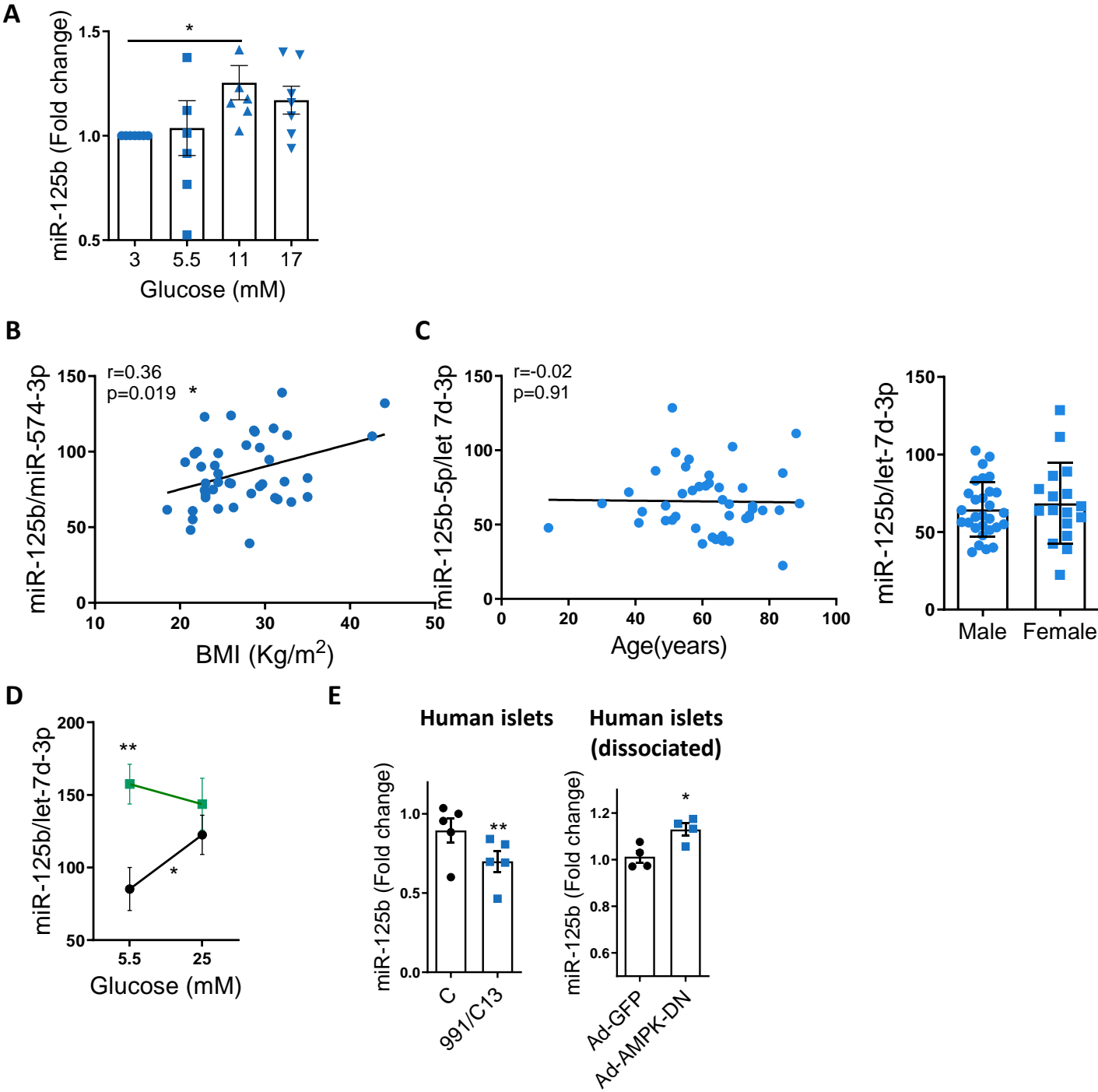
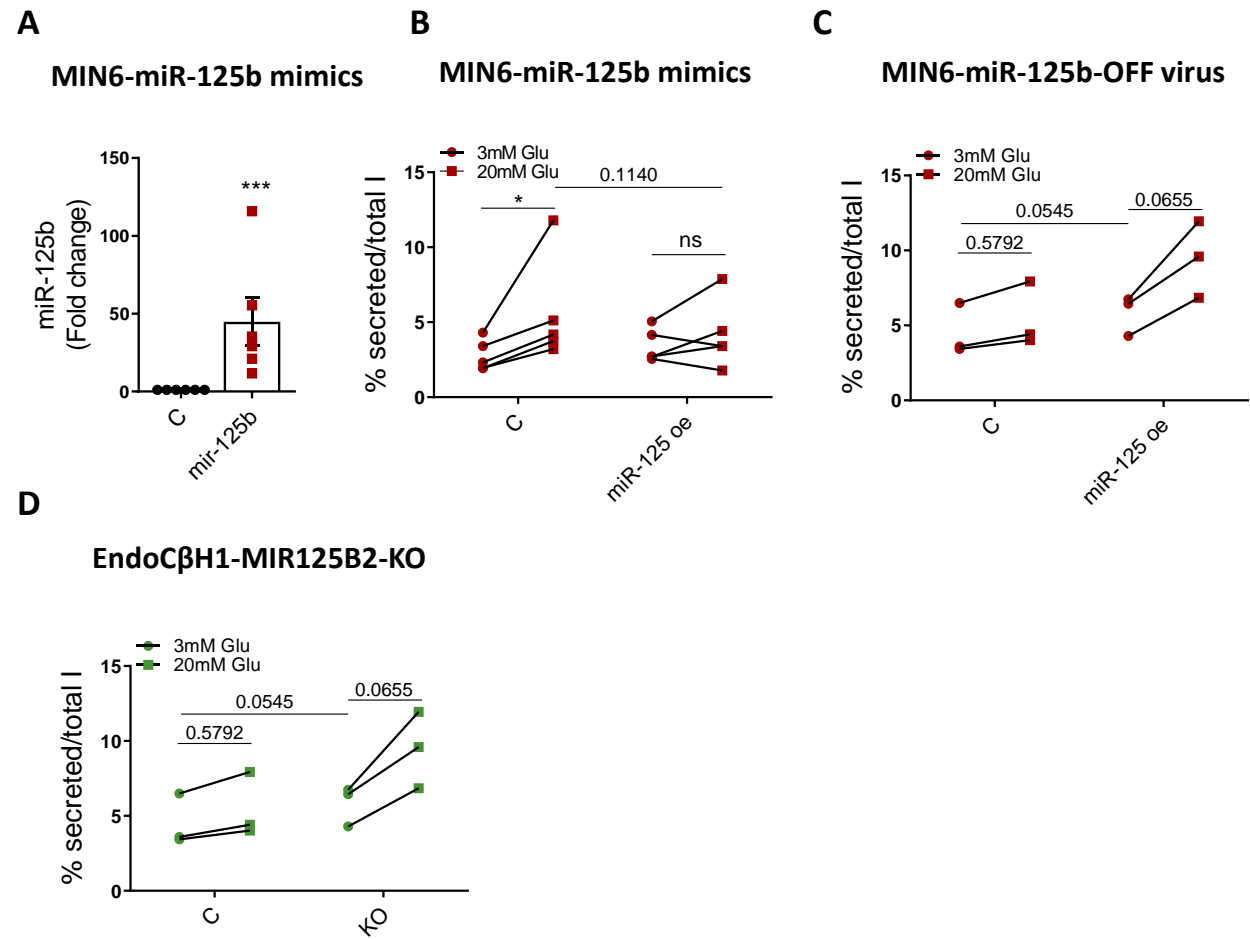


Supplemental Figure 1



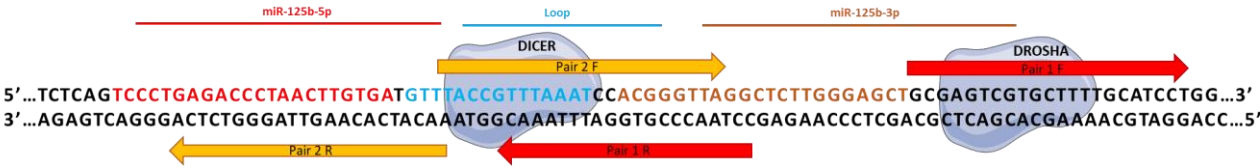
Supplemental Figure 2



Supplemental Figure 3

A

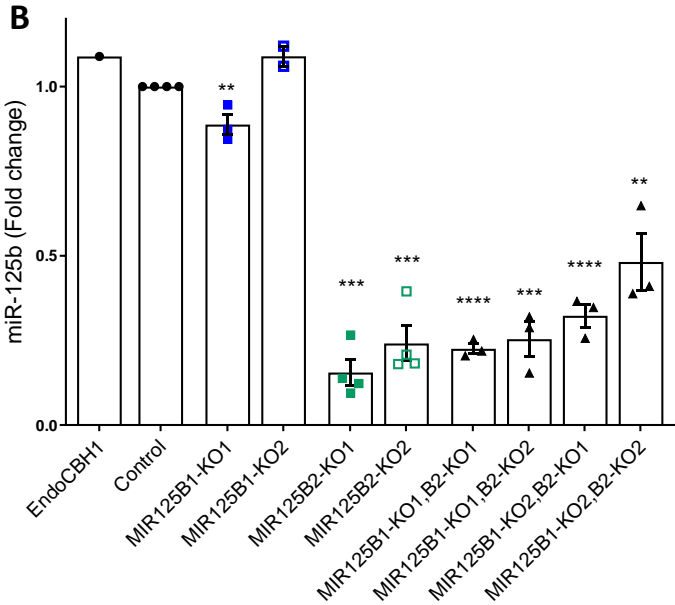
MIR125B-1



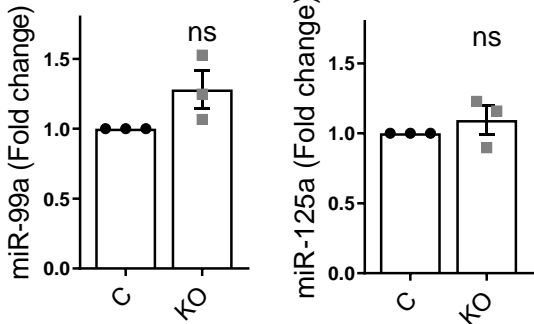
MIR125B-2



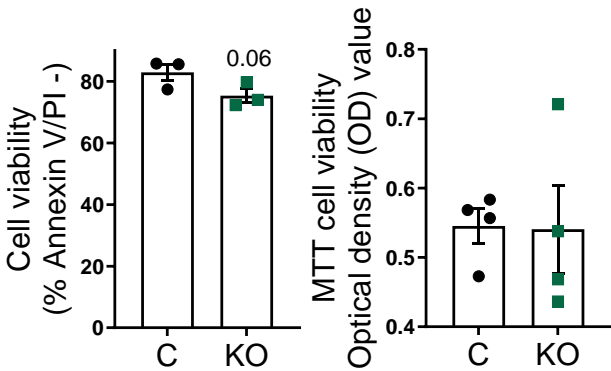
B



C

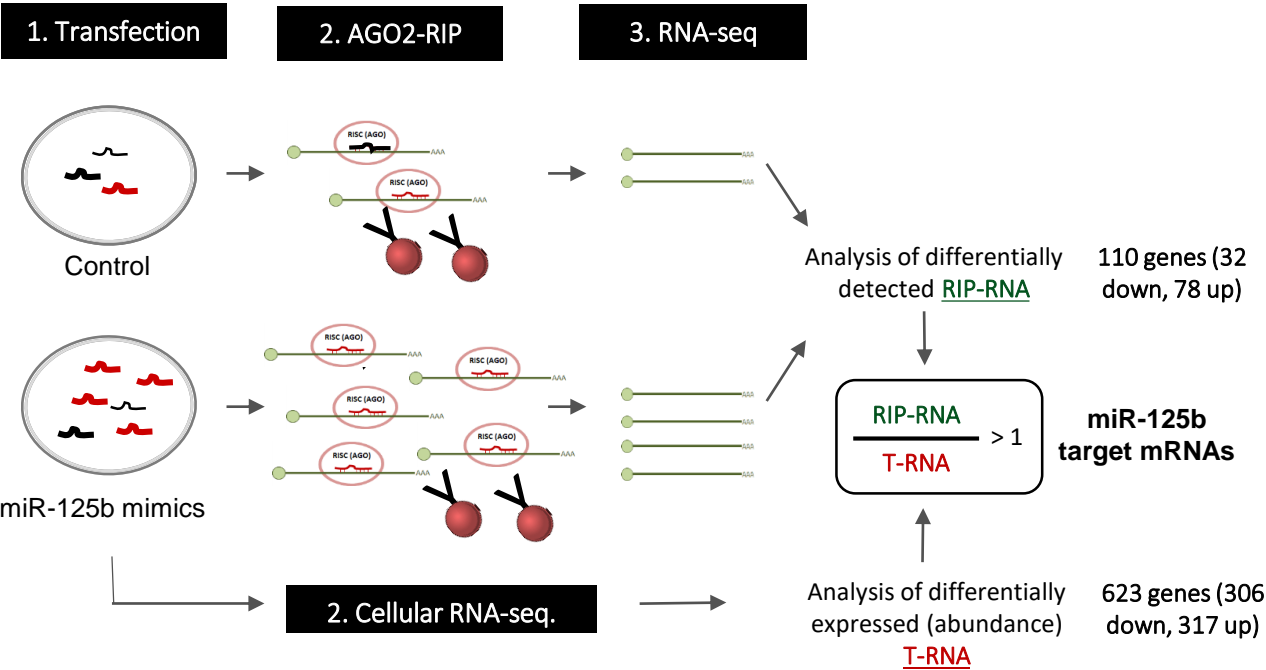


D

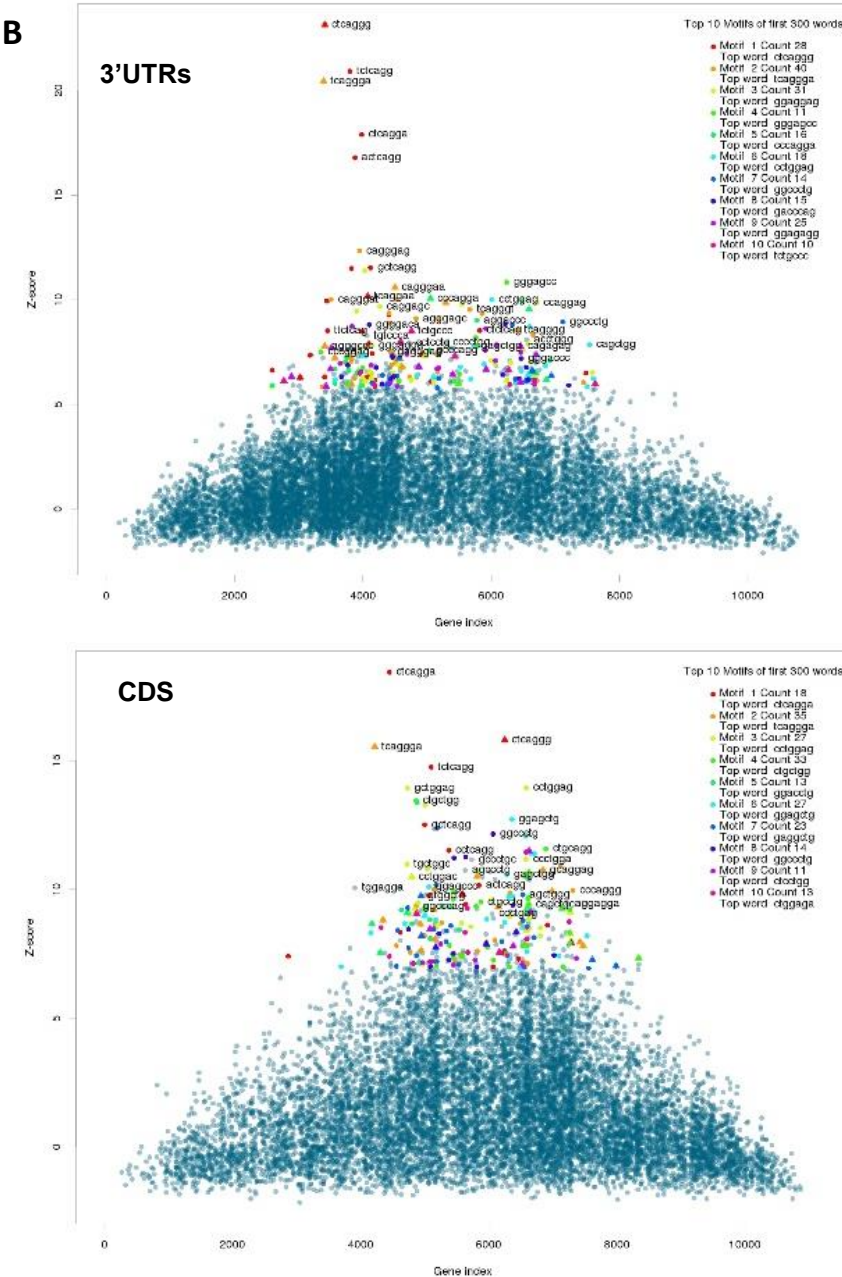


Supplemental Figure 4.

A



B

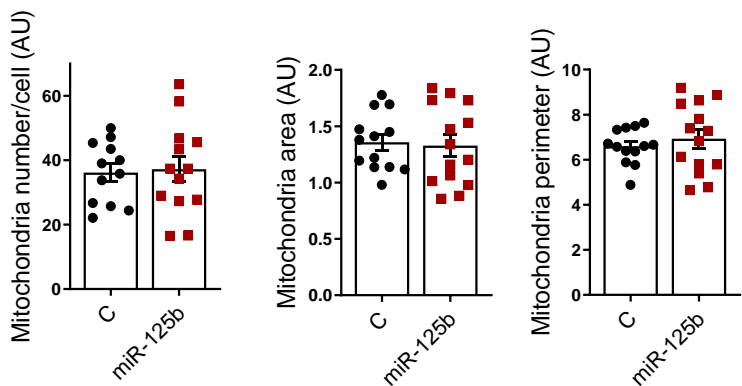


>mmu-miR-125b-5p
UCCCUGAGACCCUAA
CUUGUGA
RC: TCTCAGGGA

Supplemental Figure 5

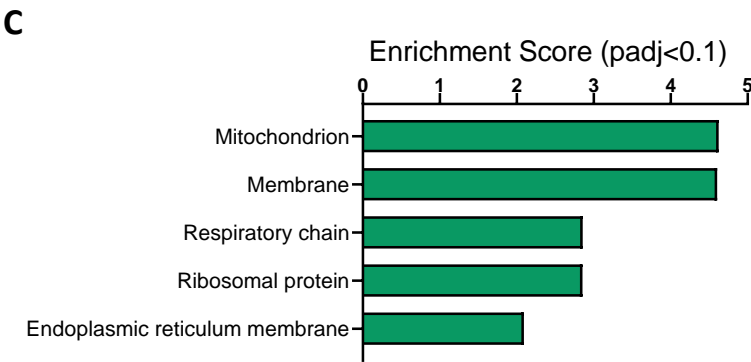
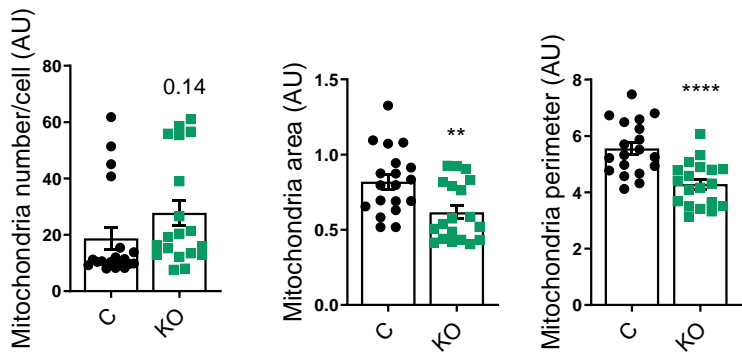
A

MIN6- miR-125b OE

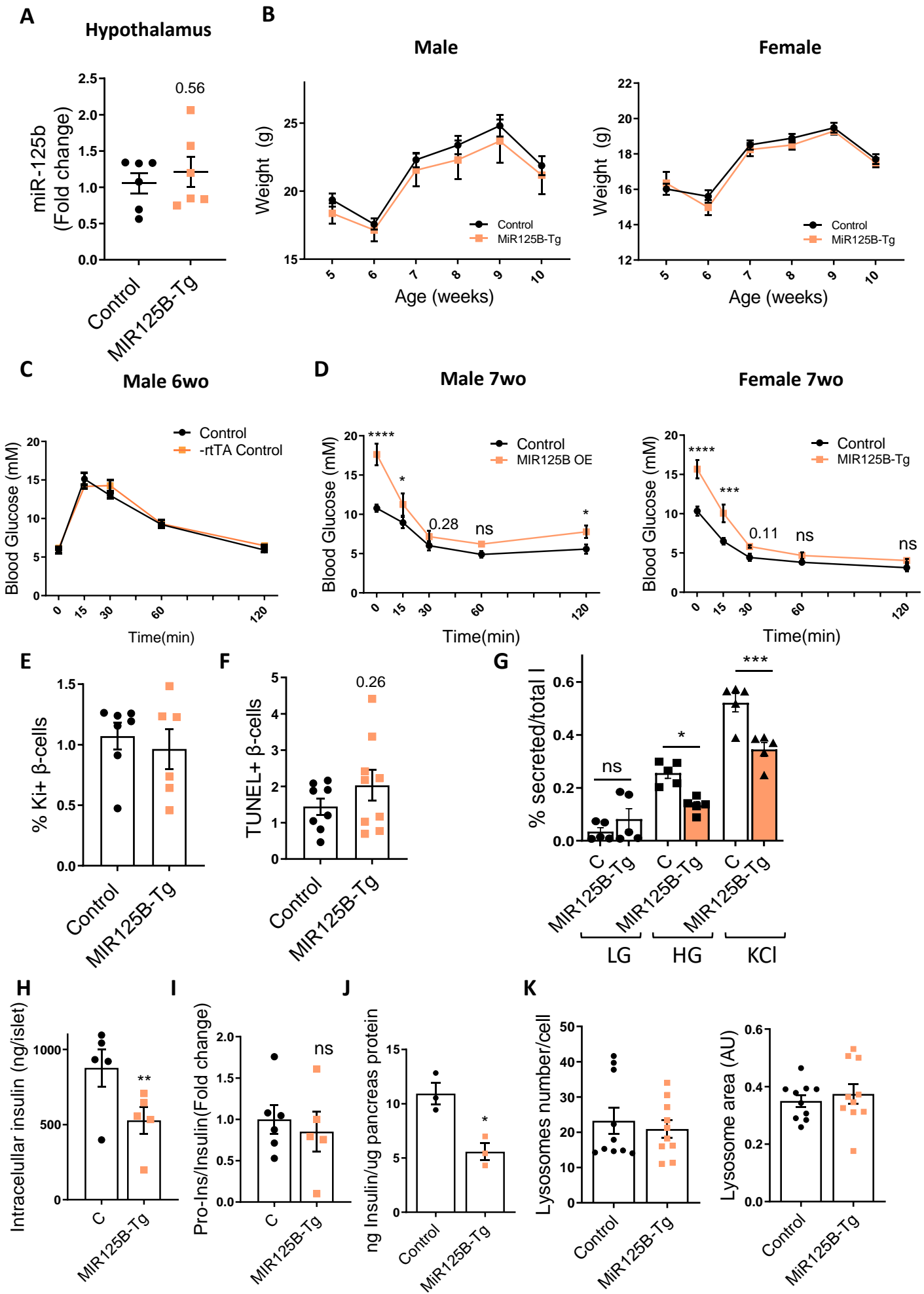


B

EndoCβ-H1-MIR125B2-KO



Supplemental Figure 6



Supplemental Figure 7

A

Insulin secretion		Golgi		Glycoproteins		ER	
Gene	log2FoldChange	Gene	log2FoldChange	Gene	log2FoldChange	Gene	log2FoldChange
FFAR1	-1.21974	EMID1	-1.6699	TMIGD3	-2.00788	EMID1	-1.6699
UCN3	-1.19986	MSLN	-1.38883	CAR15	-1.86875	TMED6	-1.35608
GPR119	-1.11149	B3GALT5	-1.07033	EMID1	-1.6699	MUC4	-1.25905
GIPR	-0.98636	B3GALNT1	-0.9301	TMIGD3	-1.63581	CLN6	-1.10723
SLC2A2	-0.94807	CNTNAP2	-0.88555	CDH7	-1.52648	B3GALT5	-1.07033
SSTR3	-0.9436	GALNT14	-0.84766	FFAR3	-1.40117	FMO1	-1.01853
MLXIPL	-0.86601	MCFD2	-0.83908	MSLN	-1.38883	SLC35D3	-0.93592
GLP1R	-0.80968	ZDHHC2	-0.82524	VWA5B1	-1.38188	DIO1	-0.90529
GLUL	-0.71175	PLK3	-0.82351	DCT	-1.37076	MCFD2	-0.83908
PDX1	-0.67944	BMP1	-0.77066	TMED6	-1.35608	ZDHHC2	-0.82524
KCNU1	-0.6569	GALNT18	-0.75762	MUC4	-1.25905	ADORA1	-0.80935
PRKCB	-0.5862	PCSK9	-0.69667	CDHR1	-1.22122	ELOVL2	-0.79347
NKX6-1	-0.58541	CHPT1	-0.68141	SLC40A1	-1.22104	GRIP1	-0.77811
CREB3L1	-0.57256	EGFR	-0.6743	FFAR1	-1.21974	ESYT1	-0.75418
NEUROD1	-0.47897	SVIP	-0.65393	TMPRSS4	-1.21359	PCSK9	-0.69667
SLC37A4	-0.4743	PGAP3	-0.57013	GCGR	-1.20314	EGFR	-0.6743
NKX2-2	-0.43273	RNF128	-0.55974	CPB2	-1.10412	SVIP	-0.65393
AACS	-0.33216	HEPACAM2	-0.54779	B3GALT5	-1.07033	TRAM1	-0.62632
		B3GNT3	-0.54375	PRRT3	-1.00494	G6PC2	-0.61877
		DUSP26	-0.53542	GIPR	-0.98636	GUCY2C	-0.58323
		PKDCC	-0.53344	SLC2A2	-0.94807	CREB3L1	-0.57256
		FUT10	-0.51535	SSTR3	-0.9436	PGAP3	-0.57013
		GGA2	-0.50119	B3GALNT1	-0.9301	RNF128	-0.55974
		POFUT2	-0.47267	CPM	-0.90018	SEC31A	-0.54945
		NMT2	-0.46052	CNTNAP2	-0.88555	PIGO	-0.5264
		LDLR	-0.45331	GPA33	-0.88485	LSS	-0.50743
		TMEM167	-0.44032	CEACAM1	-0.86556	ANGEL1	-0.50638
		KDELRL1	-0.43078	HCN4	-0.85993	POR	-0.49357
		TMED9	-0.39473	ASIC1	-0.84837	ATP2A3	-0.47299
		LMAN2	-0.37793	SLC22A23	-0.83433	POFUT2	-0.47267
				GLP1R	-0.80968	ATL2	-0.44289
				ADORA1	-0.80935	JPH3	-0.44126
				OTOA	-0.80259	KDELRL1	-0.43078
				PCSK4	-0.79671	HS1BP3	-0.40551
				IGFALS	-0.77858	TMED9	-0.39473
				BMP1	-0.77066	SEC61A1	-0.39407
				PLA2G2F	-0.76601	INSIG1	-0.35492
				SYT2	-0.75823		
				FRAS1	-0.75803		
				GALNT18	-0.75762		
				PCSK9	-0.69667		
				GGT7	-0.67943		
				SLC18A1	-0.67778		
				EGFR	-0.6743		
				OLFM4	-0.63233		
				FRZB	-0.62688		
				TRAM1	-0.62632		
				G6PC2	-0.61877		
				PON2	-0.61206		
				NEU1	-0.60585		
				GUCY2C	-0.58323		
				FAM174B	-0.5764		
				CREB3L1	-0.57256		
				SLC7A5	-0.5722		
				PGAP3	-0.57013		
				RNF128	-0.55974		
				AMIGO2	-0.55227		
				HEPACAM2	-0.54779		
				B3GNT3	-0.54375		
				GALR1	-0.5343		
				PKDCC	-0.53344		
				PIGO	-0.5264		
				GRIN2C	-0.52029		
				FUT10	-0.51535		
				TSPAN5	-0.51337		
				ADRA2A	-0.50873		
				QSOX2	-0.50759		
				SIRPA	-0.4979		
				TMEM231	-0.4879		
				POFUT2	-0.47267		
				LDLR	-0.45331		
				NAGA	-0.44593		
				GALNS	-0.44077		
				TMEM167	-0.44032		
				PXMP4	-0.43529		
				TTYH2	-0.43377		
				TMEM8	-0.42853		
				LRFN4	-0.42305		
				SLC29A1	-0.4132		
				TMED9	-0.39473		
				INA	-0.38035		
				LMAN2	-0.37793		
				GNS	-0.31404		

Supplemental Figure 7

B

Phosphoproteins		Axon		Glycoproteins		Golgi	
Gene	log2FoldChange	Gene	log2FoldChange	Gene	log2FoldChange	Gene	log2FoldChange
PGM5	3.384586	SRCIN1	2.143274	KCNK13	3.078916	P3H2	1.6516
SRCIN1	2.143274	SLC5A7	1.915163	SMOC1	3.040074	FGFR2	1.626991
CRMP1	1.994343	NEFL	1.735895	GABRP	2.117097	SCARA3	1.465067
SLC5A7	1.915163	NTM	1.73145	PDGFC	2.040732	FGFR3	1.453484
CDH6	1.903529	CALB1	1.523657	WNT7B	2.036377	EHF	1.447345
STUM	1.866269	SYT1	1.382168	DLK1	1.917689	ST6GALNAC2	1.424805
LSAMP	1.856173	DTNA	1.313236	SLC5A7	1.915163	MAL	1.395117
NEFL	1.735895	HTR3A	1.286413	CDH6	1.903529	SYT1	1.382168
NOS1	1.714182	ATP1A3	1.274655	EVC2	1.875716	ATP1A3	1.274655
ILAVL2	1.708331	KIF5A	1.178635	AQP5	1.864548	CD14	1.25192
ILDR2	1.683182	NCS1	1.150788	LSAMP	1.856173	HSPB8	1.18827
FGFR2	1.626991	PYGB	1.134098	COL27A1	1.820278	NCS1	1.150788
CHL1	1.625863	TUBB3	1.132731	NEFL	1.735895	ST3GAL4	1.101342
DOC2B	1.57419	KCNA6	1.107624	NTM	1.73145	PLCE1	1.081234
ARHGAP6	1.569496	TGFB2	1.089331	P3H2	1.6516	TMEM59L	1.052226
DPYSL5	1.556181	CNR1	1.044278	FGFR2	1.626991	RAB27B	1.049924
DPYSL3	1.537004	SNCA	1.021912	CHL1	1.625863	SNCA	1.021912
MAPK4	1.528335	PALLD	1.01456	FLRT3	1.616883	ACHE	0.974595
MAP1A	1.510319	ACHE	0.974595	TNFRSF19	1.564367	APC2	0.974186
PCP4L1	1.467693	KCNA2	0.881891	TGFB3	1.547986	ST6GALNAC2	0.973201
FGFR3	1.453484	SEMA6A	0.765375	MFAP2	1.547205	IL17RD	0.969734
DCX	1.442323	PALM	0.764501	KL	1.482683	PTGS1	0.958713
SH3PXD2B	1.433606	ALCAM	0.751319	SCNN1A	1.469131	SMO	0.944786
TIAM1	1.431407	MAPT	0.723769	SCARA3	1.465067	ECE2	0.943918
ADGRG6	1.431193	KCNH1	0.683248	FGFR3	1.453484	PLD1	0.928606
PLCD3	1.425484	MYH10	0.679126	ADGRG6	1.431193	CDC42EP1	0.843105
EPN3	1.423582	CTNNA2	0.629709	ST6GALNAC2	1.424805	PTGFRN	0.841552
LEPR	1.415607	APP	0.491763	LEPR	1.415607	CAV2	0.825733
COL18A1	1.388956	CPT1C	0.468435	FLRT2	1.413927	PARM1	0.821136
SYT1	1.382168	MAP2K1	0.348694	COL18A1	1.388956	MDFIC	0.808626
KLHDC7A	1.380444			SYT1	1.382168	GJA1	0.773144
ADCYAP1R1	1.373177			KLHDC7A	1.380444	EMP2	0.77238
CARD10	1.365265			ADCYAP1R1	1.373177	SMPD3	0.70152
FERMT1	1.35601			COL9A2	1.358039	CREG2	0.699238
SULT1A1	1.332353			INHBA	1.342248	SORL1	0.657576
SOX5	1.322169			OLFML2B	1.305021	IRGM2	0.639081
DTNA	1.313236			ERBB2	1.297039	LARGE1	0.63514
ERBB2	1.297039			HTR3A	1.286413	SPRY1	0.627566
CLDN2	1.285768			SPOCK3	1.280884	ZDHHC9	0.614026
DPP10	1.276844			DPP10	1.276844	RAB31	0.612486
ATP1A3	1.274655			ANO1	1.269384	APP	0.491763
ANO1	1.269384			CD14	1.25192	ENTPD6	0.398712
SFN	1.249896			CP	1.229932	MAP2K1	0.348694
REEP1	1.237442			PRELP	1.209164		
HSPB8	1.18827			LAMA5	1.189775		
EVPL	1.18489			SNED1	1.153812		
SHROOM1	1.183754			LYNX1	1.1496		
KIF5A	1.178635			GDF10	1.140987		
CLMN	1.166565			SDC1	1.128319		
PYGB	1.134098			APCDD1	1.128		
TUBB3	1.132731			KIRREL	1.122798		
SDC1	1.128319			ST3GAL4	1.101342		
BACH2	1.128003			LGI2	1.099607		
KIRREL	1.122798			SLC52A3	1.098478		
AMOT	1.110241			TGFB2	1.089331		
DCLK1	1.110144			ARNTL	1.083724		
KCNA6	1.107624			ADAMTSL4	1.083002		
STRIP2	1.102385			KCNQ1	1.075632		
KCNN4	1.099209			SEMA3B	1.073551		
SLC52A3	1.098478			TMEM59L	1.052226		
HK1	1.093945			SLIT2	1.051137		
WWC1	1.085285			RNF43	1.046204		
ARNTL	1.083724			CNR1	1.044278		
PLCE1	1.081234			GAS6	1.032908		
PALMD	1.078257			PLAUR	1.030368		
KCNQ1	1.075632			PLAT	1.02416		
PTPN14	1.064004			AGRN	1.020408		
MMP14	1.0492			NOTCH2	1.013127		
CNR1	1.044278			ENPP3	1.011407		
HMGCS2	1.043029			HAPLN1	1.011075		
KCNQ2	1.039918			SEMA3C	1.009993		
GAS6	1.032908			SEMA4F	1.007728		
PLS3	1.031522			CRIM1	1.003023		

Supplemental Figure 8

