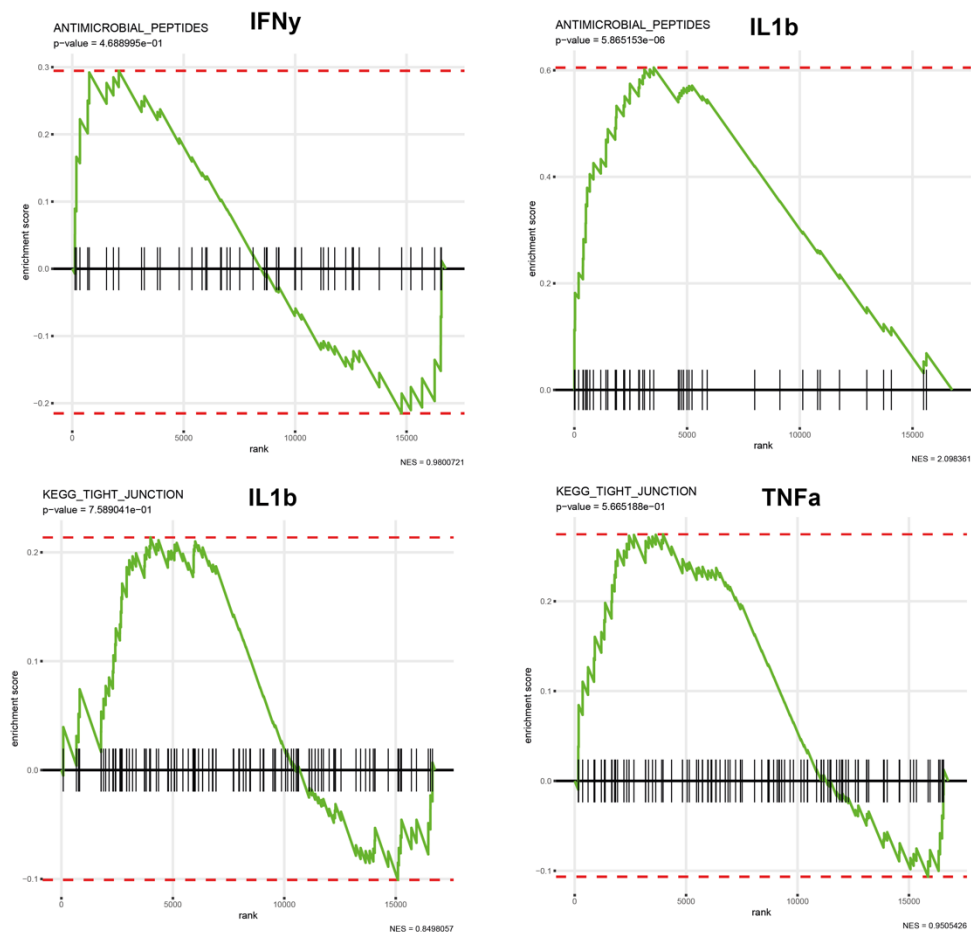


Figure S4B: Gene set enrichment analyses (GSEA) showing enrichment of genes expressing tight junctions following treatment with IFN- γ , IL1b and antimicrobial peptides upon treatment with IL1b and TNF- α

Table S1: Primer sequences used for qPCR analysis.

	Forward	Reverse
<i>Arg1</i>	TTGGGTGGATGCTCACACTG	TTGCCCATGCAGATTCCC
<i>CD163</i>	GTGCTGGATCTCCTGGTTGT	CGTTAGTGACAGCAGAGGCA
<i>IL6</i>	AAGTCGGAGGCTTAATTACACATGT	CCATTGCACAACCTCTTTTCTCATT
<i>IL1b</i>	TTGACGGACCCCAAAAGATG	CAGGACAGCCCAGGTCAAAG
<i>TNFα</i>	CTGAACCTCGGGGTGATCGG	GGCTTGTCACCTCGAATTTTGAGA
<i>Muc2</i>	TGCCCAGAGAGTTTGGAGAGG	CCTCACATGTGGTCTGGTTG
<i>TFF3</i>	CTCTGTCACATCGGAGCAGTGT	TGAAGCACCAGGGCACATT
<i>Cldn2</i>	CCACAAGCAGGCTCAAGAAG	TTCGCCTTTCTCTGGACCTA
<i>Cldn3</i>	GCAAGCAGACTGTGTGTCGT	TACCGTCACCACTACCAGCA
<i>Ocln</i>	CATAGTCAGATGGGGGTGGA	ATTTATGATGAACAGCCCCC
<i>Defa1</i>	CAGGCCGTATCTGTCTCCTT	ATGACCCTTTCTGCAGGTTC
<i>Reg3g</i>	TTCCTGTCCTCCATGATCAAAA	CATCCACCTCTGTTGGGTTCA
<i>β3 defensin</i>	GTTTGCATTTCTCCTGGTGC	GCCTCCTTTCTCAAACAACCT
<i>Lyz1</i>	GAGACCGAAGCACCGACTATG	CGGTTTTGACATTGTGTTCGC
<i>GAPDH</i>	GGGAAGCCCATCACCATCTT	GCCTCACCCCATTTGATGTT