ESM Table 1.

Predicted miR-153 targets	Targetscan Context+ score	Targetscan aggregate P _{CT}	Brain expression/function [reference]	Pancreas expression/function [reference]
BSN	-0,05	0.85	[1]	[2]
PCLO	-0,10	0,89	[3]	[4]
SNAP25	-0,14	0,78	[5]	[6]
SNCA	-0,18	0,85	[7]	[8]
SYT1	>-0,02	< 0,1	[9]	[10]
SYT4	-0,04	0,73	[11]	[12]
VAMP2	-0,26	0.93	[13]	[14]

References to ESM Table 1.

 Altrock WD, tom Dieck S, Sokolov M, et al. (2003) Functional inactivation of a fraction of excitatory synapses in mice deficient for the active zone protein bassoon. Neuron 37: 787-800
Ohara-Imaizumi M, Ohtsuka T, Matsushima S, et al. (2005) ELKS, a protein structurally related to the active zone-associated protein CAST, is expressed in pancreatic beta cells and functions in insulin exocytosis: interaction of ELKS with exocytotic machinery analyzed by total internal reflection fluorescence microscopy. Mol Biol Cell 16: 3289-3300

[3] Mukherjee K, Yang X, Gerber SH, et al. (2010) Piccolo and bassoon maintain synaptic vesicle clustering without directly participating in vesicle exocytosis. Proc Natl Acad Sci U S A 107: 6504-6509

[4] Fujimoto K, Shibasaki T, Yokoi N, et al. (2002) Piccolo, a Ca2+ sensor in pancreatic beta-cells. Involvement of cAMP-GEFII.Rim2. Piccolo complex in cAMP-dependent exocytosis. J Biol Chem 277: 50497-50502

[5] Blasi J, Chapman ER, Link E, et al. (1993) Botulinum neurotoxin A selectively cleaves the synaptic protein SNAP-25. Nature 365: 160-163

[6] Sadoul K, Lang J, Montecucco C, et al. (1995) SNAP-25 is expressed in islets of Langerhans and is involved in insulin release. J Cell Biol 128: 1019-1028

[7] Nemani VM, Lu W, Berge V, et al. (2010) Increased expression of alpha-synuclein reduces neurotransmitter release by inhibiting synaptic vesicle reclustering after endocytosis. Neuron 65: 66-79

[8] Geng X, Lou H, Wang J, et al. (2011) alpha-Synuclein binds the K(ATP) channel at insulin-secretory granules and inhibits insulin secretion. Am J Physiol Endocrinol Metab 300: E276-286

[9] Geppert M, Goda Y, Hammer RE, et al. (1994) Synaptotagmin I: a major Ca2+ sensor for transmitter release at a central synapse. Cell 79: 717-727

[10] Lang J, Fukuda M, Zhang H, Mikoshiba K, Wollheim CB (1997) The first C2 domain of synaptotagmin is required for exocytosis of insulin from pancreatic beta-cells: action of synaptotagmin at low micromolar calcium. Embo J 16: 5837-5846

[11] Dean C, Liu H, Dunning FM, Chang PY, Jackson MB, Chapman ER (2009) Synaptotagmin-IV modulates synaptic function and long-term potentiation by regulating BDNF release. Nat Neurosci 12: 767-776 [12] Gut A, Kiraly CE, Fukuda M, Mikoshiba K, Wollheim CB, Lang J (2001) Expression and localisation of synaptotagmin isoforms in endocrine beta-cells: their function in insulin exocytosis. J Cell Sci 114: 1709-1716

[13] Schoch S, Deak F, Konigstorfer A, et al. (2001) SNARE function analyzed in synaptobrevin/VAMP knockout mice. Science 294: 1117-1122

[14] Regazzi R, Wollheim CB, Lang J, et al. (1995) VAMP-2 and cellubrevin are expressed in pancreatic beta-cells and are essential for Ca(2+)-but not for GTP gamma S-induced insulin secretion. Embo J 14: 2723-2730

ESM Table 1. Candidate miR-153 target genes that correlate with IA-2 beta function at sites of IA-2beta expression. The first column shows the names of the predicted miR-153 targets. Targetscan total context+ scores (looking at the context of the sites within the UTR; the lower the score, the better) and aggregate P_{CT} (Probability conserved targeting) preferential conservation of the sites; score between 0 and 1.0; the higher the score, the better) are shown in the second and third column, respectively. References that demonstrated correlation between expression and/or function of IA-2beta and target genes in brain and pancreas are shown in the fourth and fifth column, respectively. The list of relevant references is shown below the table.