

Supplementary Table 1a: Hits from the first round of sorting ($\log_2(\text{FC}) > 1$, $\text{FDR} < 0.01$)

Gene ID	$\log_2(\text{FC})$	FDR
RNF152	5.69	1.59E-13
TMEM251	5.43	6.27E-13
UBE3C	3.25	6.79E-11
VPS18	2.96	1.04E-10
VPS16	2.73	1.21E-09
VPS41	2.70	2.03E-09
VPS33A	2.66	6.88E-11
GNPTAB	2.63	1.83E-08
VPS11	2.34	8.60E-10
DIO2	2.11	4.38E-09
MBTPS1	1.88	1.36E-09
TSC2	1.81	3.43E-07
CNTF	1.76	1.72E-08
ZNF426	1.72	1.72E-08
TLCD2	1.72	1.71E-08
TAF1L	1.70	1.72E-08
SLC1A1	1.70	1.43E-08
GRB10	1.69	1.43E-08
WDR87	1.64	5.20E-07
PLIN5	1.57	6.56E-09
ENPP6	1.52	1.43E-08
NEK6	1.52	1.92E-08
TMPRSS6	1.51	1.43E-08
ARX	1.51	1.43E-08
FAM174A	1.51	1.60E-08
DPP4	1.47	2.12E-08
MTERF1	1.45	2.61E-08
ATP6V1C1	1.41	1.72E-08
GDI2	1.41	1.39E-08
RBM20	1.40	2.21E-08
LOC10013035	1.40	9.22E-07
RHBDL1	1.39	1.10E-07
VSX1	1.39	5.98E-07
HPS6	1.38	2.47E-07
DCUN1D3	1.37	3.39E-07
WDR88	1.36	2.17E-08
MMP19	1.36	1.82E-08
HES5	1.35	1.72E-08
HSFY1	1.34	3.41E-07
OR10G8	1.34	8.57E-08
PIKFYVE	1.34	2.47E-07

RAD54L2	1.33	1.49E-08
REG3A	1.33	1.39E-08
MPEG1	1.32	1.39E-08
LRRC23	1.32	2.19E-08
SPRED2	1.31	1.48E-06
ERICH6B	1.30	5.72E-09
PDCD2L	1.30	1.43E-08
LOC339862	1.29	9.11E-07
SSTR3	1.28	1.73E-06
PTBP3	1.28	6.61E-09
XPNPEP3	1.28	1.63E-08
CXXC5	1.27	1.43E-08
ZNF765	1.27	1.96E-08
CALCOCO2	1.27	1.14E-06
MLF1	1.25	1.72E-08
ZNF549	1.25	2.25E-08
F13B	1.25	1.40E-08
PA2G4	1.24	1.72E-08
SH3GL2	1.24	5.61E-07
OR4Q3	1.23	1.63E-08
RABL3	1.23	1.43E-08
MCOLN1	1.23	1.30E-06
OR1J4	1.23	2.09E-08
TNFAIP8L1	1.22	5.23E-07
LYPD4	1.22	1.33E-08
SRGAP2	1.22	2.04E-08
TRIM48	1.21	2.96E-08
GNAT2	1.21	1.96E-08
EBF1	1.21	7.07E-08
GAGE12H	1.20	6.24E-07
SLC8B1	1.20	2.04E-08
MRGPRX3	1.20	2.04E-08
UNC13A	1.20	2.41E-08
ERI2	1.19	2.41E-08
VGLL2	1.19	6.27E-07
VIL1	1.19	6.69E-09
SPDYA	1.19	4.37E-08
CCDC157	1.18	2.86E-08
ABCB8	1.18	1.22E-06
PCDHA7	1.17	1.38E-07
CAPN3	1.17	2.20E-08
NQO2	1.16	1.48E-06
ANKRD55	1.16	2.63E-08

ARL6IP1	1.16	4.08E-08
NECAB1	1.15	9.83E-07
MAP9	1.15	1.11E-06
ZMYM3	1.15	5.28E-08
PTCHD4	1.15	9.19E-07
ATP6V1G1	1.15	3.98E-08
ZSCAN5B	1.15	1.82E-08
GNPTG	1.15	9.23E-07
TMEM185B	1.14	4.72E-08
C8orf58	1.14	1.43E-08
SMPD3	1.14	1.35E-06
HMP19	1.14	1.43E-08
CAV3	1.14	3.41E-07
PCDHA1	1.13	8.46E-08
EMC7	1.13	1.62E-06
UBTFL1	1.13	3.56E-08
SNX13	1.12	2.82E-07
GALNS	1.12	1.12E-06
IFNA10	1.11	6.89E-06
EDA	1.11	7.44E-08
SLC26A9	1.11	2.08E-08
CC2D1B	1.10	1.53E-08
DRD5	1.10	2.08E-08
RNF113B	1.10	5.48E-08
ZP2	1.10	2.19E-08
SIGLEC14	1.10	2.31E-08
TMEM9	1.10	1.60E-08
CECR1	1.10	2.76E-08
FLYWCH2	1.10	2.76E-08
PHEX	1.10	6.57E-07
MSANTD4	1.10	2.25E-08
TAC3	1.09	1.61E-06
CNPY3	1.09	1.24E-06
CCDC182	1.09	4.95E-07
NKX6-1	1.09	8.38E-07
HRH4	1.09	3.66E-08
UBE2F	1.09	2.12E-08
PDE7A	1.09	2.76E-08
AGBL4	1.09	1.40E-08
CCDC77	1.09	2.71E-08
PDE10A	1.09	9.16E-07
UGT1A10	1.09	3.43E-08
KLHDC10	1.08	1.72E-08

SEC24C	1.08	1.05E-06
PWWP2B	1.08	2.94E-08
BCAS4	1.08	2.04E-08
TSPY3	1.08	2.34E-08
C7orf77	1.08	1.72E-08
TMSB4Y	1.07	7.97E-08
SH3YL1	1.07	2.56E-08
FRMD3	1.07	1.32E-06
WDR7	1.07	3.45E-05
CORT	1.07	2.96E-08
RDH14	1.07	1.43E-08
MAGED1	1.07	2.61E-08
USP18	1.06	8.63E-07
KRTAP22-2	1.06	4.44E-08
MRVI1	1.06	3.93E-08
FBXO16	1.06	3.45E-08
MPDZ	1.06	1.34E-06
HTR2B	1.06	2.41E-08
ZFP36	1.06	3.48E-08
CEBPA	1.06	4.93E-07
HPGDS	1.06	1.74E-07
GSR	1.06	6.78E-08
SMIM9	1.06	1.72E-08
ANKRD18A	1.06	1.72E-08
LRRK2	1.06	1.72E-08
FCHSD2	1.05	1.83E-08
AMZ2	1.05	4.80E-08
SERPINA3	1.05	1.59E-06
ZNF10	1.05	3.64E-08
TMPRSS11D	1.05	1.39E-08
CP	1.05	1.43E-08
VPS39	1.04	1.56E-07
MPC1	1.04	1.83E-08
WFDC11	1.04	1.72E-08
DOK2	1.04	1.53E-08
DOK6	1.04	1.13E-08
HBA2	1.04	0.00011142
APBB1IP	1.04	1.99E-06
XKR3	1.04	5.36E-08
ZNF275	1.03	1.61E-06
GNGT1	1.03	1.07E-07
STAG1	1.03	1.43E-08
C1QTNF9	1.03	1.60E-08

OARD1	1.03	1.15E-06
ADGRE2	1.03	1.72E-08
GCNT7	1.03	1.72E-08
HMOX1	1.02	1.43E-08
CDH1	1.02	2.41E-08
KDM4D	1.02	3.46E-08
OSR2	1.02	2.25E-08
C22orf46	1.02	6.31E-08
NPW	1.02	1.27E-07
PAOX	1.01	5.48E-07
MAP1A	1.01	9.16E-07
C14orf105	1.01	1.43E-08
HRASLS2	1.01	2.41E-08
LRFN5	1.01	1.23E-07
FBN1	1.01	1.39E-06
MYOC	1.01	5.47E-08
TYW3	1.01	1.44E-06
OSR1	1.01	1.61E-06
SCGB2A2	1.01	1.86E-06
IRF4	1.01	2.13E-08
RBP5	1.01	3.47E-06
C16orf96	1.00	1.32E-06
GABARAPL2	1.00	2.20E-08
SH3BP5	1.00	1.72E-08
IL5	1.00	1.50E-06
SRA1	1.00	3.46E-08

Supplementary Table 1b: Hits from the second round of sorting ($\log_2(\text{FC}) > 1$, $\text{FDR} < 0.01$)

Gene ID	$\log_2(\text{FC})$	FDR
RNF152	11.71	1.97E-20
TMEM251	9.52	1.29E-17
GNPTAB	5.96	1.49E-13
UBE3C	4.45	1.43E-12
ATP6V1C1	4.06	4.02E-11
EMC7	2.77	5.71E-07
ATP6V0C	2.53	1.03E-09
ATP6V0B	2.45	1.30E-09
ATP6AP2	2.43	3.60E-09
MBTPS1	2.19	5.13E-08
BRI3BP	2.09	0.00027624
ATP6V1A	2.08	1.68E-09
BIRC6	2.01	7.45E-05
ATP6V1D	1.87	2.01E-08
SSTR3	1.77	3.22E-05
ATP6V1B2	1.75	1.22E-05
ATP6V0D1	1.73	1.79E-06
ATP6V1G1	1.64	3.25E-06
WDR7	1.52	3.00E-07
KCNN1	1.50	4.38E-05
RNASEK	1.43	5.71E-07
ATP6AP1	1.36	1.90E-07
GAS1	1.35	0.00140735
OR5B12	1.26	3.22E-05
OAZ2	1.21	1.72E-05
VMA21	1.14	1.09E-05
LRRC16A	1.13	1.23E-05