

1 Reagents

Plantamajoside (B20225) and Metformin (B25331) were purchased from Shanghai yuanye Bio-Technology Co., Ltd. Glucose (G8150) was purchased from Solarbio. Palmitic acid (P9767) was purchased from Sigma. Elisa kit for insulin (ml001983) was purchased from Shanghai Enzyme-linked Biotechnology Co., Ltd. TUNEL Apoptosis Assay Kit (KGA1406) was purchased from Jiangsu Kaiji Bio-technology Co., Ltd. Glycated Serum Protein (ml037457) were obtained from Shanghai Enzyme-linked Biotechnology Co., Ltd. Lactate dehydrogenase (A020-2-2), reactive oxygen species (E004-1-1) were obtained from Nanjing Jiancheng Biological Engineering Institute. Primary antibodies for Bcl-2(26593-1-AP), Bax(50599-2-Ig), CytC(12245-1-AP), ATF6(66563-1-Ig), XBP1(24868-1-AP), Ddit3 (CHOP)(66741-1-Ig), GRP78(11587-1-AP), Dnajc1(12362-1-AP), were purchased from Proteintech Group, Inc.

2 Table S1 Differential genes

Gene Name	HG+PA vs NC		HG+PA+PMS vs HG+PA	
	log2FoldChange	padj	log2FoldChange	padj
Cav2	-1.42	0.00	-1.16	0.00
Mid2	-1.56	0.00	-1.32	0.02
Mx1	3.44	0.00	-1.05	0.03
Fmr1	-1.33	0.00	-1.14	0.00
Bcl2l1	-1.13	0.00	1.79	0.02
Kif11	-1.17	0.01	-1.01	0.00
Arl5b	1.30	0.00	-1.22	0.00
Cep290	-1.18	0.00	-1.48	0.01
Xpo1	-1.11	0.00	-1.04	0.00
Xbp1	1.81	0.00	-2.20	0.01
Aspa	-1.83	0.00	-1.08	0.01
Serpib9b	1.91	0.00	-1.28	0.00
Rasa1	-1.33	0.00	-1.01	0.00
Esco2	-1.08	0.00	-1.34	0.00
Crybg3	-1.41	0.00	-1.25	0.00
Map4k3	-1.38	0.00	-1.06	0.04
Slc12a2	-1.00	0.00	-1.01	0.00
Tmx3	-1.26	0.00	-1.05	0.00
Jak2	-1.09	0.00	-1.02	0.00
Ddit3	2.41	0.00	-2.83	0.01
Phf6	-1.26	0.00	-1.19	0.00

Ccr1	3.64	0.00	-1.02	0.03
Xiap	-1.30	0.00	-1.14	0.00
Sgo2a	-1.01	0.00	-1.12	0.00
Nek7	-1.54	0.00	-1.11	0.00
Ifi202b	1.44	0.00	-1.22	0.01
Ifi211	1.65	0.00	-1.60	0.00
Atf6	1.12	0.00	-2.55	0.01
Bmi1	-1.36	0.00	-1.07	0.00
Dnajc1	-1.58	0.00	3.03	0.01
Grp78	2.09	0.00	-1.35	0.00
Kn11	-1.08	0.00	-1.16	0.00
Napb	1.60	0.00	-1.35	0.00
Lrrcc1	-1.03	0.04	-1.31	0.03
Car13	1.15	0.00	-1.17	0.00
Kcnab1	1.70	0.00	-1.25	0.05
Sass6	-1.14	0.00	-1.08	0.01
Ifi44	1.92	0.00	-1.05	0.00
Depdc1a	-1.08	0.00	-1.71	0.00
Casp8ap2	-1.29	0.00	-1.15	0.00
Prkg2	1.16	0.00	-1.02	0.00
Herc6	1.25	0.00	-1.17	0.00
Tmem184c	-1.44	0.00	-1.10	0.01
Atr	-1.44	0.00	-1.19	0.00
Xrn1	-1.00	0.00	-1.05	0.00
Snx14	-1.38	0.00	-1.26	0.00
Lpp	-1.20	0.00	-1.04	0.00
Casp4	2.91	0.00	-1.08	0.00
Ifit1	1.28	0.00	-1.54	0.00
Tmtc3	-1.37	0.00	-1.02	0.00
N4bp2	-1.22	0.00	-1.23	0.04
Bank1	2.53	0.00	-1.30	0.00
Plcb4	-1.30	0.00	-1.37	0.00
Cept1	1.29	0.00	-1.12	0.00
Ncapg2	-1.33	0.00	-1.13	0.00
Phf11a	1.22	0.01	-1.29	0.01
4930503L19Rik	-1.12	0.00	-1.19	0.00
Serpib9	2.62	0.00	-1.33	0.00

Kctd4	3.42	0.00	-1.20	0.05
Lanc13	2.65	0.00	-1.17	0.00
Usp34	-1.30	0.00	-1.06	0.00
Serpinb9e	3.08	0.00	-1.36	0.00
Gm8995	1.56	0.00	-1.05	0.00
Cycs	1.64	0.00	-1.91	0.01
Slfn9	-1.44	0.00	-1.01	0.00
Ifi204	1.18	0.01	-1.10	0.03
Ccdc82	-1.13	0.00	-1.19	0.00
Prl2c2	5.42	0.00	-1.16	0.03
Ifi203-ps	2.88	0.00	-1.39	0.00
Phf11b	1.50	0.00	-1.04	0.00
Ptgs2os2	1.76	0.00	-1.04	0.00
