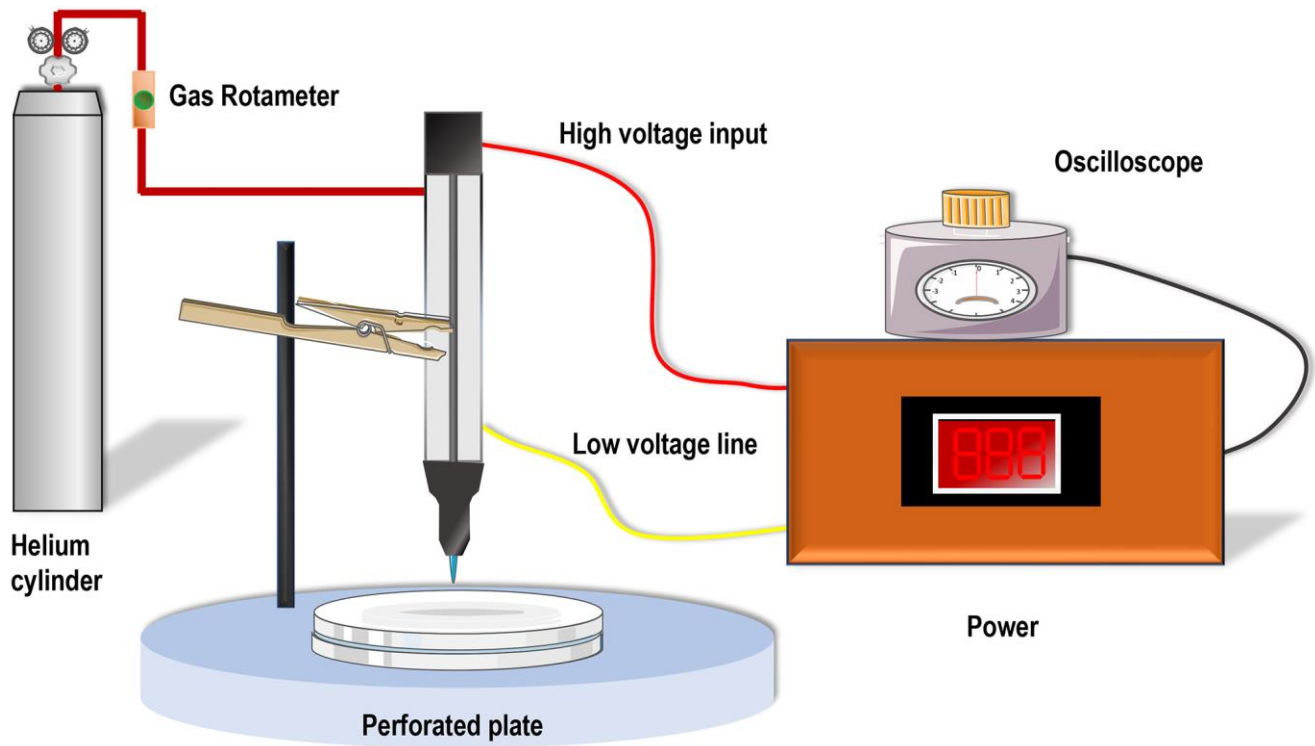
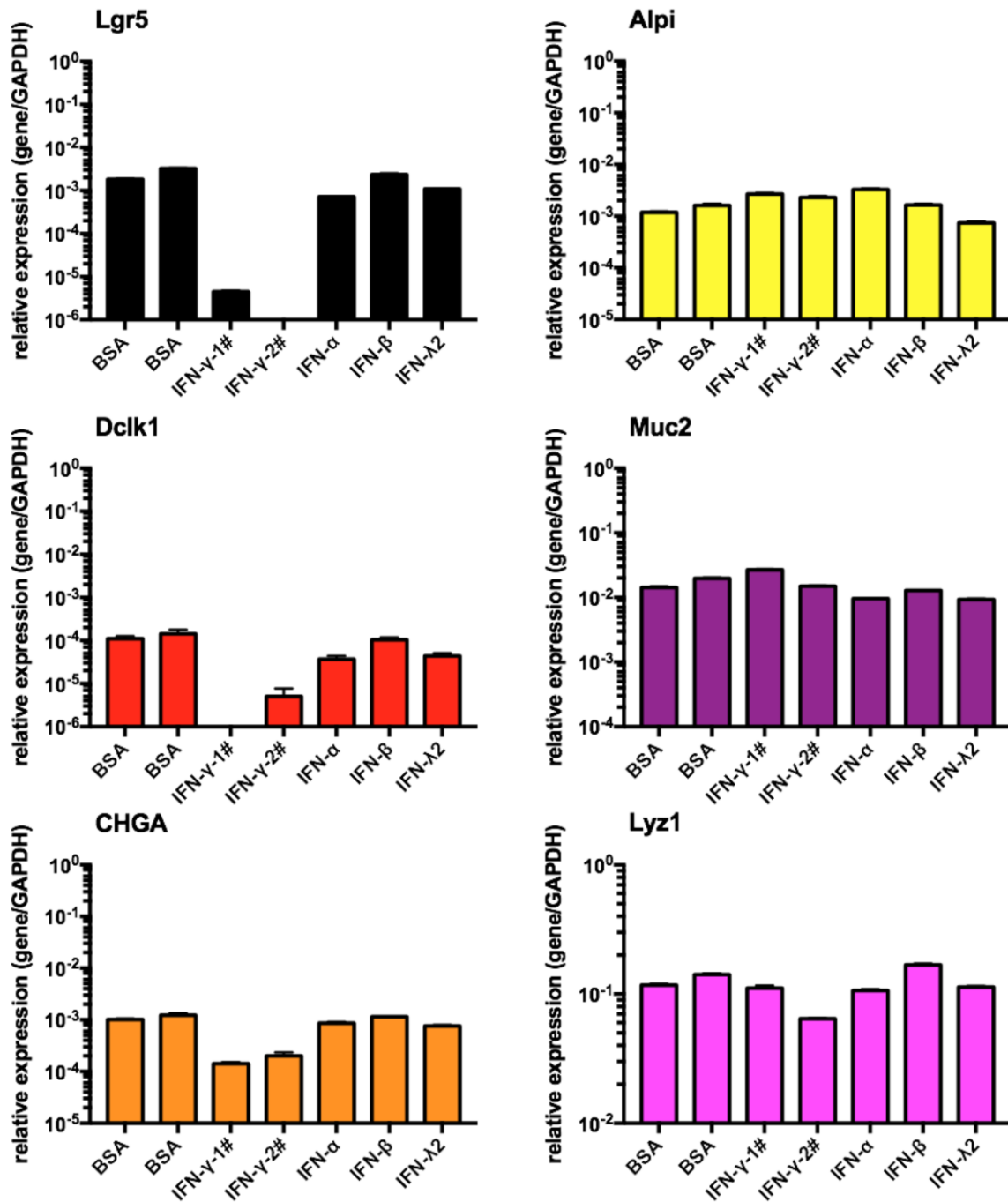


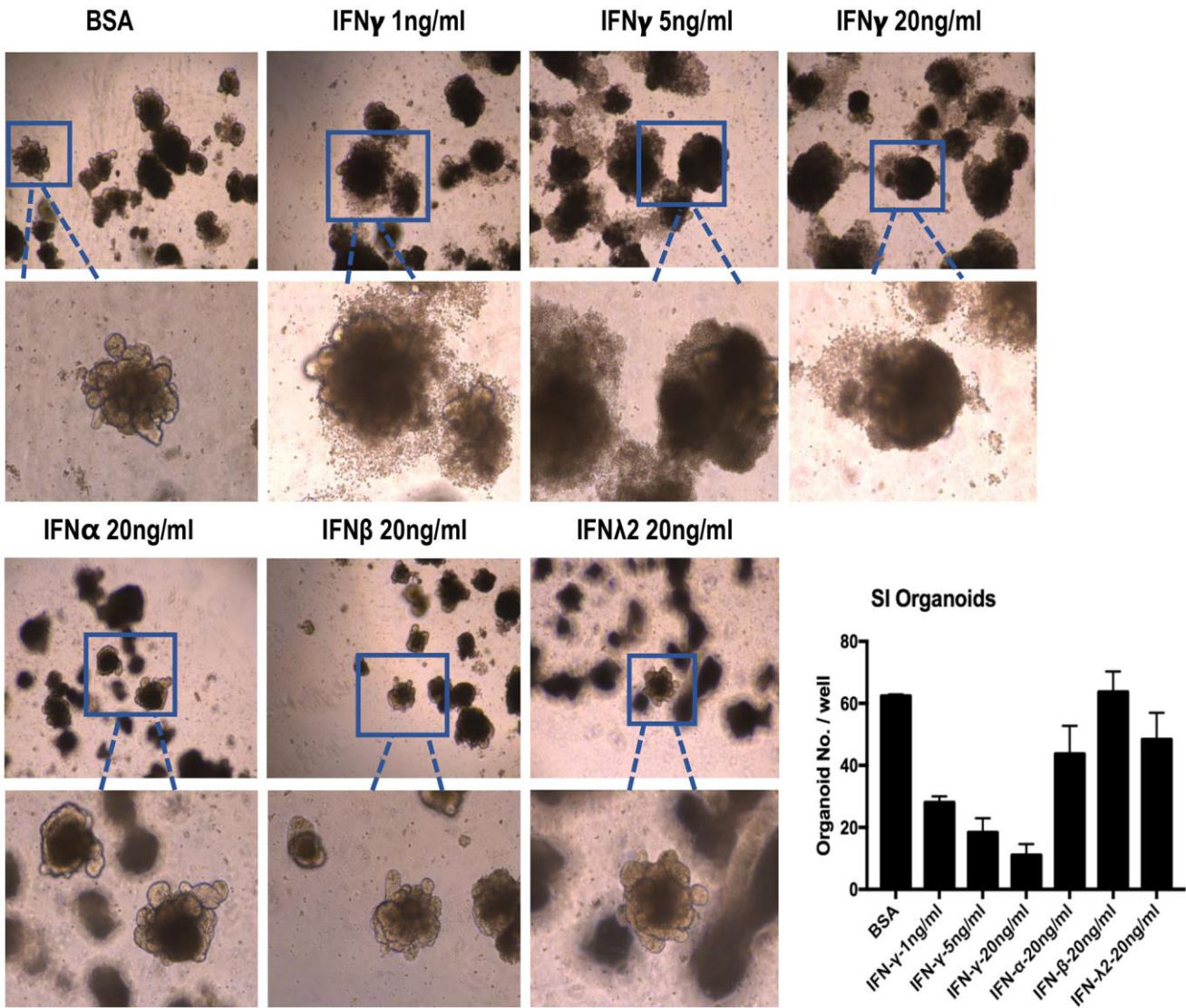
SUPPLEMENTARY FIGURES



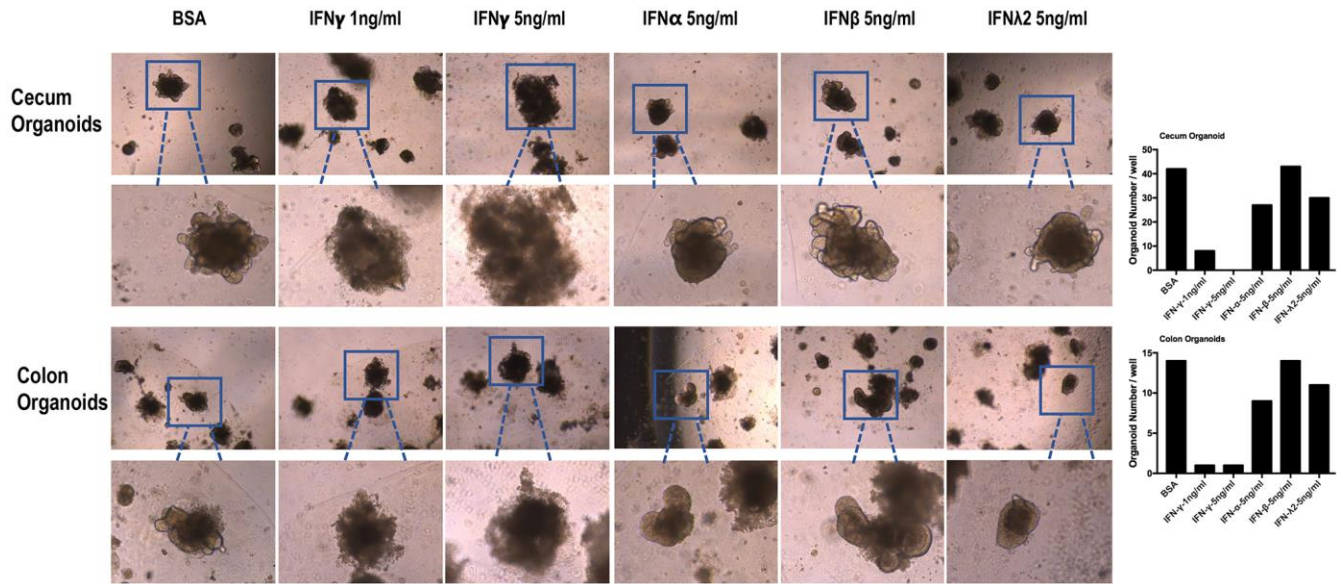
Supplementary Figure 1. Schematic diagram showing the equipment for CAP ejection.



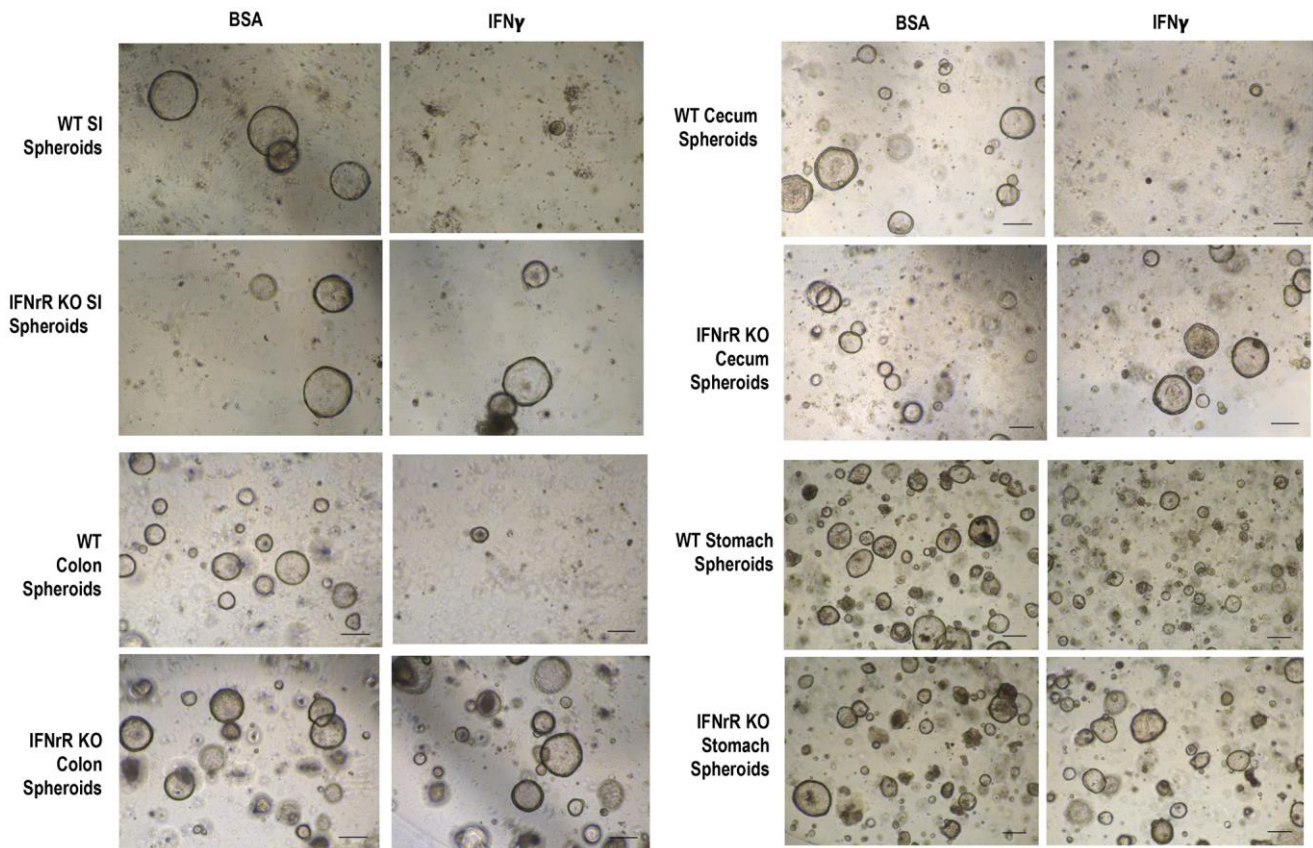
Supplementary Figure 2. Canonical marker gene expression in stem cells, enterocytes, Tuft cells, Goblet cells, enteroendocrine cells and Paneth cells in response to IFN $\alpha/\beta/\gamma/\lambda 2$. IFN γ -1, IFN γ -2 were purchased from Abisin (#abs04123) and Yeasen (#91211ES10), respectively.



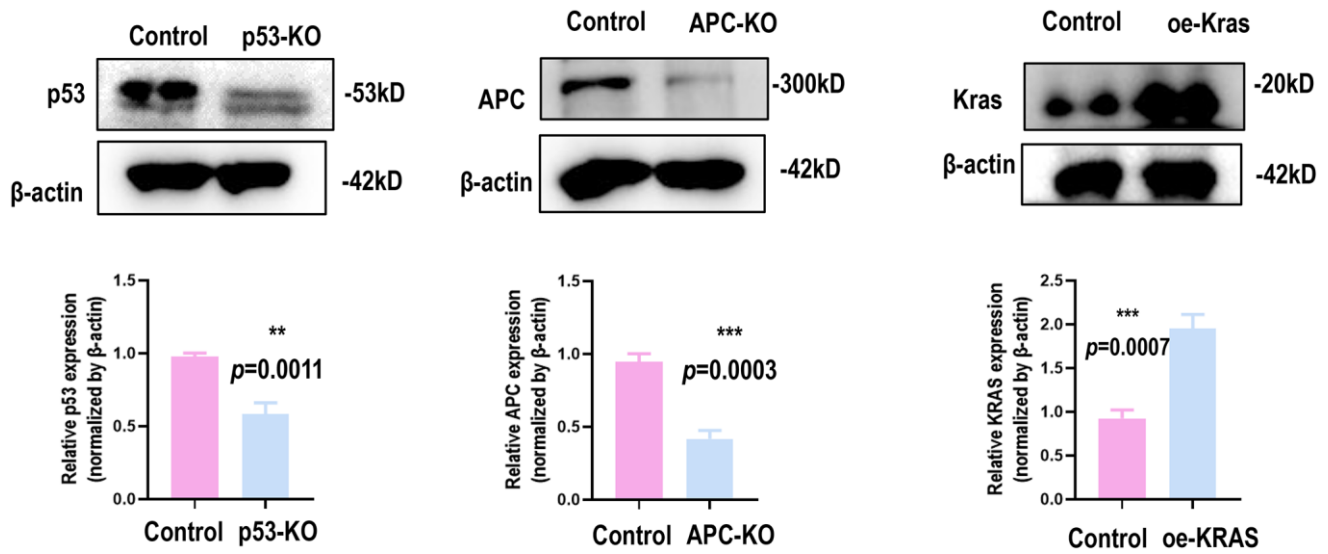
Supplementary Figure 3. The amount of SI spheroids in response to IFN α / β / γ under different concentrations.



Supplementary Figure 4. The amount of cecum and colon spheroids in response to IFN $\alpha/\beta/\gamma$ under different concentrations.



Supplementary Figure 5. Images of spheroids from different tissues in response to IFN γ when knocking down *IFNGR1/2*.



Supplementary Figure 6. The knockout of *p53*, *APC* or the hyperactivation of *Kras*.