

Supplemental Table 2

Phenotype	Cell type	Library	Assay	Primary Findings	Reference
GLUT4 exocytosis	HeLa	GeCKO	Cells expressing HA-GLUT4-GFP reporter stimulated with insulin, stained with anti-HA antibodies, and FACS sorted	RABIF identified as positive regulator of exocytosis	Gulbranson 2017
Insulin production	iPS cell-derived beta-like cell	Activity-optimized genome-wide library	FACS sorting of GFP under insulin promoter	Vitamin D receptor serves as a modulator of inflammation and beta cell survival	Wei 2018
Insulin transcription and release	MIN6	Genome-wide GeCKO	FACS sorting of cells stained with insulin antibodies	Identified multiple transcriptional, translational, and post-translational regulators	Fang 2019
Insulin-induced GLUT4 exocytosis	HeLa	Genome-wide GeCKO	Cells expressing HA-GLUT4-GFP reporter stimulated with insulin, stained with anti-HA antibodies, and FACS sorted	Exoc7/Exo70 plays critical role in GLUT4 exocytosis	Wang 2019
Autoimmune protection	NIT-1	Genome-wide GeCKO	Cell survival after transplant into NOD mice	Rnls knockout protects cell from diabetic autoimmune killing	Cai 2020
LDL uptake	HuH7	Genome-wide GeCKO	Uptake of fluorescently conjugated LDL	LDLR as positive regulator and MYLIP as negative regulator of LDL uptake	Emmer 2021