

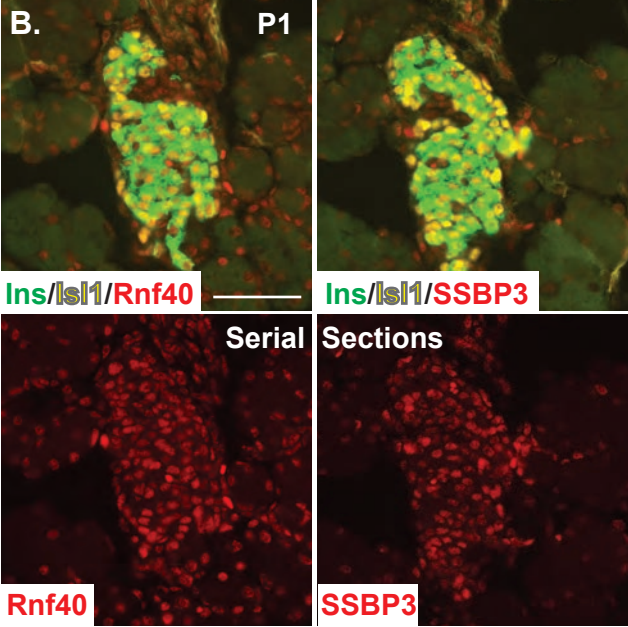
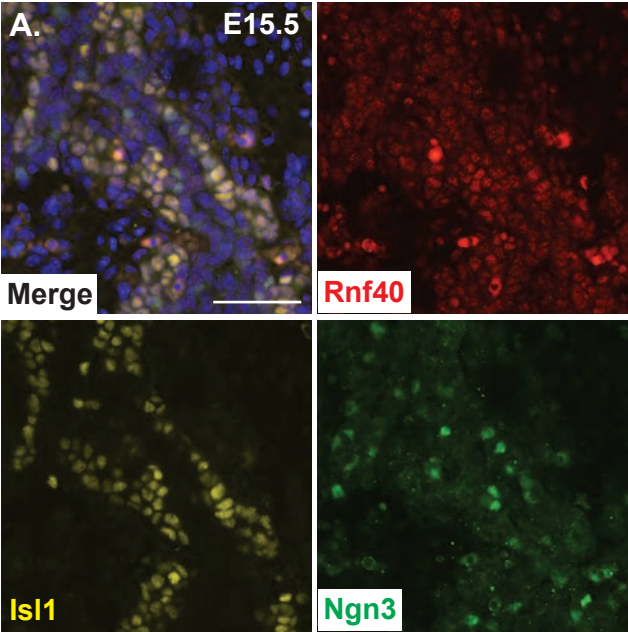
**Supporting information for “LIM-domain transcription complexes interact with ring finger ubiquitin ligases to impact islet  $\beta$ -cell function” Wade and Liu et al.**

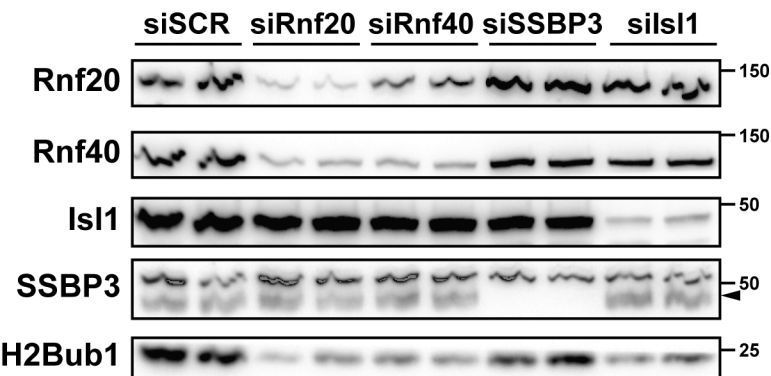
Three supplemental figures and one table.

**Figure S1.** (Related to Fig 1). **A.** Immunofluorescence staining of Rnf40 (red), Isl1 (yellow), and Ngn3 (green) in wild type E15.5 pancreas tissue. **B.** Immunofluorescence image of a wild type P1 islet serial section staining to demonstrate similar islet staining of Rnf40 (red, left) and SSBP3 (red, right), with insulin (green), and Isl1 (yellow). Scale bar (white) = 50 $\mu$ m.

**Figure S2.** (Related to Fig 4). Western blotting of indicated siRNA-treated rat Ins-1 cells demonstrating reduced histone H2B mono-ubiquitination in cells deficient on Rnf20, Rnf40, Isl1, and SSBP3. Duplicate siRNA knockdown transfections are shown. Approximate kDa protein sizes are shown to the right of each blot image. The black arrowhead points to the faster-migrating SSBP3-specific band, as opposed to the robust non-specific band, which we also observed in a prior study (22).

**Figure S3.** (Related to Fig 6). Relative mRNA quantification of various secretory effectors in control (siSCR-transfected, black bars, set to one-fold) and Rnf20-depleted (white bars) Min6 cells. Primer sequences provided upon request.





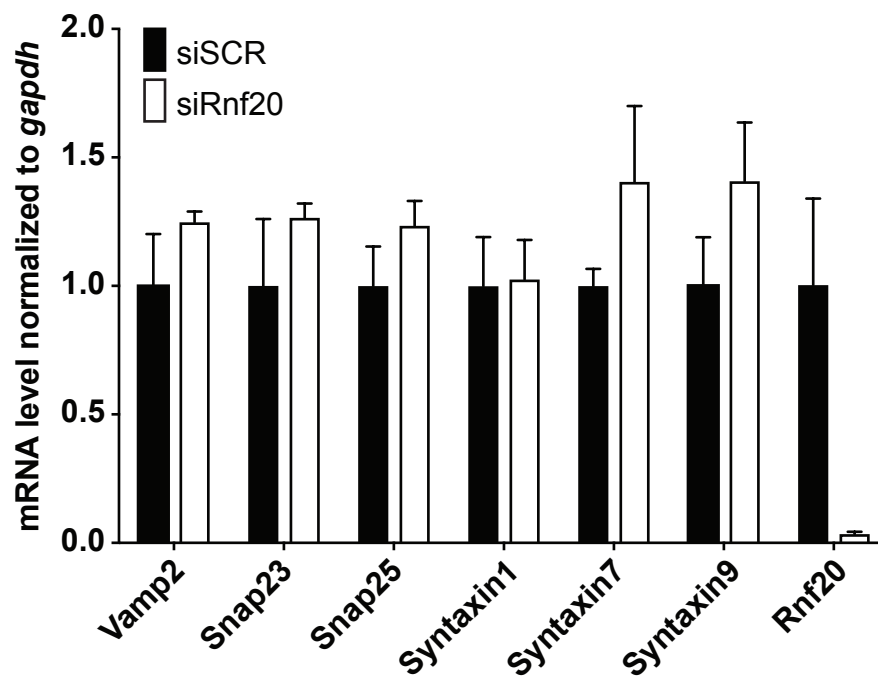


Table 1: Abbreviated ReCLIP/Mass Spectrometry Results – Comparing Isl1 and SSBP3 Interactions

<b>Name</b>	<b>Description</b>	<b>Isl1 Dataset</b>	<b>SSBP3 Dataset</b>
LIM Domain Binding Protein 1 (Ldb1)	Co-regulator	Yes	Yes
Single-Stranded Binding Protein 3 (SSBP3)	Co-regulator	Yes	Yes
Single-Stranded DNA-Binding Protein 2 (SSBP2)	Co-regulator	No	Yes
P53	Tumor Suppressor	Yes	No
BRE1A/Rnf20	E3 ubiquitin ligase complex	Yes	Yes
BRE1B/Rnf40	E3 ubiquitin ligase complex	Yes	No
Ubiquitin-Like Modifier-Activating Enzyme 1 (Uba1)	E1 Ubiquitin Ligase	Yes	No
SMARCC1/ BAF155	SW1/SNF component	Yes	No
SMARCC2/ BAF170	SW1/SNF component	Yes	Yes
SW1/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1 / BAF57	SW1/SNF component	No	Yes
Transcription Activator BRG1	SW1/SNF component	Yes	Yes
Transcription Intermediary Factor 1-beta (Tif-1beta)	NuRD component	Yes	Yes
MYB-1b	NuRD component	No	Yes
Myb-binding protein 1A	HDAC	Yes	No
Matrin-3	Nuclear matrix protein	Yes	Yes
RuvB-like 1	NuA4 HAT component	No	Yes
RuvB-like 2	NuA4 HAT component	Yes	Yes
Homeobox-Containing Protein 1 (Hmbox1)	Transcription Factor	Yes	No
Cell Division Cycle 5-like Protein (CDC5L)	Cell Cycle Factor	Yes	Yes
Cell Cycle and Apoptosis Regulator Protein 2	DBIRD component	No	Yes