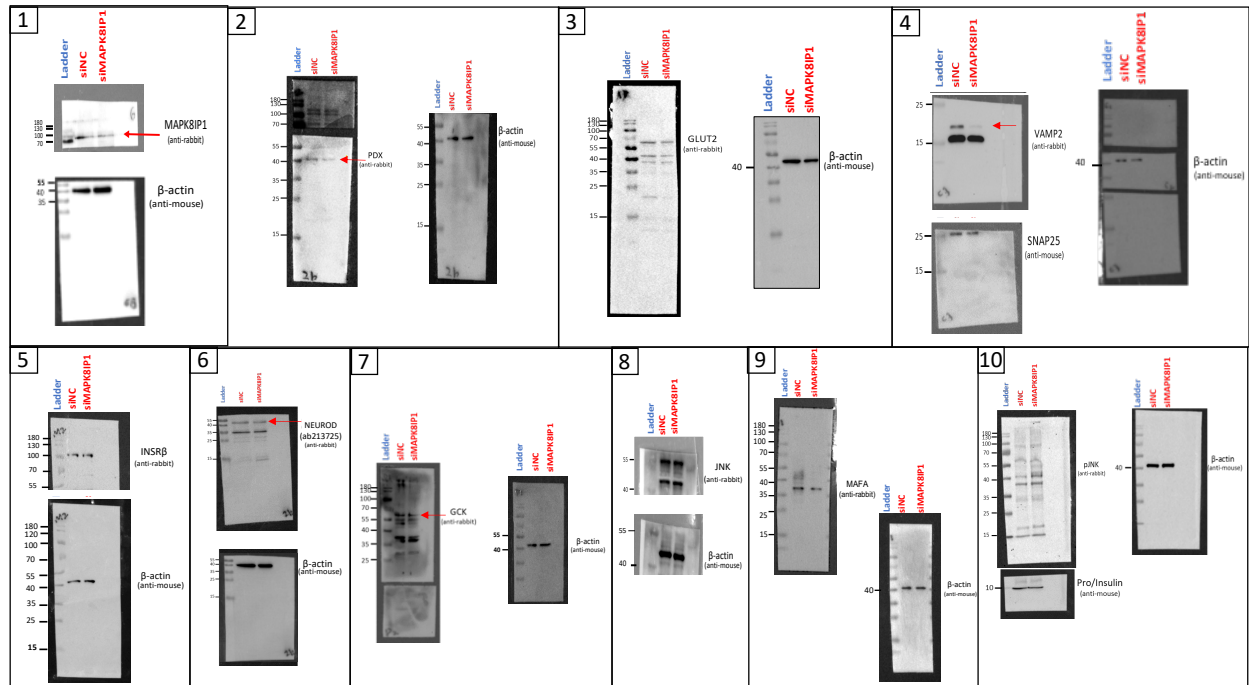


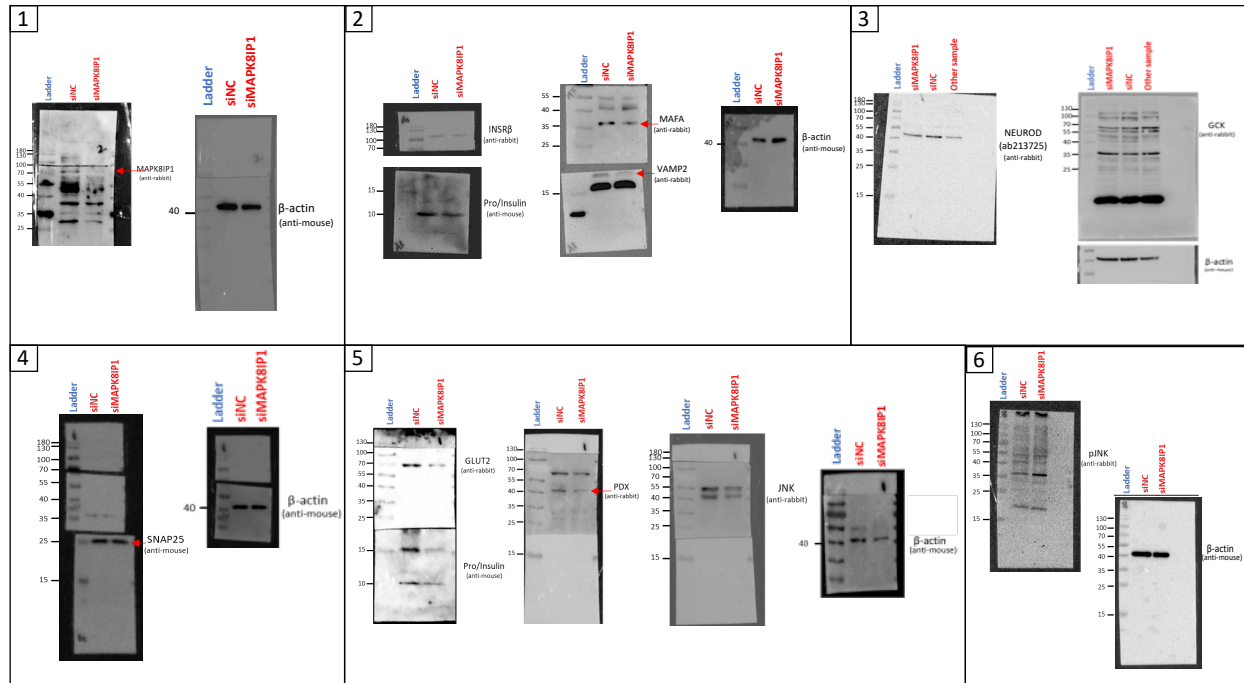
Supplementary Figure S2 (replicate 1) The full-length western blot expressions after *Mapk8ip1* silencing. Total protein was extracted 48 hours post-transfection. Western blot was conducted for (1) MAPK8IP1 and Pro/insulin, (2) INSR β and VAMP2, NEUROD1 and SNAP25, (3) MAFA, (4) GCK, (5) PDX1, (6) JNK, (7) pJNK and GLUT2. β -actin was used as endogenous control. The cropped blots from membranes 2, 5 and 6 were used as representative figures for INSR β , VAMP2, JNK, pJNK and GLUT2, respectively in the main article.

Figure S3 (replicate 2):



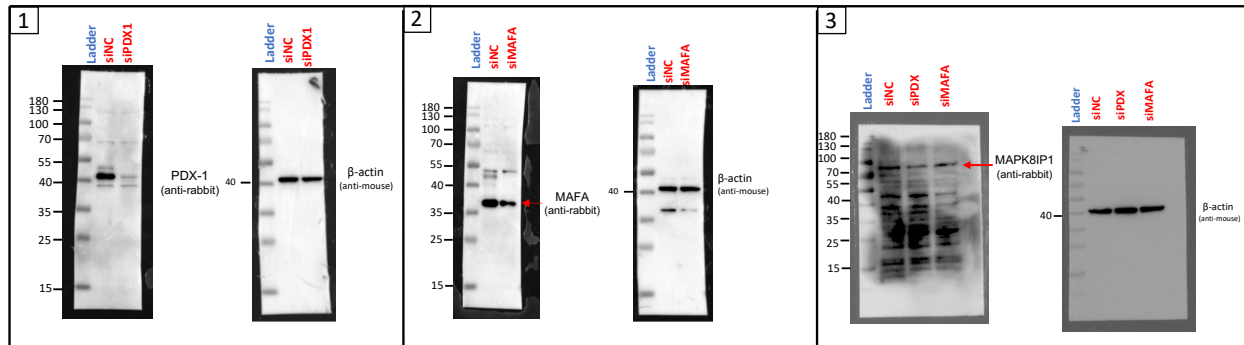
Supplementary Figure S3 (replicate 2) The full-length western blot expressions after *Mapk8ip1* silencing. Total protein was extracted 48 hours post-transfection. Western blot was conducted for (1) MAPK8IP1, (2) PDX-1, (3) GLUT2, (4) VAMP2 and SNAP25, (5) INSRβ (6) NEUROD1, (7) GSK, (8) JNK, (9) MAFA, (10) pJNK and Pro/insulin. β-actin was used as endogenous control. The cropped blots from membranes 4 and 8 were used as representative figures for SNAP25 and JNK respectively, in the main article.

Figure S4 (replicate 3):



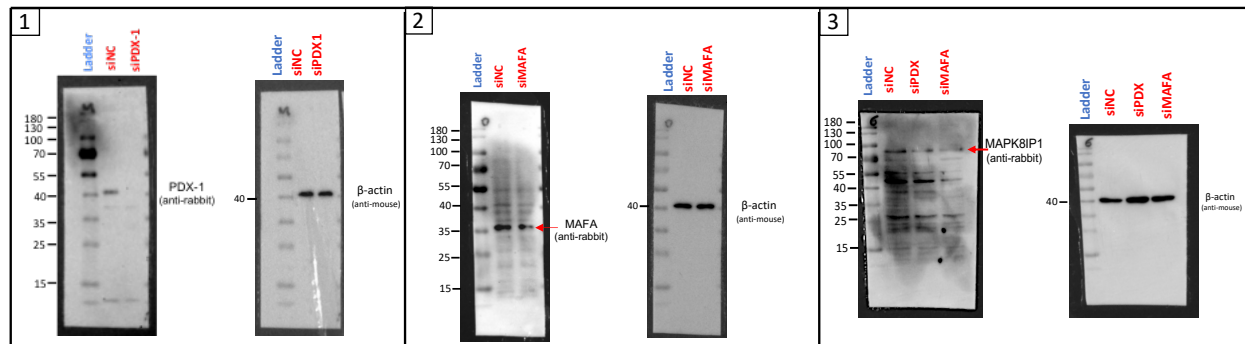
Supplementary Figure S4 (replicate 3) The full-length western blot expressions after *Mapk8ip1* silencing. Total protein was extracted 48 hours post-transfection. Western blot was conducted for **(1)** MAPK8IP1, **(2)** INSRβ, Pro/insulin, MAFA and VAMP2, **(3)** NEUROD1 and GCK, **(4)** SNAP25, **(5)** GLUT2, Pro/insulin, PDX1 and JNK, **(6)** pJNK. β-actin was used as endogenous control. The cropped blots from membranes 1, 2, 3 and 5 were used as representative figures for MAPK8IP1, MAFA, NEUROD1, GCK, Pro/insulin and PDX1, respectively in the main article.

Figure S5 (replicate 1):



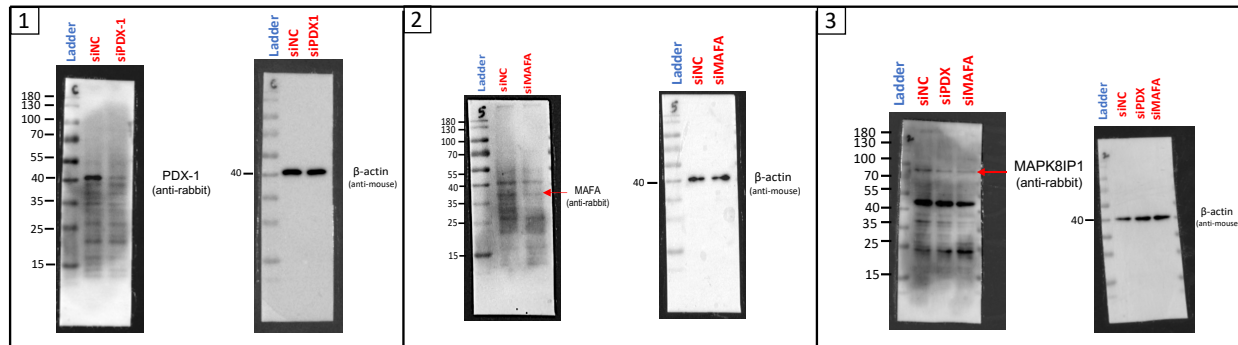
Supplementary Figure S5 (replicate 1) The full-length western blot expressions after *Pdx1* and *MafA* silencing. Total protein was extracted 48 hours post-transfection. Western blot was conducted for (1) PDX-1, (2) MAFA and (3) MAPK8IP1. β-actin was used as endogenous control. The cropped blots from membranes 1, 2 and 3 were used as representative figures in the main article.

Figure S6 (replicate 2):



Supplementary Figure S6 (replicate 2) The full-length western blot expressions after *Pdx-1* and *MafA* silencing. Total protein was extracted 48 hours post-transfection. Western blot was conducted for (1) PDX-1, (2) MAFA and (3) MAPK8IP1. β-actin was used as endogenous control.

Figure S7 (replicate 3):



Supplementary Figure S7 (replicate 3) The full-length western blot expressions after *Pdx1* and *MafA* silencing. Total protein was extracted 48 hours post-transfection. Western blot was conducted for **(1)** PDX-1, **(2)** MAFA and **(3)** MAPK8IP1. β -actin was used as endogenous control.