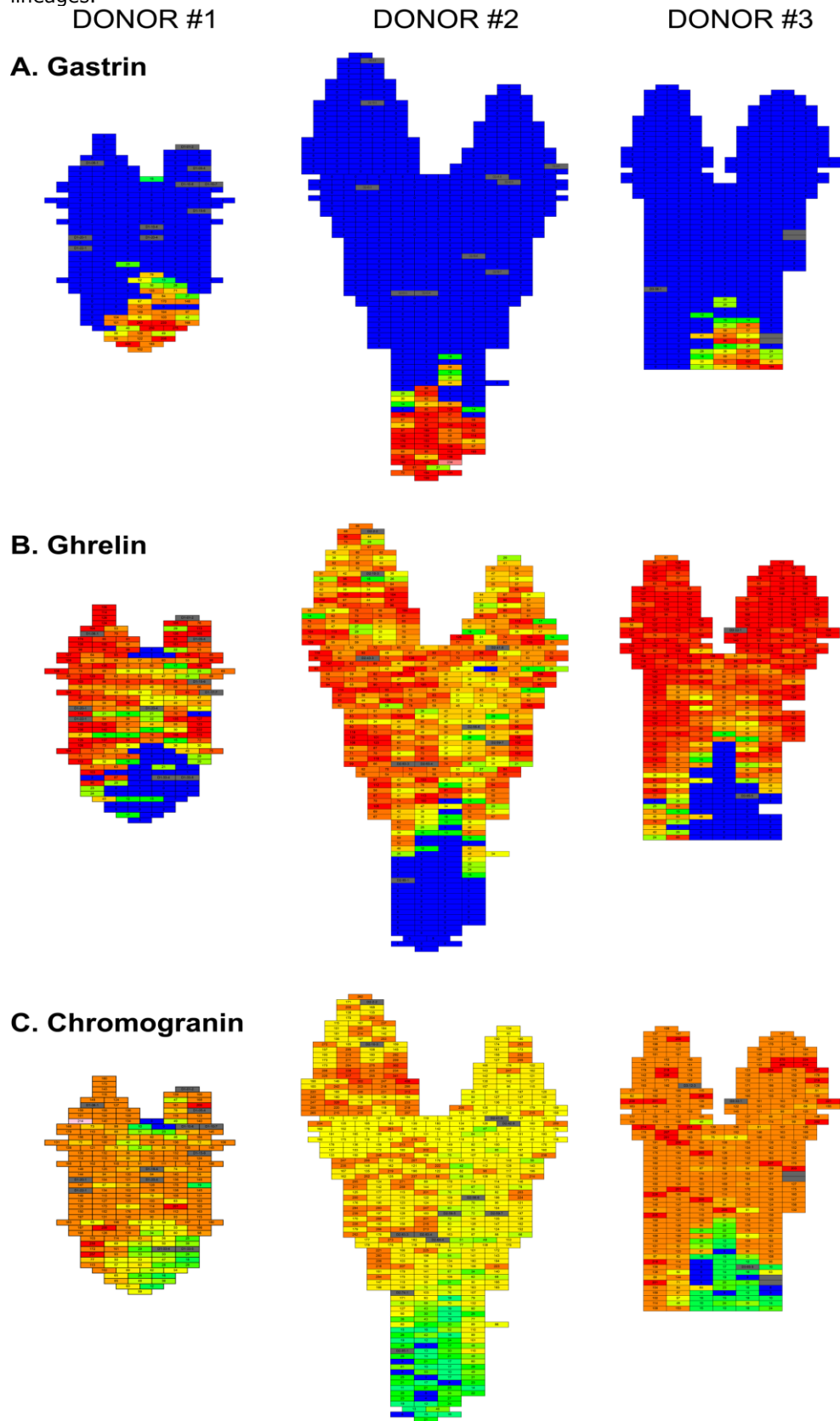
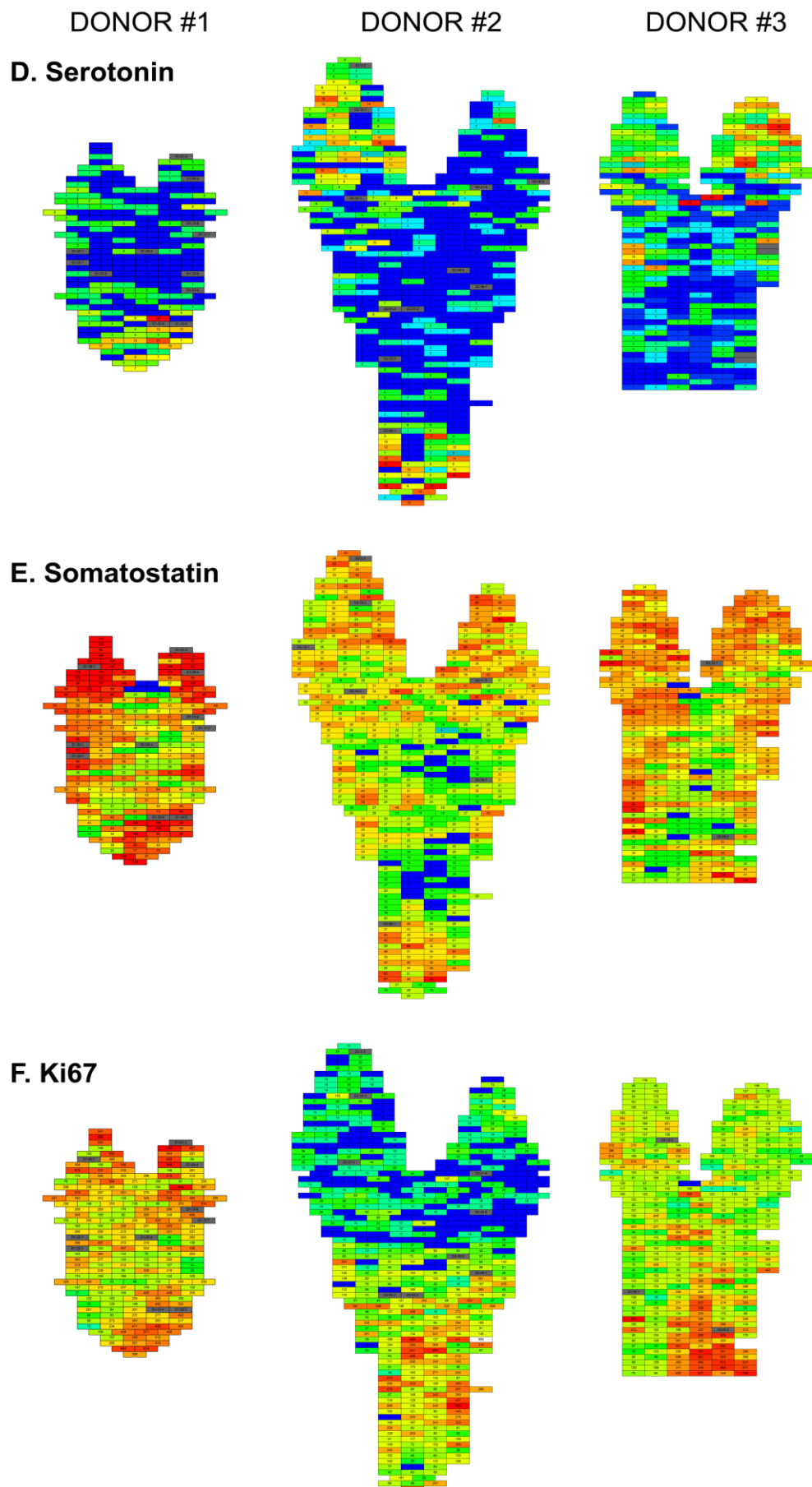


Supplemental Figures

Supplemental Figure 1: Two-dimensional maps of cell numbers from all three donors for endocrine lineages.



Supplemental Figure 2: Two-dimensional maps of cell numbers from all three donors for cell lineages.



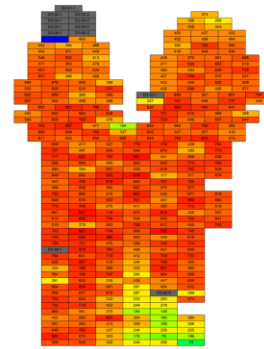
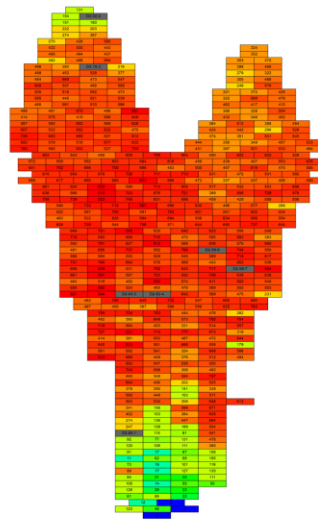
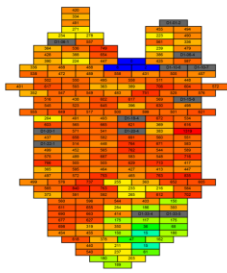
Supplemental Figure 3: Two-dimensional maps of cell numbers from all three donors for cell lineages. Twodimensional maps from all three donors with quantitation of G) H/K-ATPase (parietal cells), H) Mist1 (chief cells) and I) MUC6. The two-dimensional maps for donor 2 correspond to the 3-dimensional maps shown in Figure 3.

DONOR #1

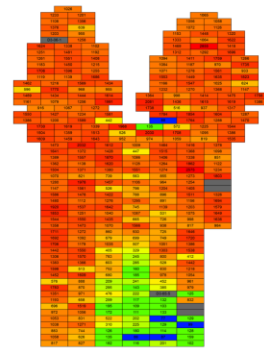
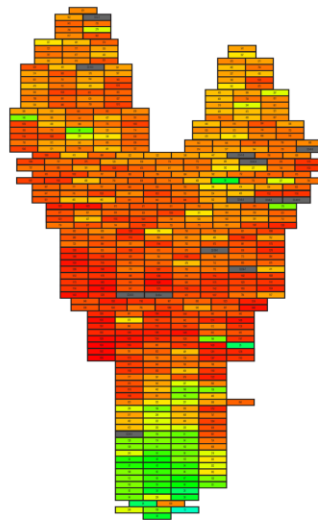
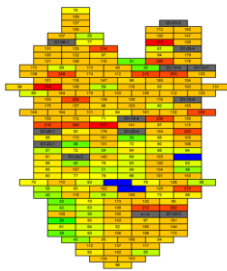
DONOR #2

DONOR #3

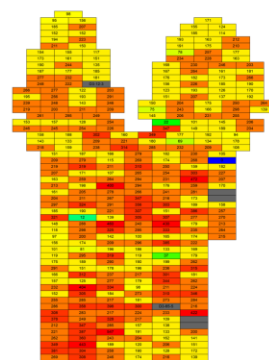
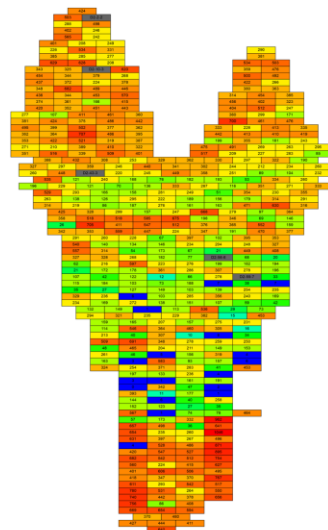
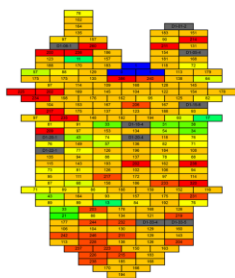
G. H/K-ATPase



H. Mist1



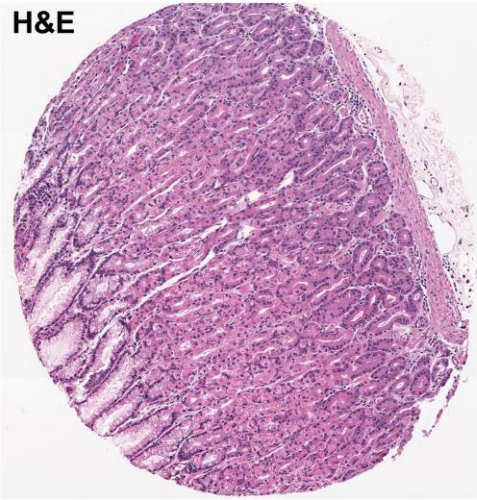
I. MUC6



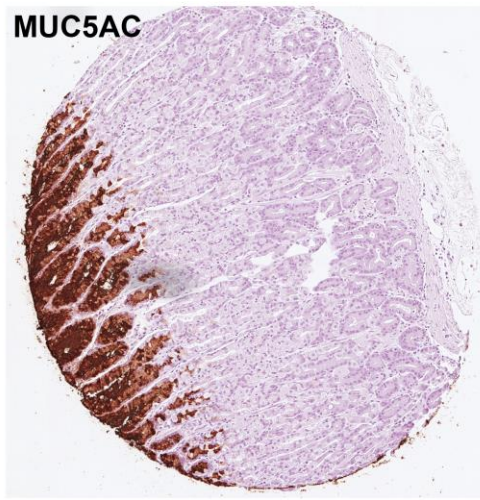
Supplemental Figure 4: Staining of representative cores from the body and antrum.

A

H&E

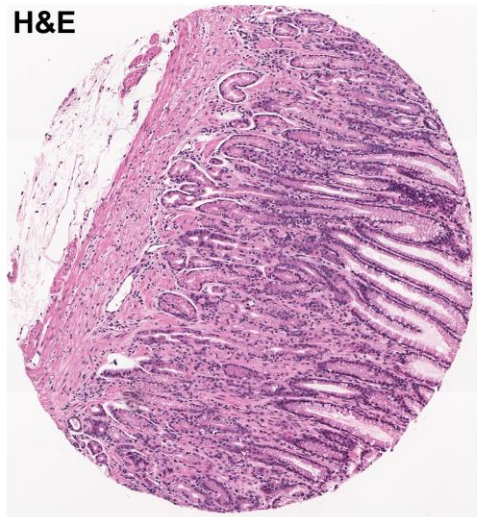


MUC5AC

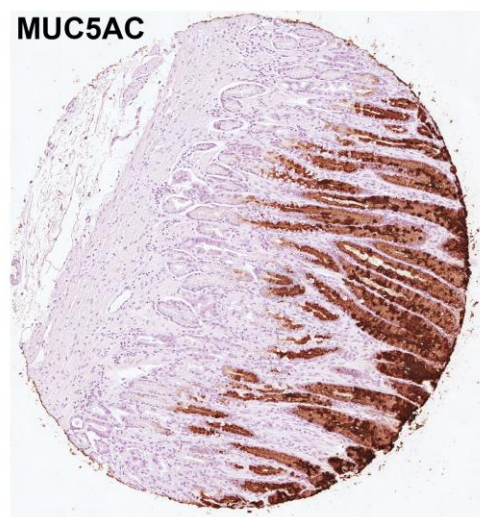


BODY

H&E



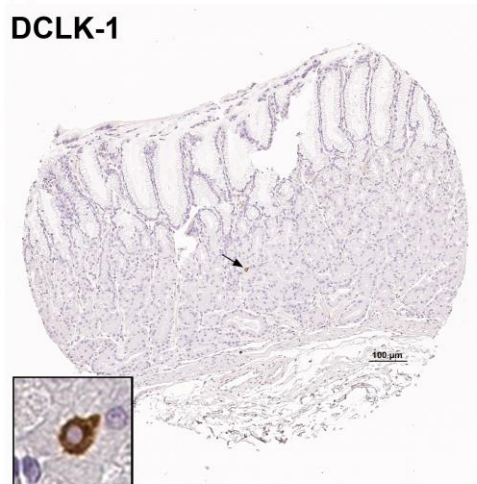
MUC5AC



ANTRUM

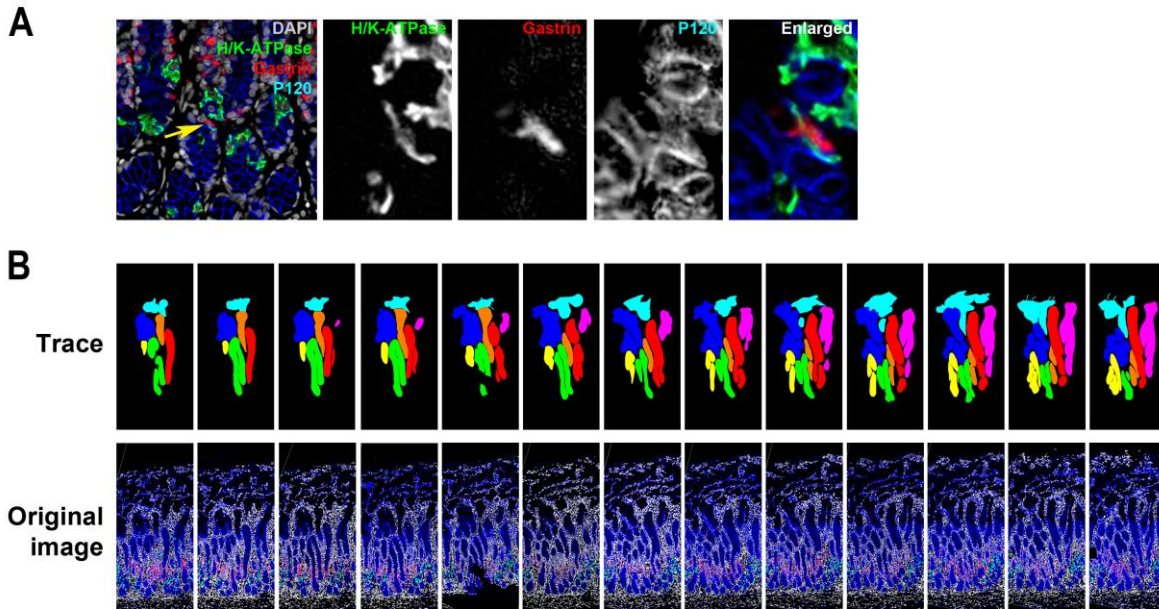
B

DCLK-1

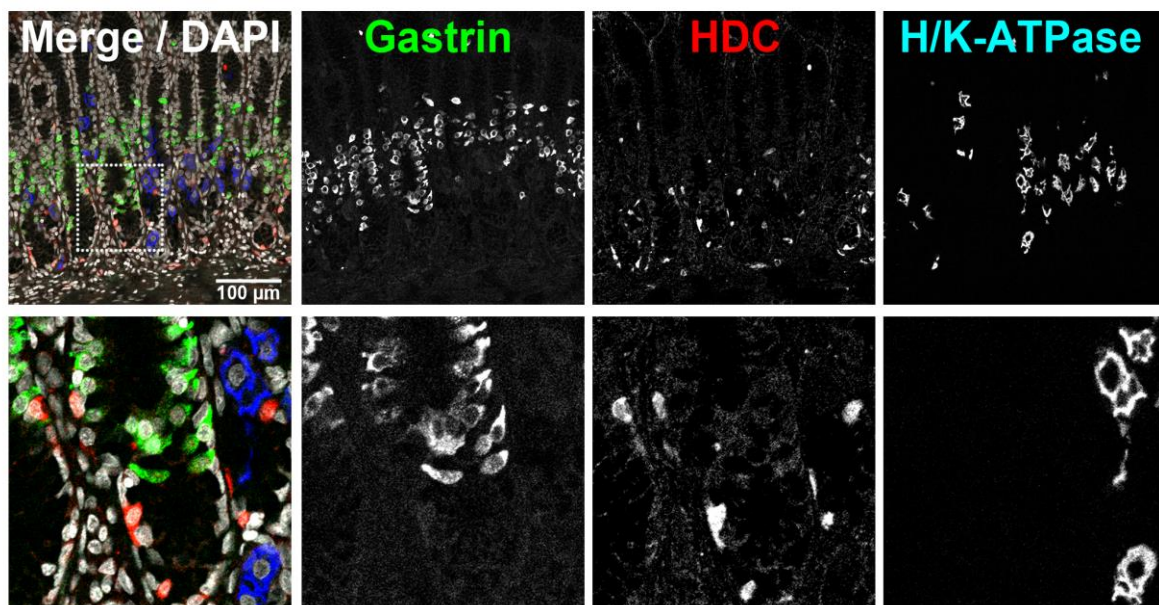


ANTRUM

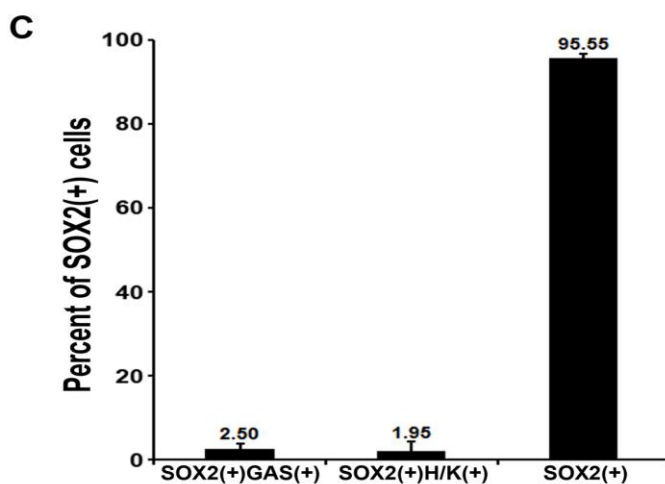
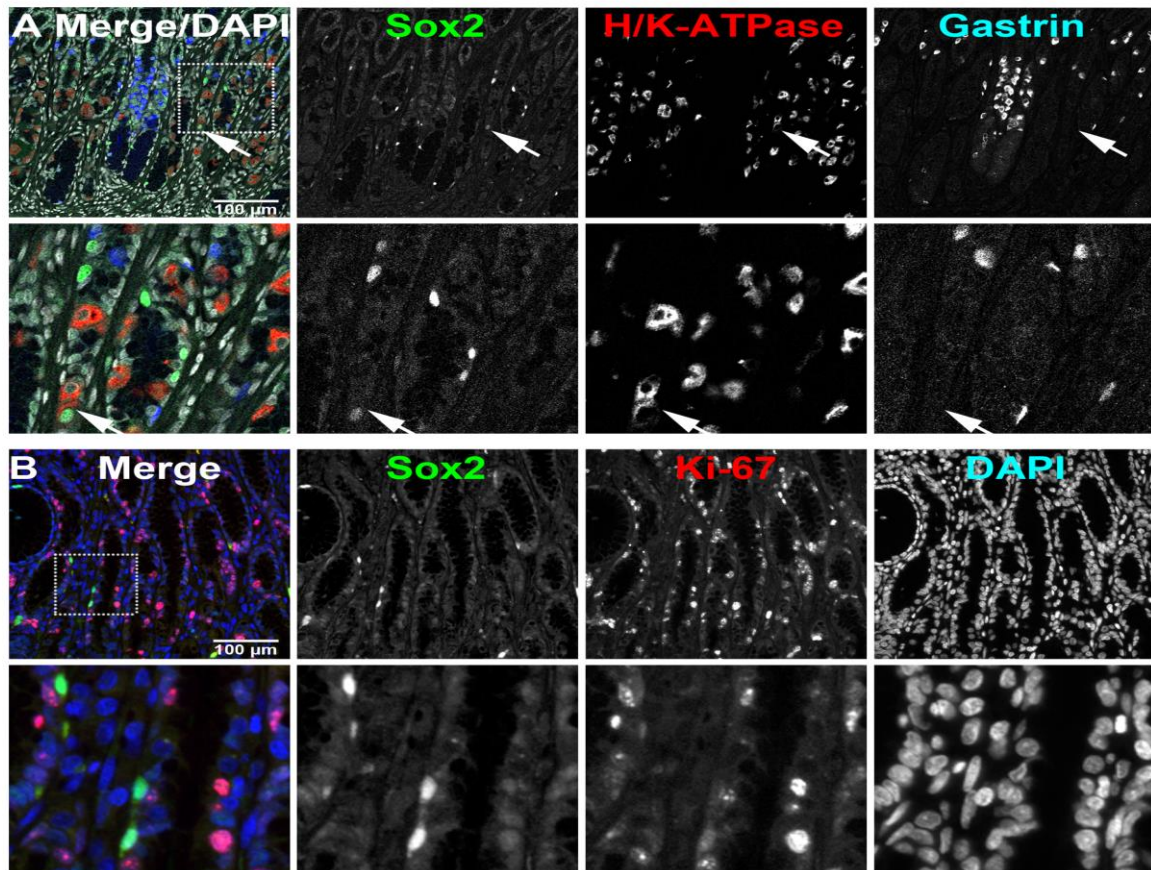
Supplemental Figure 5: A. Immunofluorescence staining for H/K-ATPase and Gastrin co-positive cells. Immunostaining for H/K-ATPase and gastrin from the stomach antrum demonstrates the presence of an H/K-ATPase and gastrin co-positive cell (yellow arrow). B. Assembly of gland tracing. Upper tracings of individual glands were outlined based on stained images in the lower panel for triple labeling with antibodies against gastrin (red), H/K-ATPase (green) and p120 (blue). The color-coding for traced gland units was as follows: Red, orange, and green – antral-type glands lacking parietal cells, pink and yellow – mixed-type glands with both parietal cells and gastrin cells, light blue and blue – incompletely mapped glands



Supplemental Figure 6. Immunofluorescence staining for ECL cells in the human antrum.



Supplemental Figure 7: Immunofluorescence staining for SOX2-expressing gastric stem cells in human antrum. Paraffin sections of human gastric antrum were immunostained for SOX2, gastrin and H/K-ATPase (A) and for SOX2 and Ki67 (B). DAPI was used for nuclear staining. Dotted boxes depict regions enlarged. White arrows indicate the position of cells co-labeled for both H/K-ATPase and SOX2. Scale bars are as indicated. C. Quantitation of SOX2-expressing cells co-positive for H/K-ATPase or Gastrin in human antrum. Sections were triple stained for SOX2, gastrin and H/K-ATPase. The graph represents the proportion of SOX2-expressing cells co-positive for SOX2 and gastrin (SOX2(+)/GAS(+)) or co-positive for SOX2 and H/K-ATPase (SOX2(+)/H/K(+)) or singly positive only for Sox2 (SOX2(+)) per 100 SOX2- expressing cells (n=3).



Supplemental Figure 8: Immunostaining for MUC6 in a core from the stomach body shows a single SPEM gland. Immunostaining for MUC6 in this core from the stomach body demonstrates the normal distribution of MUC6-staining mucous neck cells. The arrow indicates the presence of one gland with MUC6 staining of cells throughout a gland to its base, characteristic of SPEM.

