Pancreatic Exocrine Tissue Architecture and Integrity are Maintained by E-cadherin During Postnatal Development
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Supplementary Information

1. Supplementary Table 1

| Antigen               | Species     | Source             | Dilution |
|-----------------------|-------------|--------------------|----------|
| Active β-catenin      | Mouse       | Millipore          | 1:200    |
| Amylase               | Mouse       | Santa Cruz         | 1:500    |
| β-catenin             | Rabbit      | Cell Signaling     | 1:300    |
| Chromogranin A        | Goat        | Santa Cruz         | 1:500    |
| Cdhl                  | Rat         | Cell Signaling     | 1:500    |
| Cdh1                  | Goat        | R&D                | 1:500    |
| Cpa1                  | Goat        | R&D                | 1:500    |
| CD133                 | Rabbit      | Abcam              | 1:200    |
| YAP                   | Rabbit      | Cell Signaling     | 1:300    |
| Epcam                 | Rat         | DSHB               | 1:100    |
| Glucagon              | Rabbit      | Invitrogen         | 1:500    |
| Insulin               | Guinea Pig  | Dako               | 1:500    |
| Laminin 1             | Rabbit      | Sigma              | 1:1000   |
| Mucin 1               | Rabbit      | Abcam              | 1:500    |
| Nr5a2                 | Mouse       | R&D                | 1:300    |
| Pancreatic Polypeptide| Goat        | Novus              | 1:500    |
| Somatostatin          | Goat        | Santa Cruz         | 1:200    |
| Sox9                  | Rabbit      | Millipore          | 1:200    |
| Trypsin               | Sheep       | R&D                | 1:300    |
| Bio-DBA               |             | Vector Laboratories| 1:500    |
2. Supplementary Figure Legends

Supp. Figure 1. Cdh1ΔPan/ΔPan mice exhibit normal endocrine development. Immunofluorescence analysis of Cdh1 (white) in the control (A) and Cdh1ΔPan/ΔPan (B) pancreas at E11.5. Immunofluorescence analysis of acinar (amylase, green), ductal (DBA, white), and endocrine (chromogranin A, red) compartments of control (C) and Cdh1ΔPan/ΔPan (D) pancreata at E15.5. Quantification of acinar (E) and endocrine (F) areas in control and Cdh1ΔPan/ΔPan mice at E15.5. (G) Relative pancreas size in control and Cdh1ΔPan/ΔPan mice at E15.5. (H-K) Immunofluorescence analysis of the endocrine markers insulin, glucagon, somatostatin, and pancreatic polypeptide (green) and Chromogranin A (red) in control (H,J) and Cdh1ΔPan/ΔPan (I,K) pancreata at P0 and P4. Histograms represent mean ± SEM of at least three independent determinations. For 2-tailed t-tests, * = p<0.05, ** = p<0.01, *** = p<0.001 compared to control. White scale bars = 100 μm.

Supp. Figure 2. Cdh1ΔPan/ΔPan mice exhibit normal expression patterns of acinar markers at P0. (A-F) Immunofluorescence analysis of the acinar markers Cpa1, Trypsin, and Nr5a2 (green), the epithelia cell marker Epcam (red) and nuclei (white, DAPI) in control (A,C,E) and Cdh1ΔPan/ΔPan (B,D,F) mice at P0. (G,H) Whole-mount immunofluorescence images showing the distribution of ductal (Muc1, red) and exocrine (Epcam, green) compartments in the control (G) or Cdh1ΔPan/ΔPan (H) pancreas at P0. White scale bars = 100 μm.

Supp. Figure 3. Exocrine tissues in Cdh1ΔPan/ΔPan pancreata exhibit ultrastructural impairments at P0. Transmission electron micrographs of acinar (A), ductal (B), and endocrine (C) tissue in the P0 Cdh1ΔPan/ΔPan pancreas. Higher magnification views of red and yellow inset boxes are shown to the right in (A’-C’) and (A”-C”), respectively. Red scale bars = 2 μm.

Supp. Figure 4. E-cadherin deletion leads to acinar-to-ductal metaplasia (ADM) in the P4 pancreas. Transmission electron micrographs of representative
ductal structures in control (A) and $Cdh1^{ΔPan}\DeltaPan$ (B) pancreata at P4. Dashed red boxes are projected in panels to the right ($A',B'$). Red scale bars = 2 μm.
3. Supplementary Figures

Suppl. Figure 1

[Images of figures A through K, showing gene expression and protein localization in different conditions.]

| Chromogranin A (ChgA) | Insulin | Glucagon | Somatostatin | Polypeptide |
|------------------------|---------|----------|--------------|-------------|
| Control                | H       | H’       | H”          | H”’         |
| Cdhl<sup>1</sup> Pan<sup>1</sup>/Pan<sup>1</sup> | I       | I’       | I”          | I”’         |
| P0                     | J       | J’       | J”          | J”’         |
| Cdhl<sup>1</sup> Pan<sup>1</sup>/Pan<sup>1</sup> | K       | K’       | K”          | K”’         |

[Graphs showing quantification of E-cadherin, amylose, ChgA, and pancreas size.]

*E11.5*
| Control       | Cdh1-/-Pam/Prn |
|---------------|----------------|
| ![Image A]    | ![Image A']    |
| ![Image B]    | ![Image B']    |