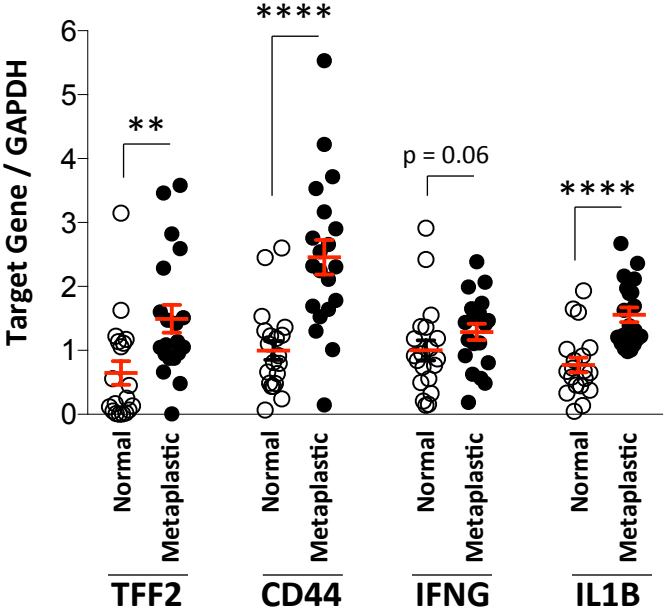
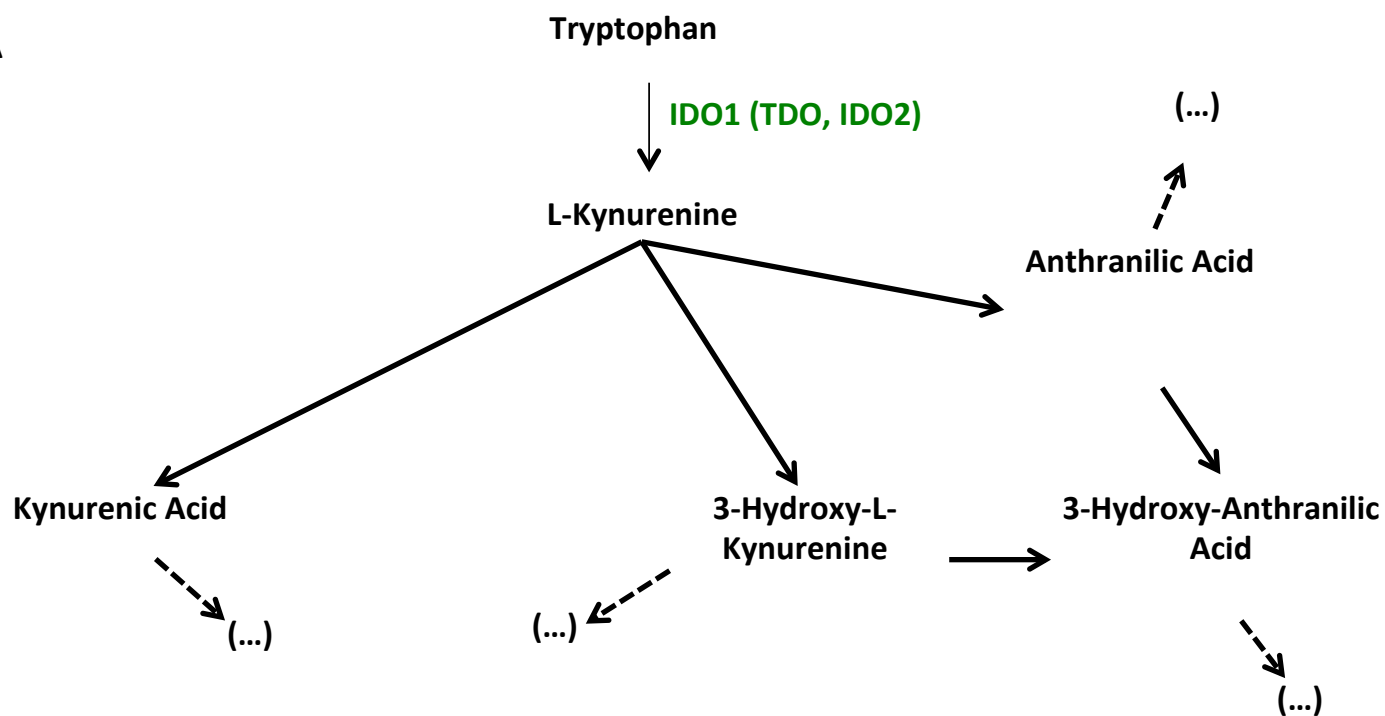


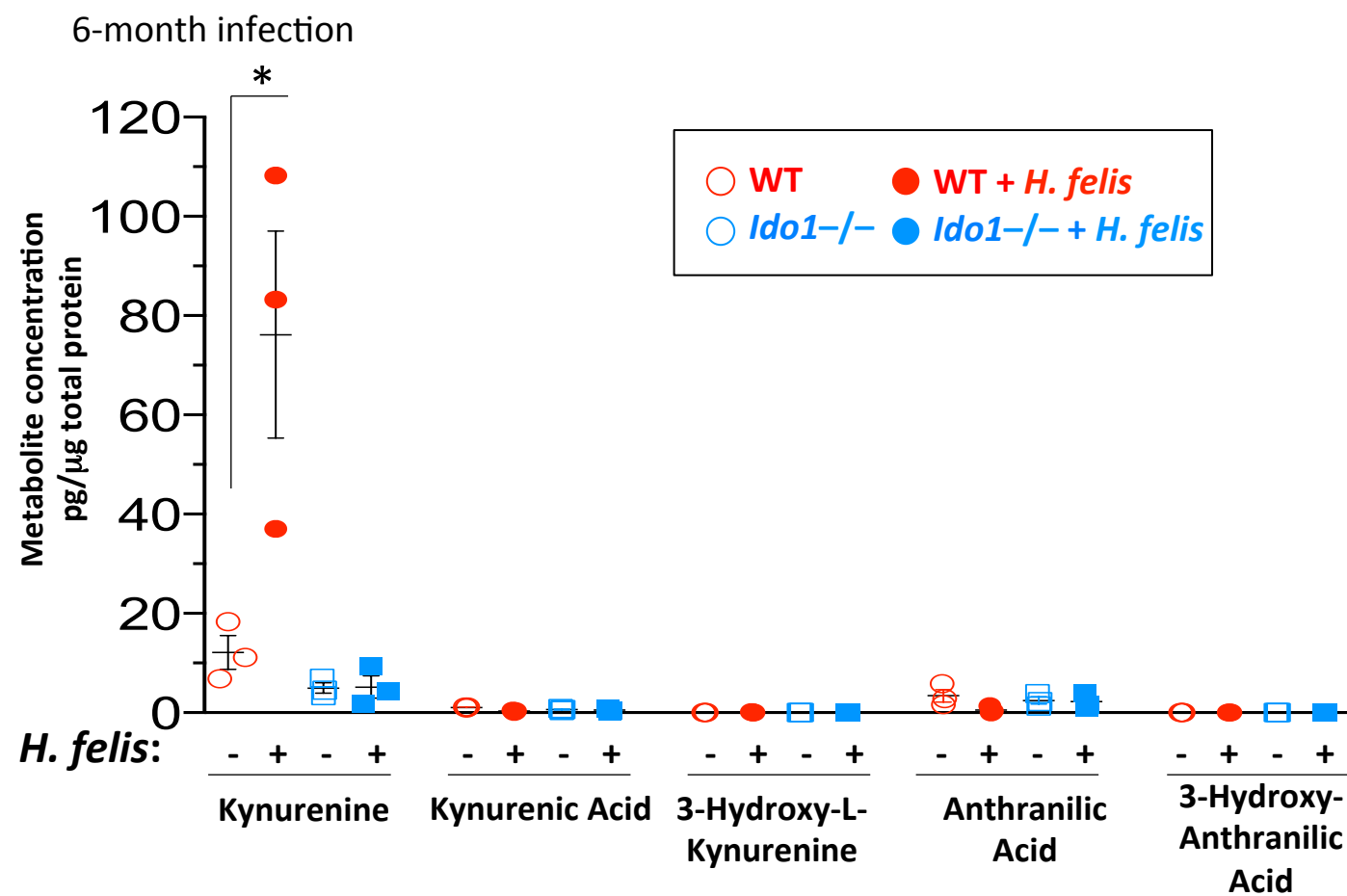
# Supplementary Figure 1



A

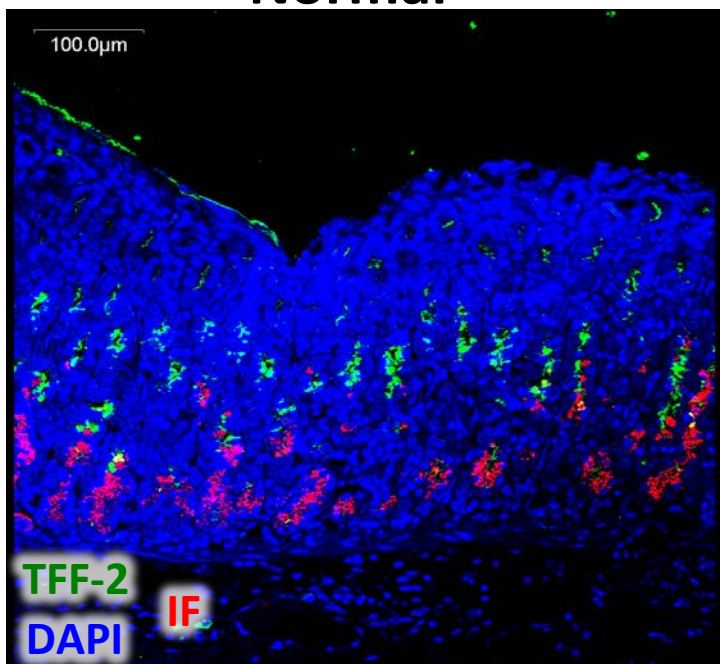


B

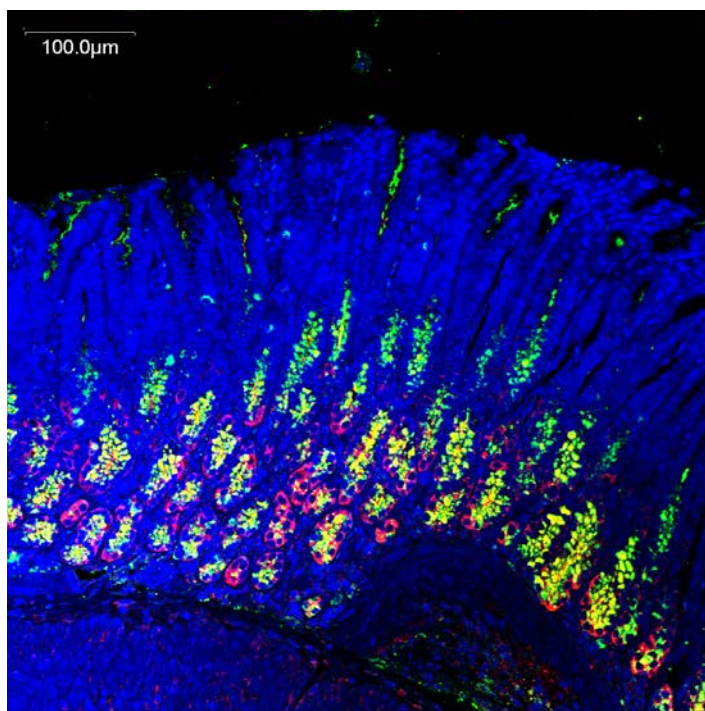


A

Normal

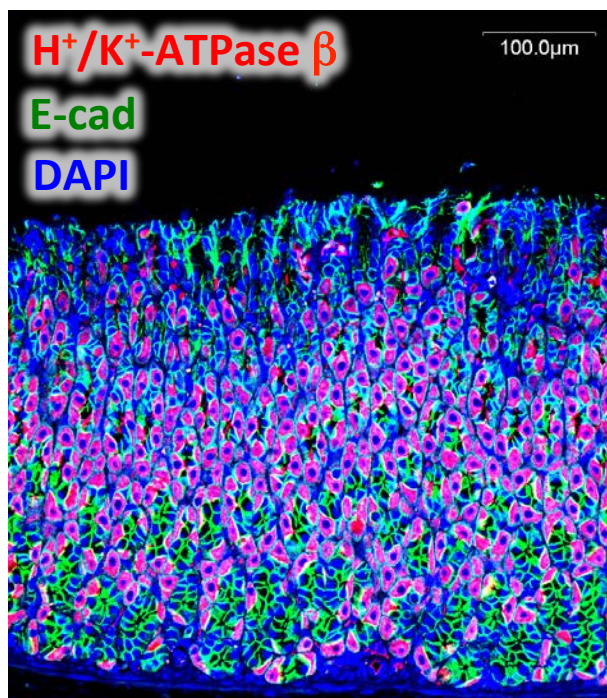


Metaplastic



B

Normal



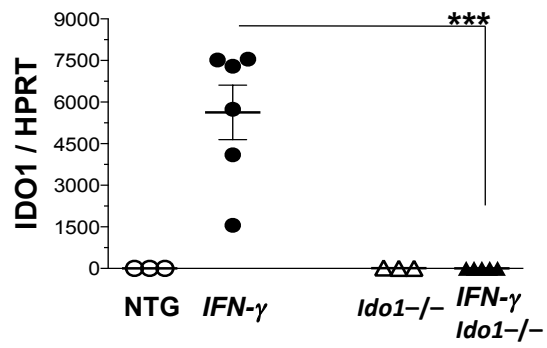
Parietal Cell Loss



# Supplementary Figure 4

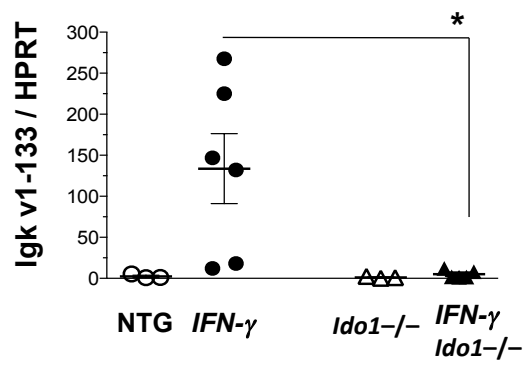
## A

### *IDO1* mRNA



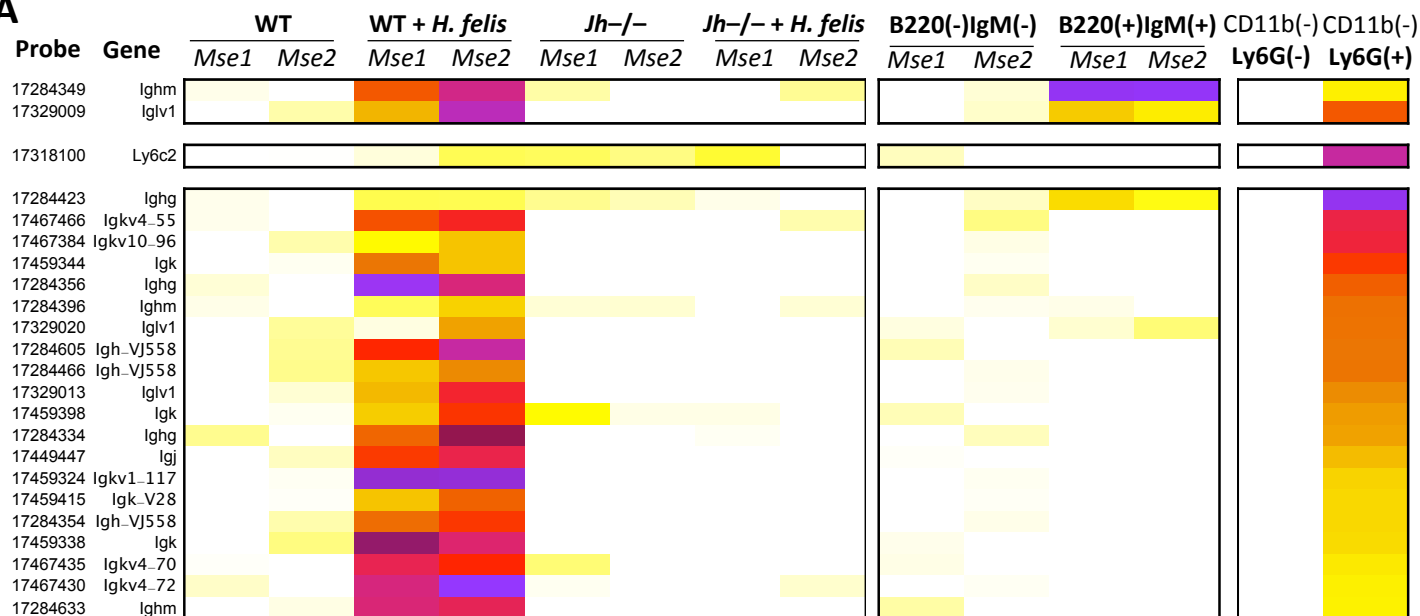
## B

### *Igk v1-133* mRNA



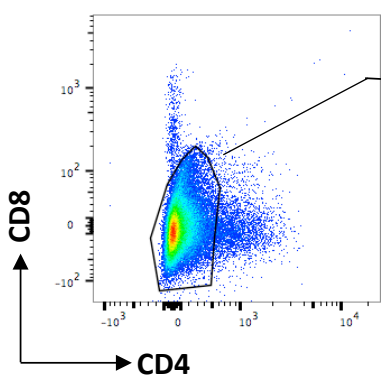
# Supplementary Figure 5

**A**



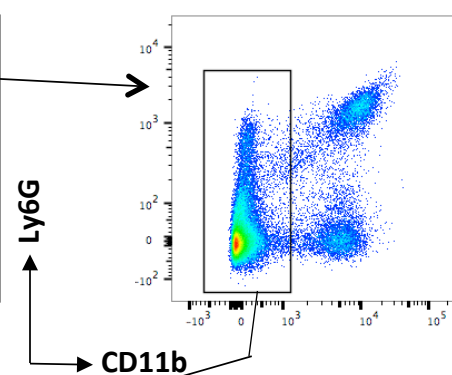
**B**

Gating: Live Cells

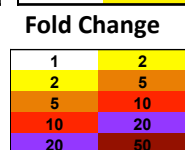
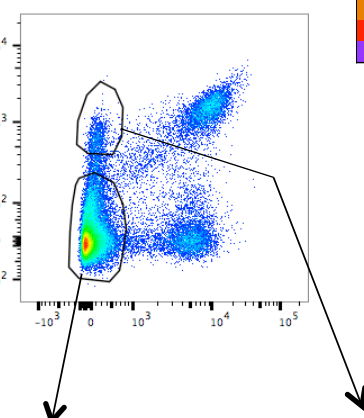


**C**

Gating: CD4(-)CD8(-)

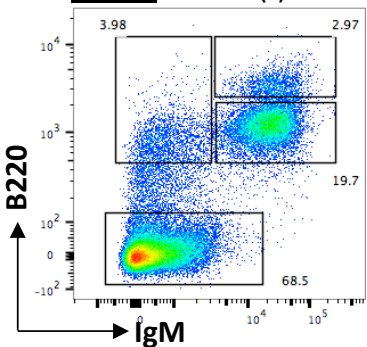


**D**

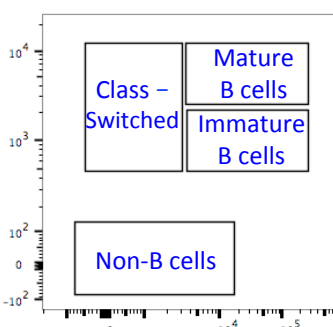


**E**

Gating: CD11b(-)

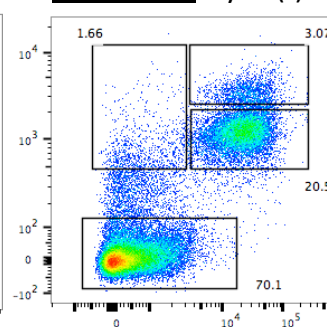


**F**



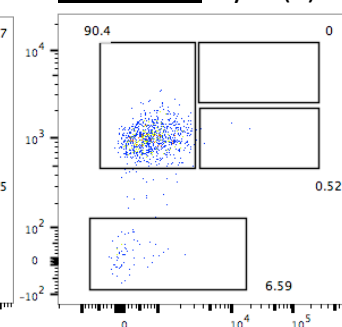
**G**

Sub-Gating: Ly6G(-)



**H**

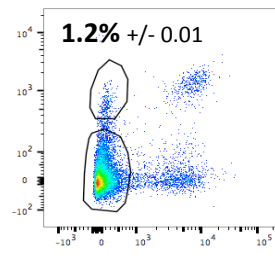
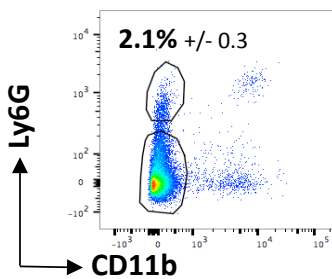
Sub-Gating: Ly6G(+)



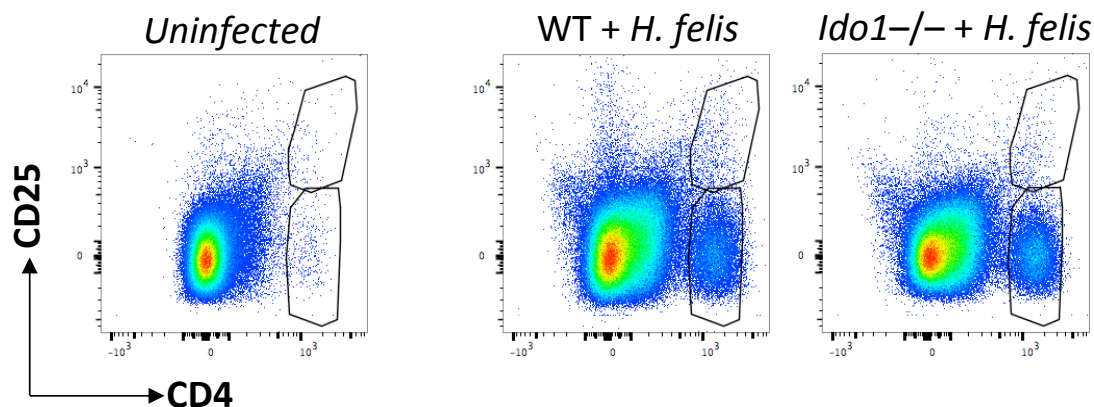
**I**

*WT + H. felis*

*Ido1-/- + H. felis*

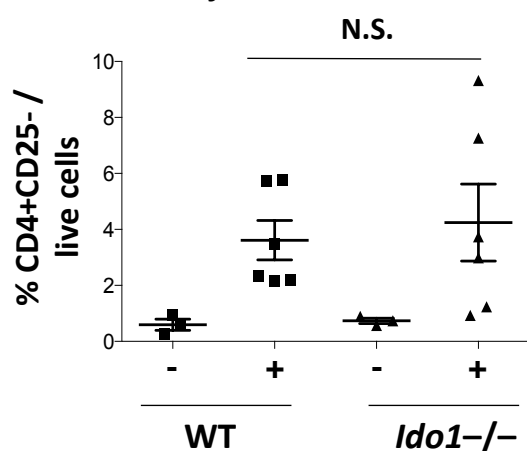


**A**



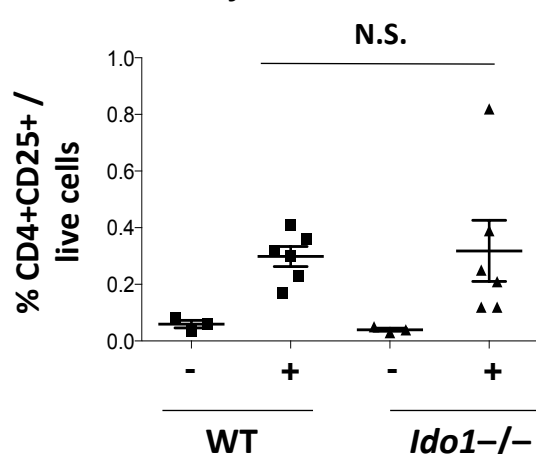
**B**

**Gastric CD4+CD25-  
FACS Quantification**



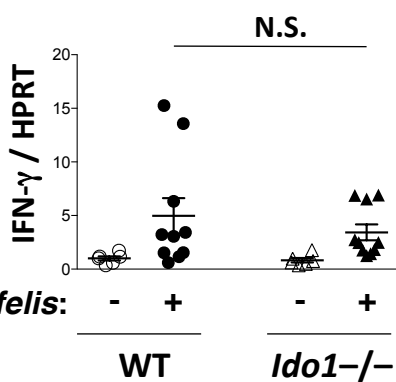
**C**

**Gastric CD4+CD25+  
FACS Quantification**

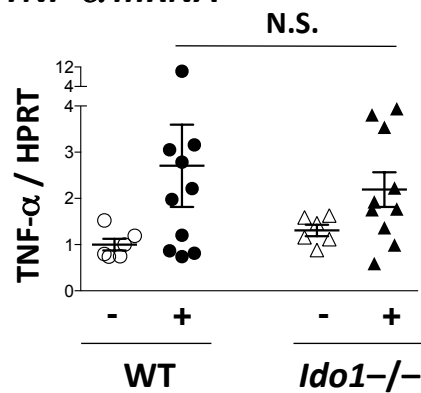


**D**

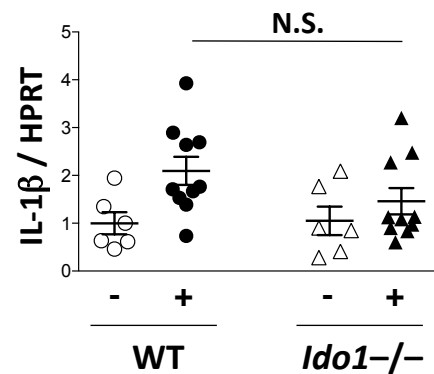
**IFN- $\gamma$  mRNA**



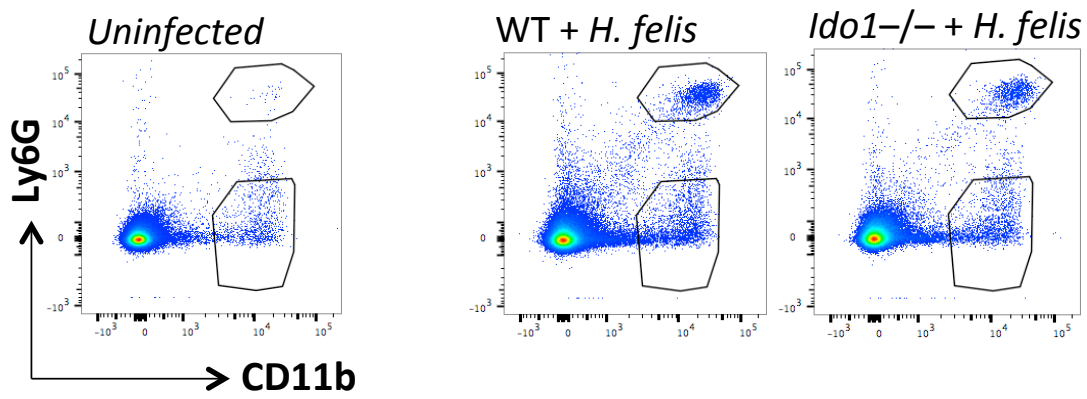
**TNF- $\alpha$  mRNA**



**IL-1 $\beta$  mRNA**

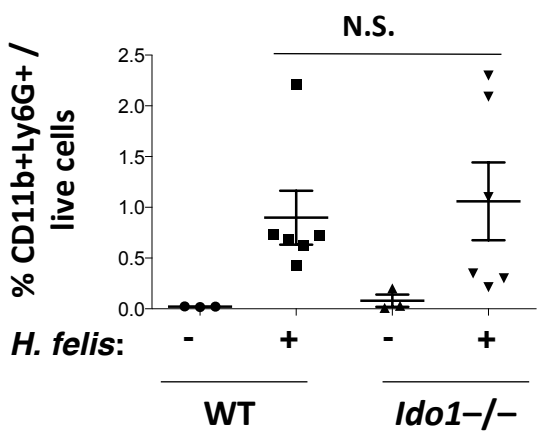


A



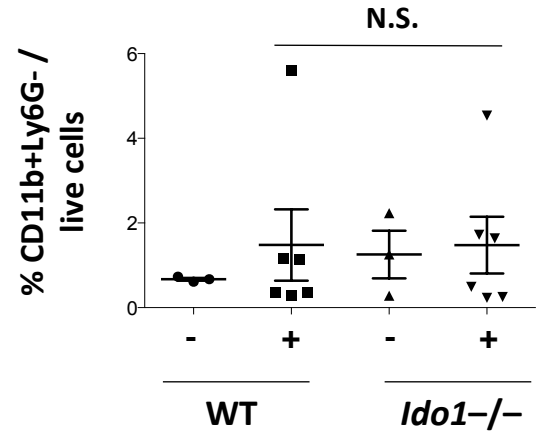
B

**Gastric CD11b<sup>+</sup> Ly6G<sup>+</sup> FACS Quantification**

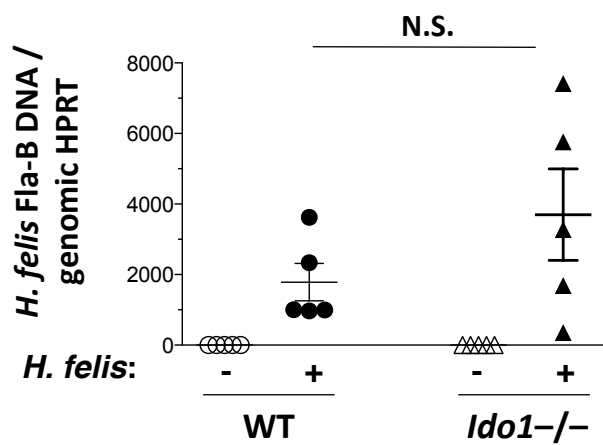


C

**Gastric CD11b<sup>+</sup> Ly6G<sup>-</sup> FACS Quantification**



*H. felis* Fla-B qPCR



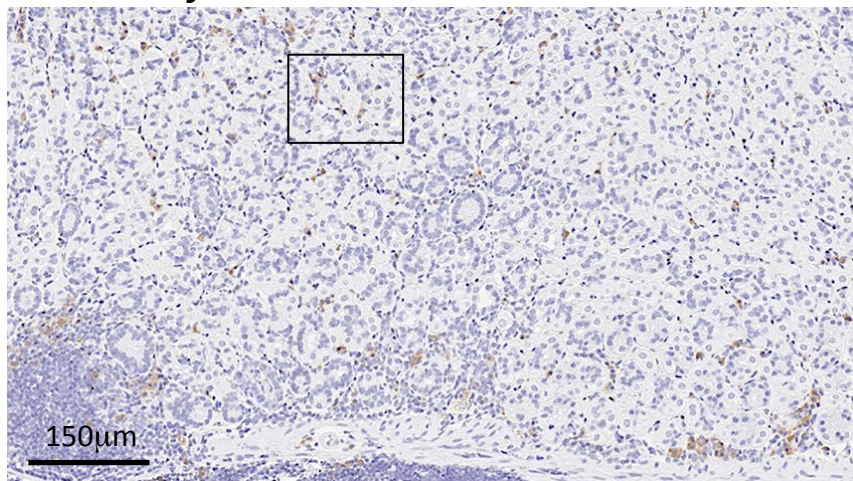
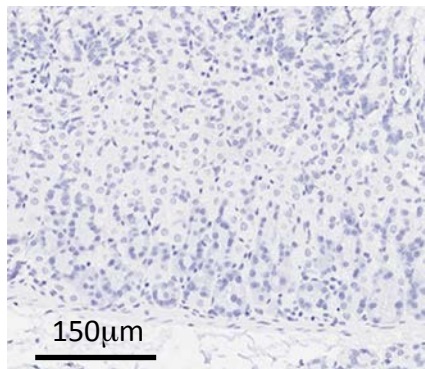


# Supplementary Figure 9

**A**

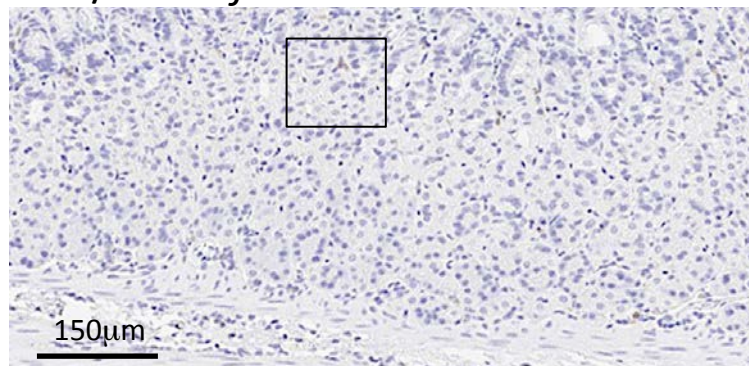
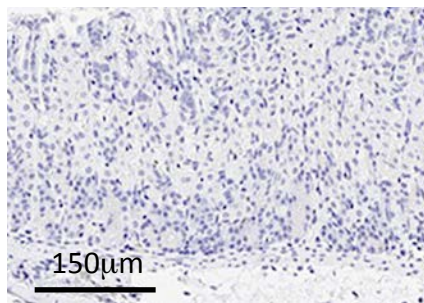
*WT + H. felis*

*WT*



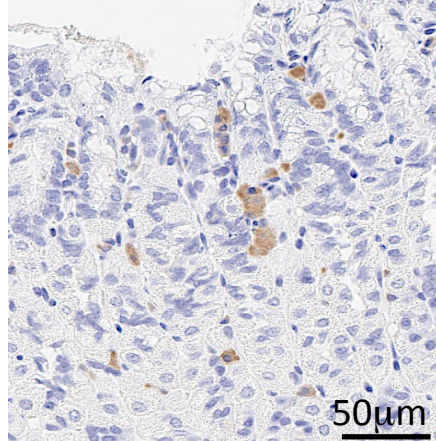
*Ido1*<sup>-/-</sup> + *H. felis*

*Ido1*<sup>-/-</sup>

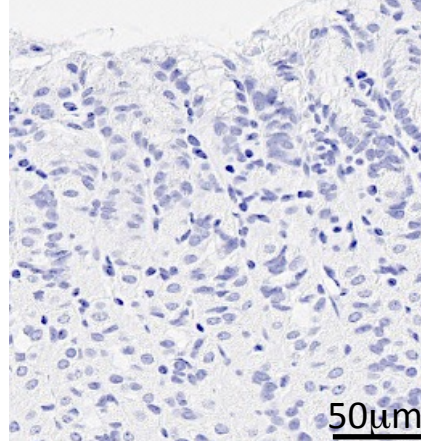


**B**

Positive Control



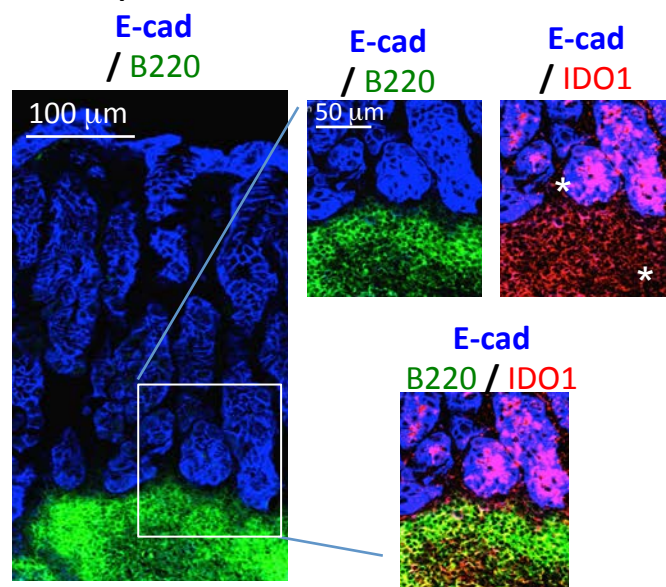
Negative Control



# Supplementary Figure 10

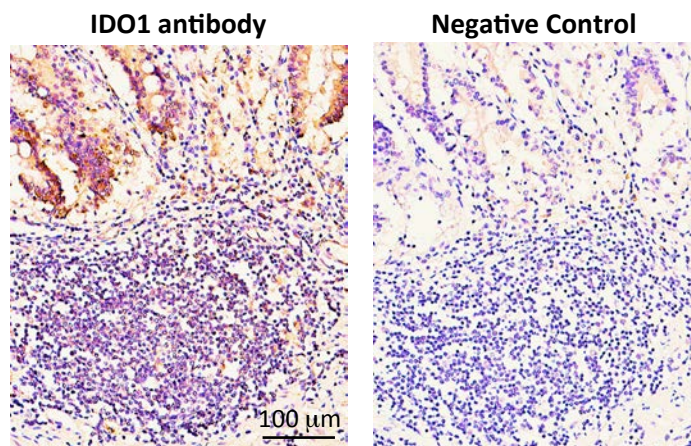
**A**

## Mouse Metaplastic Stomach Tissue



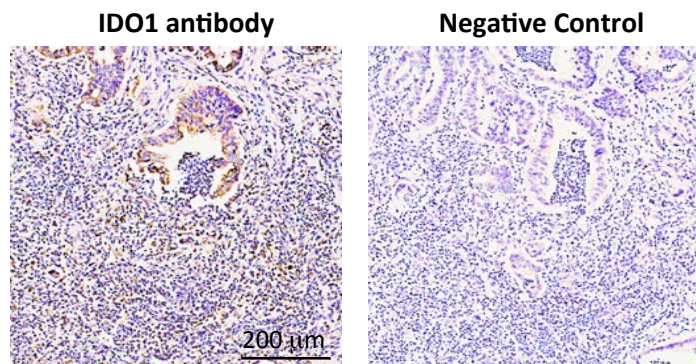
**B**

## Human Metaplastic Stomach Tissue

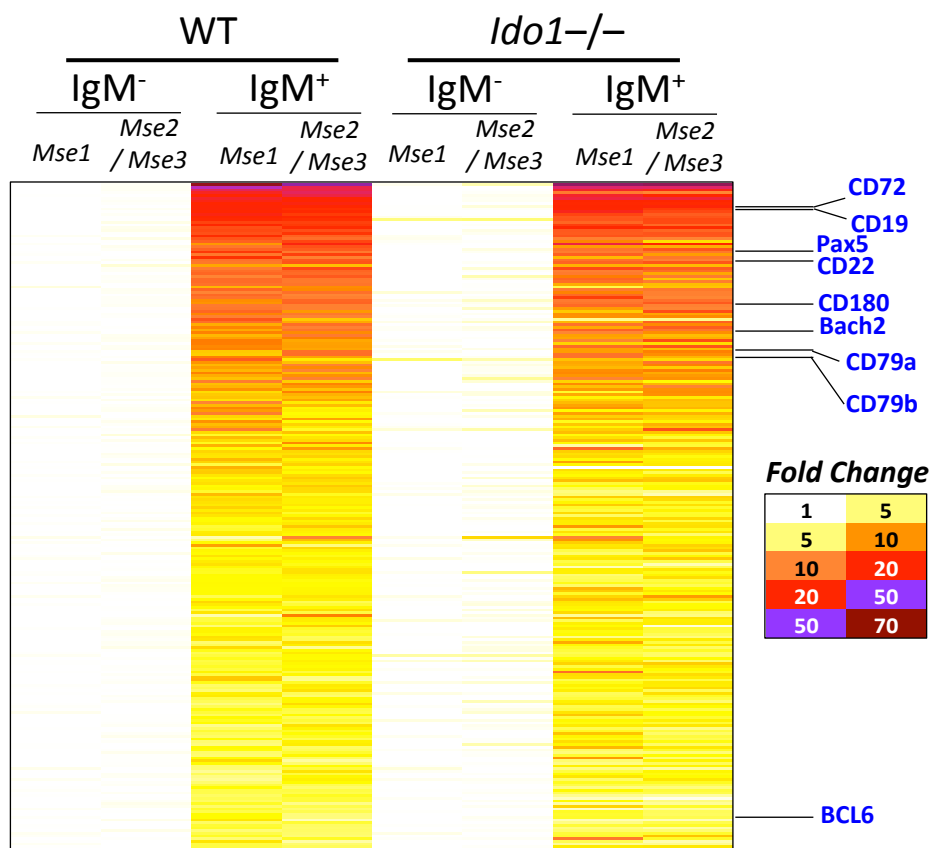


**C**

## Human Gastric Cancer Tissue

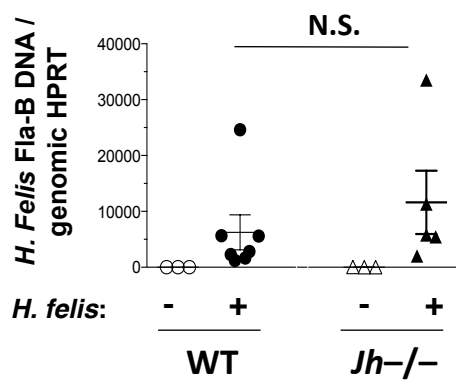


# Supplementary Figure 11



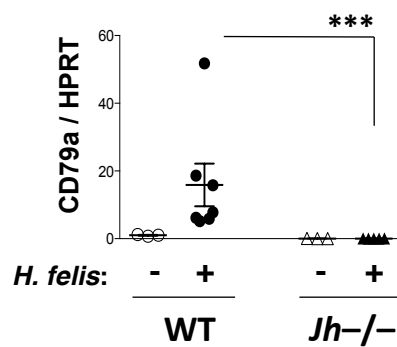
A

*H. felis* Fla-B qPCR



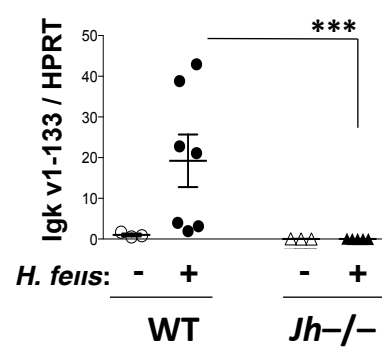
B

*CD79a* mRNA



C

*Igk v1-133* mRNA



# Supplementary Figure 13

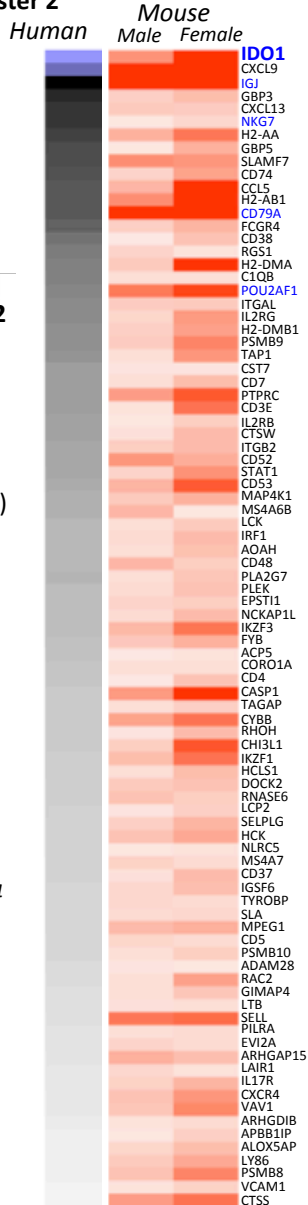
**A**

## Human vs *H. felis*

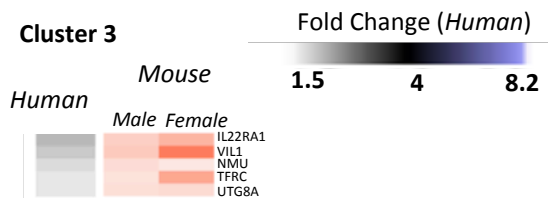
**Cluster 1**



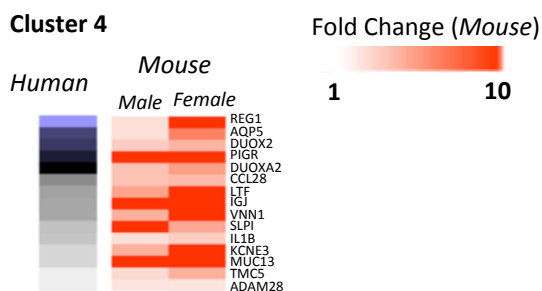
**Cluster 2**



**Cluster 3**

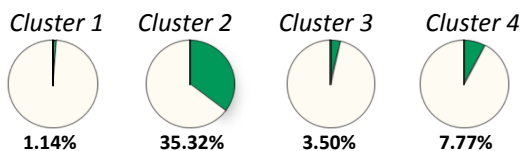


**Cluster 4**



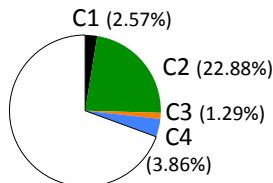
**B**

## HUMAN: (% Genes common to *H. felis* / Mouse)



**C**

## MOUSE: (% Common to each cluster)

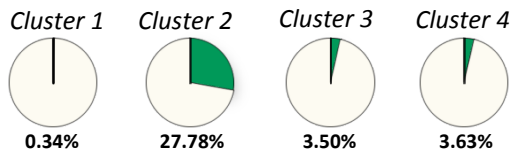


# Supplementary Figure 14

**A**

## Human (*expression clusters*) vs H<sup>+</sup>/K<sup>+</sup>-IFN- $\gamma$

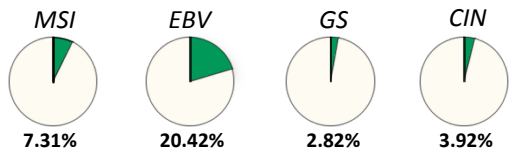
**HUMAN:** (% Genes common to IFN- $\gamma$  / Mouse)



**B**

## Human (*overall subtypes*) vs H. felis model

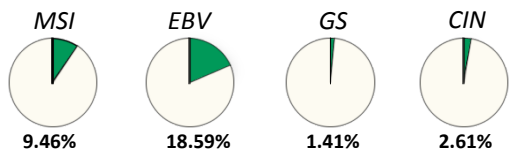
**HUMAN:** (% Genes common to *H. felis* / Mouse)



**C**

## Human (*overall subtypes*) vs H<sup>+</sup>/K<sup>+</sup>-IFN- $\gamma$

**HUMAN:** (% Genes common to IFN- $\gamma$  / Mouse)



# Supplementary Diagram 1

## Metaplasia / Dysplasia

