## SUPPLEMENTARY INFORMATION

## DOCK2 confers immunity and intestinal colonization resistance to *Citrobacter rodentium* infection

Zhiping Liu<sup>1</sup>, Si Ming Man<sup>1</sup>, Qifan Zhu<sup>1,2</sup>, Peter Vogel<sup>3</sup>, Sharon Frase<sup>4</sup>, Yoshinori Fukui<sup>5</sup>, and Thirumala-Devi Kanneganti<sup>1,\*</sup>

<sup>1</sup> Department of Immunology, St. Jude Children's Research Hospital, Memphis, TN, 38105, USA;

<sup>2</sup> Integrated Biomedical Sciences Program, University of Tennessee Health Science Center, Memphis, Tennessee 38163, USA;

<sup>3</sup> Animal Resources Center and the Veterinary Pathology Core, St. Jude Children's Research Hospital, Memphis, TN, 38105, USA;

<sup>4</sup> Cell and Tissue Imaging Center, St. Jude Children's Research Hospital, Memphis, TN, 38105, USA;

<sup>5</sup> Division of Immunogenetics, Department of Immunobiology and Neuroscience, Medical Institute of Bioregulation, Kyushu University, Fukuoka 812-8582, Japan.

\*Correspondence: Thirumala-Devi Kanneganti, Department of Immunology, MS 351, St Jude Children's Research Hospital, 262 Danny Thomas Place, Memphis, TN 38105-3678 Tel: (901) 595-3634; Fax. (901) 595-5766.

E-mail: <u>Thirumala-Devi.Kanneganti@StJude.org</u>.

## Supplementary figures legends

Supplementary Figure S1. *DOCK2*<sup>-/-</sup> mice do not have an impaired ability to produce cytokines during *C. rodentium* infection. (A) Levels of IL-17, IFN- $\gamma$  and TNF- $\alpha$  proteins in the colon 14 days post-infection with *C. rodentium*. (B and C) Real-time qPCR analysis of the expression of genes encoding IL-23p19 (B) and IL-22 (C) in colon tissues of WT and *Dock2*<sup>-/-</sup> mice infected with *C. rodentium*. Data are representative of two independent experiments (mean and SEM). Two-tailed *t*-test. \*, P < 0.05; NS, not statistically significant.

**Supplementary Figure S2.** *DOCK2*-/- mice have similar expression of the gene **encoding mucin**. Real-time qPCR analysis of the expression of genes encoding MUC1, MUC, MUC3 and MUC4 in the colon of WT and *DOCK2*-/- mice 4 days post-infection with *C. rodentium.*. Data are representative of two independent experiments (mean and SEM). Two-tailed *t*-test. NS, not statistically significant.

**Supplementary Table S1. Real time qPCR primer sequence.** 



