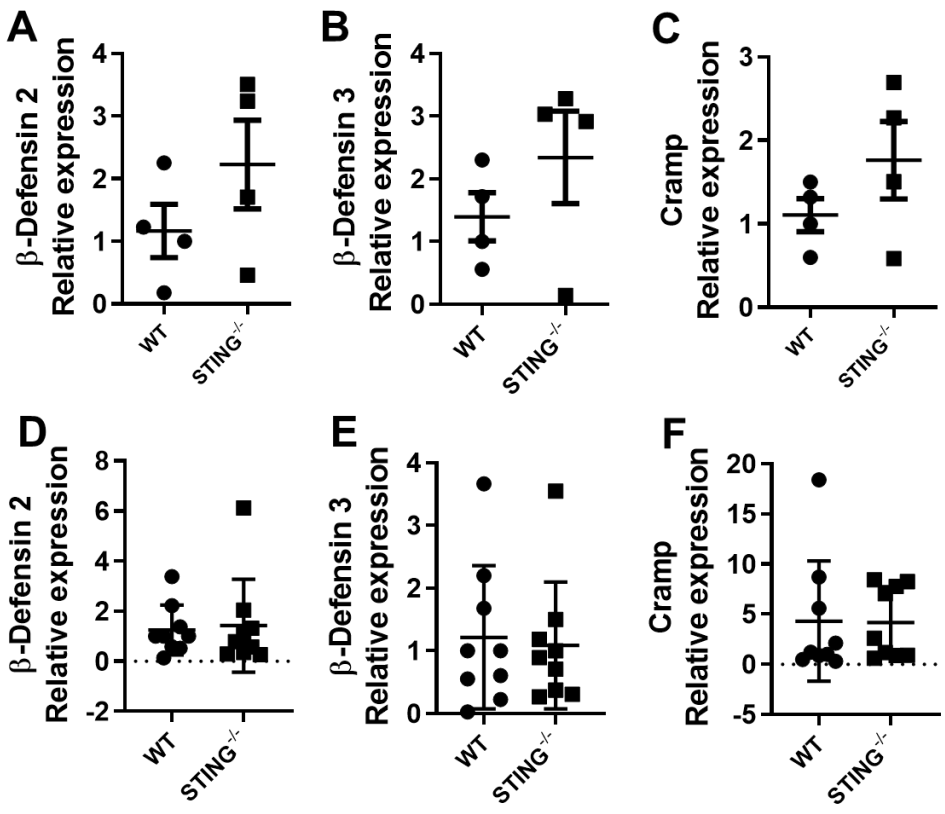
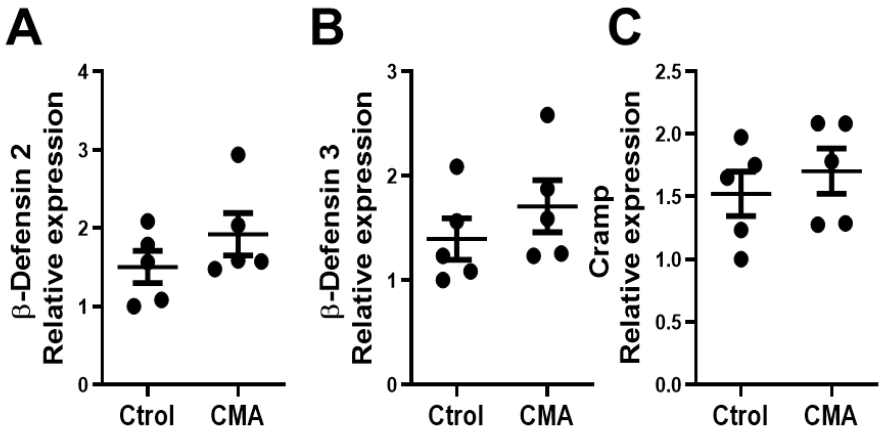
Supplementary Materials

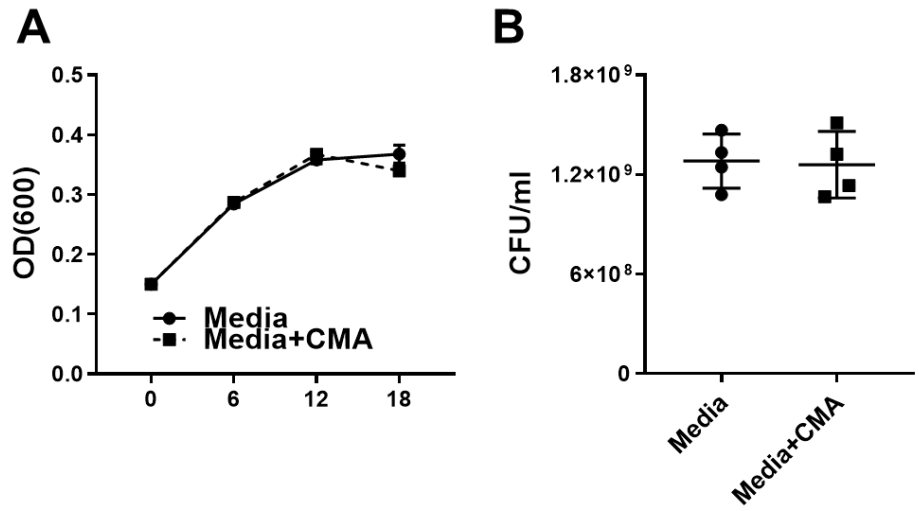
STING controls intestinal homeostasis through promoting antimicrobial peptide expression in epithelial cells



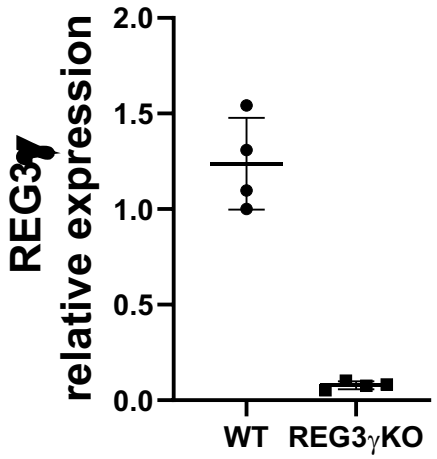
Supplementary Fig. 1 STING$^{-/-}$ IECs show similar levels of β-defensins and Cramp compared with WT IECs. (**A-C**) IECs were isolated from WT and STING$^{-/-}$ mice (n = 4/group) under steady conditions. The expression of β-defensin-2, -3, and Cramp was evaluated by qRT-PCR and normalized against GAPDH. (**D-F**) WT (n = 9) and STING$^{-/-}$ mice (n = 9) were infected with *Citrobacter rodentium* by oral gavage. Primary IECs were isolated 10 days post infection. The expression of β-defensin-2, -3, and Cramp was determined by qRT-PCR and normalized against GAPDH. Data are represented as means ± standard deviation. One representative of 2-3 experiments with similar results was shown.



Supplementary Fig. 2 STING agonist does not affect β-defensins and Cramp expression in IECs. MSIE cells (n = 5/group) were treated with or without 50 μg/ml CMA for 24 hrs. The expression of β-defensin-2, -3, and Cramp was also evaluated by qRT-PCR and normalized against GAPDH. Data are represented as means ± standard deviation. One representative of 3 experiments with similar results was shown.



Supplementary Fig. 3 CMA alone does not affect *Citrobacter rodentium* growth. *Citrobacter rodentium* were treated with or without CMA (50 μg/ml) for 24 hrs. (**A**) The OD values (600 nm) were measured at different time points. (**B**) Bacterial culture suspensions were added to solid culture plates for colony counting overnight after treated with the extracts of IEC with the extracts of IEC at 6 hours. Data are represented as means ± standard deviation. One representative of 3 experiments with similar results was shown.



Supplementary Fig. 4. The efficiency of knockout of REG3γ Using CRISPR. WT and REG3γKO MSIE cells (n = 4) were collected for analysis of REG3γ expression using qRT-PCR.

Supplementary Table 1. PCR Primers and CRISPR-Guide RNA Oligo Sequences

PCR primers		
mGAPDH	Forward	5’-TCAACAGCAACTCCCACTCTTCCA-3’
	Reverse	5’-ACCCTGTTGCTGTAGCCGTATTCA-3’
mREGIIIβ	Forward	5’-TCCCAGGCTTATGGCTCCTA-3’
	Reverse	5’-GCAGGCCAGTTCTGCATCA-3’
mβ-defensin-2	Forward	5’-AAGTATTGGATACGAAGCAG-3’
	Reverse	5’TGGCAGAAGGAGGACAAATG-3’
mβ-defensin-3	Forward	5’- AAAGGAGGCAGATGCTGGAA-3’
	Reverse	5’- ACGGGATCTTGGTCTTCTCT-3’
mCRAMP	Forward	5’-CAGCCCTTTCGGTTCAAGAA-3’
	Reverse	5’-CCCACCTTTGCGGAGAAGT-3’
mHK2	Forward	5’-TGATCGCCTGCTTATTCACGG-3’
	Reverse	5’- AACCGCCTAGAAATCTCCAGA-3’
mLDHA	Forward	5’- TGTCTCCAGGAAAGACTACTGT-3’
	Reverse	5’- GACTGTACTTGACAATGTTGGGA-3’
mPDK	Forward	5’-GGACTTCGGGTCAGTGAATGC-3’
	Reverse	5’-TCCTGAGAAGATTGTCGGGGA-3’
CRISPR-guide RNA oligo sequences		
STAT3	Forward	5’-CACCGCGATTACCTGCACTCGCTTC-3’
	Reverse	5’-AAACGAAGCGAGTGCAGGTAATCGC-3’
mREG3γ	Forward	5’-CACCGTAGGGCTATGAACCCAACAG-3’
	Reverse	5’-AAACCTGTTGGGTTCATAGCCCTAC-3’

PCR, polymerase chain reaction.