

Supp Table 1. Patient characteristics of samples used for colony assays, xenografts and intracellular colony assays

Sr.No	Age	Sex	Diagnosis (IPSS)	Blast%	Cytogenetics	Mutations (AF%)
	Patient samples used for colony assays					
1.	68	F	Low risk MDS	1%	N/A	None
2.	78	M	RAEB-1	7%	N/A	DNMT3A
3.	66	F	High risk MDS	12.2%	5q-,7q-,+11, 20q-	DNMT3A (28%) TP53 (58%)
4.	61	M	High risk MDS	6.2%	Monosomy 7	ASXL1 (36%) EZH2 (77%) RUNX1(18%)
5.	63	M	Low risk MDS		Normal	ETV6 (34%), KRAS(15%), RUNX1 (40%), SRSF2 (43%), ZRSR2 (86%)
6.	62	F	RAEB-2		Del 5q	TP53 (7%)
7.	76	F	t-MDS	<1%	Normal	TET2(10%)
8.	80	M	Low risk MDS	5%	Normal	SF3B1(21%) TET2(8%) ZRSR2(62%)
9.	74	F	MPN	5%		JAK2V617F+
10.	76	M	Low risk MDS	<1%	Deletion Y	None
11.	84	M	Low risk MDS	N/A	N/A	N/A
12.	86	M	Int-2 MDS	4-8% blasts	Normal	U2AF1 (43%) CBL (15%)
13.	64	M	low risk MDS	1-3%	20q deletion	ASXL1 (17%) SETBP1(17%) U2AF1(15%)
14.	81	F	Low risk MDS	<1%	Normal	None
	Patient samples used					

	for PDX					
15.	87	F	Int-2 risk MDS	1.2%	Complex cytogenetics, del 7, dup 11, del 13q	SETBP1 (38%)
16.	59	F	High-risk MDS	7-10%	Complex cytogenetics (-5q31, -7q31, trisomy 8, del 11q23)	NRAS (12%), RUNX1 (20%), SRSF2 (22%), STAG2 (17%)
17.	79	F	Int-2 risk MDS	5-8%		None
18.	67	M	MPN	6.6%	Normal	CALR (51%) IDH1(47%) PDGFRB (47%)
	Patient samples used for intracellular ASO uptake					
19.	69	M	MDS-AML	25%	Trisomy 8	IDH2(11%), SF3B1(12%)
20.	83	F	MDS-AML	40%	Not available	Not available
21.	21	F	t-MDS	3.6%	Del 5q, monosomy 7, complex cytogenetics	NF1 (49%) SETBP1(49%), TP53 deletion

Supp Table 2. List of genes that are differentially expressed in MDS CD34+ samples with high STAT3 expression (> median)

No.	Top Sites & Functional Pathways	Score	Molecules	Molecules in Network
1	DNA Replication, Recombination, and Repair, Cell Cycle, Hereditary Disorder	52	30	60S ribosomal subunit, ARNT, ASB8, BICD2, CHEK1, DBT, DTL, GDI1, GSN, HELLS, HIF1AN, Importin beta, IPO5, MCM6, NDUFAB1, P glycoprotein, PCLAF, PCNA, PI3K (complex), RAB5B, RAB6A, RNF146, RNF216, RPA, RPA3, RPL23, RPL18A, RPL23A, RPL26L1, TEPSIN, TNFAIP1, TRIM56, UBE2H, WDR26, WRN
2	Gene Expression, DNA Replication, Recombination, and Repair, Cell Cycle	42	26	ATXN1, CBX5, CBX7, CCNY, CENPK, CENPW, CPSF3, DUSP22, FANCI, GATA D1, H2AFZ, HISTONE, histone deacetylase, Histone h3, Histone h4, HPCAL1, Hsp70, IST1, Mapk, MAPK14, MAX, MECP2, MPHOSPH8, MTHFR, NCAPD3, RAB29, RAD51AP1, RNA polymerase II, SIN3B, TCTA, Tgf beta, TMEM185A, Tnf receptor, TXNIP, USP1
3	Cellular Assembly and Organization, Cellular Development, Cellular Growth and Proliferation	29	20	AHCYL1, Alp, atypical protein kinase C, Caveolin, Eotaxin, ERK1/2, EVA1C, F11R, GC-GCR dimer, GNB5, GTPase, HTATIP2, ITGA6, Laminin, Lfa-1, LGALS8, LITAF, LPP, MINK1, PDPK1, PEA15, PI3K (family), PTRF, Rab11, Rock, Rsk, SNAP23, SNAP29, STX6, Syntaxin, TBC1D20, TSH, TYSND1, VAMP3, VT11B
4	Cardiovascular System Development and Function, Embryonic Development, Organismal Development	29	20	AKIRIN2, ASAP1, Cbp/p300, CDKN3, DUSP3, ERK, FNIP2, FSH, Gap, Ifn, IFN alpha/beta, IFN Beta, IFN type 1, IL-2R, IL12 (complex), IRF2, JAK1, Lh, MAPRE2, MHC Class II (complex), MTMR3, NASP, NCAPH2, NCOA1, NCOA3, PTPase, RNF185, RYK, SKAP2, STAT, STAT6, STAT5a/b, TFE3, TROVE2, WASF2
5	Cell Death and Survival, Cell Cycle, Nucleic Acid Metabolism	27	19	Alpha tubulin, AMPK, APPL2, BIRC5, CAP1, caspase, CENPE, Cofilin, Collagen type I, DNASE1L1, Dynein, FGFR1OP2, FOXO3, GUCY1A3, GUCY1B3, Hdac, MAP2K1/2, Mlc, MXD4, NADPH oxidase, Notch, ORA1, Pak, PARP, PDGFC, Pkc(s), PP2A, PPM1J, PPP2CB, PRKAB2, PRKAG2, Rho gdi, STK4, STMN1, TAOK1
6	Hereditary Disorder,	27	19	Actin, ANXA4, calpain, CaMKII, CAPN1, CD59, CHMP3, COG1, Collagen(s), F

	Neurological Disease, Organismal Injury and Abnormalities			Actin,Fibrinogen,FLNA,Hsp27,INPP5A,Integrin,LDL,MIR124,MSN,NFkB (complex),OPTN,OSBP,OSBPL2,P-TEFb,P38 MAPK,PDGF BB,PDLIM5,Pro-inflammatory Cytokine,PXN,RIT1,SARM1,SQSTM1,STK40,Talin,TRIOBP,VAPB
7	Cell Death and Survival, Hereditary Disorder, Neurological Disease	25	18	ADK,AHI1,Akt,ARHGEF3,Cdk,CDK4/6,CFL2,Cg,Cyclin A,Cyclin D,Cyclin E,E2f,GINS2,HDL,IKK (complex),LASP1,MAP3K3,MCMBP,Mek,NBR1,NFkB (family),NOP58,NUSAP1,PLAC8,Ppp2c,Rb,SAA,SIVA1,ST6GAL1,TFPI,TFPII,TFPIII,TRAF1,TRAF2,TRAF3,TRAF6,TRAF7,TRAF8,TRAF9,TRAF10,TRAF11,TRAF12,TRAF13,TRAF14,TRAF15,TRAF16,TRAF17,TRAF18,TRAF19,TRAF20,TRAF21,TRAF22,TRAF23,TRAF24,TRAF25,TRAF26,TRAF27,TRAF28,TRAF29,TRAF30,TRAF31,TRAF32,TRAF33,TRAF34,TRAF35,TRAF36,TRAF37,TRAF38,TRAF39,TRAF40,TRAF41,TRAF42,TRAF43,TRAF44,TRAF45,TRAF46,TRAF47,TRAF48,TRAF49,TRAF50,TRAF51,TRAF52,TRAF53,TRAF54,TRAF55,TRAF56,TRAF57,TRAF58,TRAF59,TRAF60,TRAF61,TRAF62,TRAF63,TRAF64,TRAF65,TRAF66,TRAF67,TRAF68,TRAF69,TRAF70,TRAF71,TRAF72,TRAF73,TRAF74,TRAF75,TRAF76,TRAF77,TRAF78,TRAF79,TRAF80,TRAF81,TRAF82,TRAF83,TRAF84,TRAF85,TRAF86,TRAF87,TRAF88,TRAF89,TRAF90,TRAF91,TRAF92,TRAF93,TRAF94,TRAF95,TRAF96,TRAF97,TRAF98,TRAF99,TRAF100
8	Cell Cycle, Cell Death and Survival, DNA Replication, Recombination, and Repair	19	15	14-3-3,20s proteasome,Ap1,BCL2L2,BCR (complex),Calcineurin protein(s),CFLAR,CK1,FSCN1,HIPK2,ITPR,JAK,Jnk,LAMP1,LCP2,MAP1 LC3,NFAT (complex),Nfat (family),NFATC2,Pias,PIAS3,PLC gamma,PSEN2,Raf,Rxr,SERBP1,SSPN,SYK/ZAP,TCR,TOP2A,VAV,Vitam inD3-VDR-RXR,WIPF1,YY1,ZBTB4
9	Cell-To-Cell Signaling and Interaction, Protein Synthesis, Nervous System Development and Function	19	15	ACO1,APBA1,APBA2,APBA3,APP,ARF3,ARPP19,ATP5I,C4orf46,C6orf 106,CGB3 (includes others),CREB1,EIF1,EIF5,EIF1AX,EIF2B5,EPHB4,GTDC1,L-type Calcium Channel,MRPL48,OPA3,PDYN,PELI3,PHACTR4,PIKFYVE,PIP4K2C,PSE NEN,THOP1,TRUB1,VIPR2,WWC3,ZFYVE1,ZGRF1,ZNF35,ZNF436
10	Cell Morphology, Connective Tissue Development and Function, Cellular Function and Maintenance	19	15	ANGPTL2,ARHGAP18,ARHGAP22,ARHGEF9,CACUL1,CCPG1,CDC42,C DC42SE1,CDC42SE2,DENND2D,DSCR3,DUT,EPHX4,ESR1,FARP2,FGD5 ,HEBP1,ITGA10,KMT5B,MALL,MIEF1,mir- 1,MPC1,NCAPG,NOSTRIN,OPHN1,OVOS2,PLEKHG2,STK10,TNFAIP8L 1,Vegf,VEZF1,WBP1L,WIPF2,ZNF367
11	Cancer, Cell-To-Cell Signaling and Interaction, Organismal Injury and Abnormalities	19	15	ABTB1,ADNP2,ATP5G1,BTBD3,CTDSPL,DUSP15,DUSP28,EFCAB14,EF HD2,EFR3A,ELAVL1,FLYWCH1,GSE1,HACD2,INHBE,ITPKB,KPNA6,LAD 1,LEPROT,LSS,MFSD14A,MTMR4,NT5DC3,PDE7B,PPTC7,PTEN,RABL2 B,RC3H2,ROMO1,SLC16A5,SPOCK1,TNF,TRAM2,TULP4,ZNF330
12	Cell Death and	19	15	ABHD17A,ADAT1,C17orf75,C19orf66,C6orf89,CBFA2T2,CLCN6,EMC

	Survival, Connective Tissue Disorders, Immunological Disease			9,FAM91A1,FAS,GCHFR,HIF1A,HNF4A,MAGOH,MESP2,MOB2,MOV10,MSRB1,MTRF1,OGFOD2,PNMA1,PRDM6,PTRHD1,R3HCC1L,RIOK1,SAT2,SLC39A9,SMDT1,SNRPD2,TAL2,TCF4,TMBIM1,TMEM79,TMEM128,ZNF564
13	Cellular Movement, Cell Signaling, Cellular Assembly and Organization	16	13	alpha-adrenergic receptor,alpha2-adrenergic receptor,ANKRD6,ARHGAP24,ARHGAP26,ARHGEF28,ARRB1,cAMP-Gef,DCAF5,DNAJB2,ELMO,ELMO1,FEZ2,Focal adhesion kinase,GMPR,GSK3B,KIAA1191,PAR3-PAR6-aPKC,Pdgfr,PGGT1B,PLEKHG6,PRKCZ,R3HDM4,Rac,Ras homolog,Rho-GDP,Rho-GTP,RHOG,RHOV,RTN4,TTC7B,UBC,ZFAND3,ZFYVE21,ZNF792
14	Cell Morphology, Cellular Compromise, Developmental Disorder	16	13	ANKRD36,ANP32E,C1orf112,CDC42EP5,CSTF2T,DENND4C,DENND5B,ERCC6L,FBXW11,GAPDH,HIST1H4L,HIST2H3D,KNL1,LARS2,MAP1LC3B2,NDC1,NOL11,NSF,NSL1,NUPR1,OBSL1,PER3,RAB6C/WTH3DI,RBMS1,SEPT1,SEPT6,SEPT8,SEPT10,SEPT11,SEPT12,SEPT14,Septin,SIPA1L2,SPC25,TMEM167B
15	Cell Death and Survival, Cellular Development, Cellular Function and Maintenance	14	12	ALLC,ARID1B,ASPM,CENPBD1,CNST,DNAJB3,EWSR1,FBXO4,FXVD6,GLI1,HSP90AA1,JMY,KCNG1,KIAA1211,KLHL6,MAP9,MVK,PACS2,PADI1,Patched,PBX2,PRAG1,PSTPIP2,PTCHD4,RAB37,RPS6KC1,SLC35E1,SPICE1,STK36,TP53,TTC26,Ube3,UBE2Q1,WDR37,ZC3HAV1L
16	Cell-To-Cell Signaling and Interaction, Cellular Assembly and Organization, Cancer	14	12	15-LOX,APPL,Cadherin (E,N,P,VE),CONNEXIN,CTDSPL,CTNNB1,CTNN β -CDHE/N,CTNN β -LEF1,F2,GALNT6,GLIPR1,GPX2,Gsk3,GTF2I,HDAC1,HOXC8,LBH,MAST4,MGAT4B,MYC,NACC2,NKX2-2,NOCT,PAICS,PEAR1,PEG3,PGPEP1,PLAUR,PRKCD,RBMS2,SERPINB8,SNRK,SRC,TCF4-CTNN β ,ZNF827
17	Cell Death and Survival, Inflammatory Disease, Inflammatory Response	11	10	26s Proteasome,ADCY,Calmodulin,CAPZB,CD3,Ck2,Creb,CRTC3,DAPK1,estrogen receptor,FAM127A,G protein alpha,Growth hormone,HLA-E,Hsp90,IgG,Igm,IL1,IL12 (family),Immunoglobulin,Interferon alpha,LYN,NXT2,p85 (pik3r),Pdgf (complex),Pka,POGK,Ras,RELA,Sapk,Shc,SRC (family),STAT3,tubulin,Vegf
18	Lipid Metabolism, Small Molecule Biochemistry,	2	1	phosphatidate phosphatase,PLPP5

	Cancer			
19	Cell-To-Cell Signaling and Interaction, Cellular Movement, Hematological System Development and Function	1	1	RNF24,TRPC6,UQCRH

Supp Table 3: List of differentially expressed genes from RNA-seq analysis of CMK cells treated with AZD9150 and control

No	Gene	chr	log2FoldChange	P val	Adj P val	Mean Ctrl	Mean AZD 9150	No	Gene	chr	log2FoldChange	P val	Adj P val	Mean Ctrl	Mean AZD 9150
1	STAT3	17	-4.1	0.000000E+00	0.000000E+00	6025	343	500	NOLC1	10	-0.3	5.535455E-16	1.743072E-14	9509	7581
2	MTDH	8	-2.9	0.000000E+00	0.000000E+00	10057	1362	501	EHD2	19	1.2	5.591871E-16	1.757398E-14	202	491
3	HBA1	16	-2.1	0.000000E+00	0.000000E+00	10817	2580	502	ZNF75A	16	1.0	5.750535E-16	1.803740E-14	348	719
4	ANXA1	9	-1.3	2.449058E-304	9.851948E-301	22779	9414	503	GPR158	10	-1.1	5.772405E-16	1.807077E-14	606	273
5	HBA2	16	-2.0	2.280763E-291	7.339953E-288	9078	2308	504	NLGN2	17	1.4	6.250185E-16	1.952849E-14	110	338
6	LRRFIP1	2	-3.2	6.960482E-288	1.866685E-284	3139	324	505	SLC29A1	6	0.6	7.112708E-16	2.218034E-14	1412	2122
7	ZNF609	15	-3.7	2.604575E-282	5.987173E-279	2684	191	506	CHST2	3	0.8	7.634632E-16	2.376187E-14	692	1195
8	GLS	2	-2.6	1.295332E-281	2.605398E-278	4367	712	507	DLGAP5	14	-0.5	7.866960E-16	2.443769E-14	3019	2138
9	UBE2K	4	-3.4	2.462788E-271	4.403192E-268	2771	245	508	SNX19	11	0.7	7.898002E-16	2.448685E-14	766	1285
10	LCP1	13	-2.2	9.546672E-268	1.536155E-264	4968	1028	509	PDK3	X	-1.3	7.939020E-16	2.456669E-14	463	177
11	GNAQ	9	-3.1	1.222059E-226	1.787650E-223	2471	272	510	ZNF761	19	0.7	8.094935E-16	2.500108E-14	839	1394
12	PRUNE2	9	-3.4	5.935511E-220	7.959026E-217	2160	187	511	LTV1	6	-0.6	8.604978E-16	2.652542E-14	2156	1425
13	POLA1	X	-2.9	1.591167E-212	1.969498E-209	2593	323	512	CEL2F2	10	0.4	8.679757E-16	2.670477E-14	2789	3811
14	SETX	9	-2.5	1.615616E-207	1.856919E-204	3002	529	513	NUP88	17	-0.5	8.700396E-16	2.671719E-14	2421	1650
15	ARFGEF1	8	-3.1	2.392360E-207	2.566364E-204	2320	244	514	FUT8	14	-0.8	9.604924E-16	2.943864E-14	1004	543
16	ARIH2	3	-4.2	1.511456E-204	1.520052E-201	1727	75	515	BIRC6	2	-0.5	1.091449E-15	3.338879E-14	3453	2499
17	CHST11	12	-4.4	1.052252E-200	9.959878E-198	1673	63	516	RN75L3	14	-0.4	1.160091E-15	3.542130E-14	4025	2963
18	MAG1	3	-1.8	4.901897E-177	4.382024E-174	4484	1274	517	TCEB3	1	-0.6	1.319753E-15	4.021997E-14	1991	1303
19	GPATCH2L	14	-3.1	1.965061E-173	1.664200E-170	1824	191	518	UROS	10	1.0	1.370607E-15	4.169081E-14	340	700
20	PDCD11	10	-1.7	1.538975E-167	1.238182E-164	4353	1303	519	MAC1	7	-0.7	1.429188E-15	4.339068E-14	1521	933
21	MAPRE2	18	-3.3	1.392261E-164	1.066804E-161	1622	154	520	RN75KP80	22	-0.4	1.517642E-15	4.598941E-14	9880	7455
22	LAMC1	1	-3.7	1.151174E-163	8.419792E-161	79	1247	521	NFATC3	16	-0.7	1.563695E-15	4.729591E-14	1453	883
23	ACSL4	X	-1.6	1.593644E-162	1.114927E-159	4709	1521	522	ZC3H15	2	-0.5	1.735632E-15	5.239785E-14	3330	2399
24	ATP11B	3	-1.3	1.494542E-158	1.002028E-155	6594	2593	523	CCT8	21	-0.4	1.744200E-15	5.255789E-14	6047	4689
25	TLK1	2	-2.5	2.033171E-155	1.308630E-152	2081	341	524	ZIK1	19	1.2	1.871586E-15	5.629100E-14	186	464
26	RTN4	2	2.2	1.206240E-153	7.465232E-151	621	2831	525	MED1	17	-0.5	1.913146E-15	5.743363E-14	2822	1979
27	ITGA4	2	-1.6	3.482505E-152	2.075444E-149	4537	1498	526	FBL	19	-0.3	2.066722E-15	6.192854E-14	7017	5501
28	YLPM1	14	-1.6	1.855984E-151	1.066594E-148	4348	1374	527	CDK8	13	1.0	2.141801E-15	6.405896E-14	328	696
29	RMDN1	8	-2.9	2.780111E-147	1.542578E-144	1708	217	528	ATP2B1	12	0.6	2.191696E-15	6.542965E-14	1408	2103
30	VPS13C	15	-2.4	3.927252E-147	2.106447E-144	2088	369	529	CFI1	11	-0.4	2.323797E-15	6.913532E-14	7425	5797
31	PRKCB	16	-1.0	1.418168E-139	7.361209E-137	10580	5131	530	SRM	1	0.5	2.324418E-15	6.913532E-14	2624	3612
32	PHRF1	11	3.1	1.016593E-138	5.111873E-136	152	1471	531	EP58	12	-0.9	2.349579E-15	6.975475E-14	909	483
33	DNAJC21	5	-2.2	6.549771E-138	3.193708E-135	2236	462	532	MBNL2	13	-0.5	2.385840E-15	7.070082E-14	2416	1653
34	INO80	15	-3.0	9.619842E-133	4.552731E-130	1411	158	533	UCHL5	1	-0.4	2.430786E-15	7.190033E-14	3627	2656
35	CENPE	4	-1.4	4.897100E-128	2.251407E-125	4916	1901	534	GATAD2A	19	0.3	2.472194E-15	7.290906E-14	6953	8695
36	LMO3	12	-2.5	1.030953E-126	4.608075E-124	1655	271	535	PPP3R1	2	-0.5	2.536566E-15	7.475436E-14	2324	1584
37	PCYT1A	3	-2.8	1.296575E-126	5.638698E-124	1463	192	536	HNRNPUP1	14	-0.9	2.546614E-15	7.491327E-14	978	523
38	ELP3	8	-2.5	6.790870E-126	2.875576E-123	1724	286	537	NRD1	1	-0.4	2.659456E-15	7.808997E-14	3858	2847
39	EPB41L2	6	-1.3	2.193762E-125	9.051237E-123	5109	2015	538	RAP1GAP2	17	0.8	2.680396E-15	7.856147E-14	504	923
40	INTS2	17	-3.5	1.059304E-123	4.261316E-121	1093	81	539	CPED1	7	-0.4	2.709409E-15	7.926745E-14	4394	3291
41	ATF6	1	-2.6	2.788460E-117	1.094369E-114	1503	227	540	THUMP3	3	-0.7	2.722419E-15	7.950353E-14	1387	847
42	HERC1	15	-2.1	1.262035E-114	4.835095E-112	1930	420	541	ZNF607	19	1.7	2.837089E-15	8.270218E-14	60	237
43	DNAJC13	3	-2.4	6.258968E-114	2.342164E-111	1744	310	542	HNRNP3A3P5	13	-0.8	3.384689E-15	9.848650E-14	1104	630
44	OXR1	3	-2.0	1.333269E-111	4.875825E-109	2039	495	543	ZNF813	19	0.7	3.695431E-15	1.073343E-13	739	1237
45	HIST1H2BK	6	-0.8	3.164837E-104	1.131675E-101	16803	9941	544	P5MD12	17	-0.5	3.933682E-15	1.140484E-13	3049	2182
46	RN75L4P	3	-0.8	1.973918E-103	6.904850E-101	37341	22138	545	SP110	2	-1.1	5.225214E-15	1.512211E-13	527	229
47	FAM208A	3	-1.8	3.481392E-103	1.191895E-100	2241	632	546	NAMPTL	10	-0.6	5.920708E-15	1.710415E-13	1915	1251
48	PKP4	2	-2.0	4.621397E-103	1.525189E-100	1985	481	547	ATHL1	11	1.5	6.067125E-15	1.749572E-13	76	268
49	DICER1	14	1.8	4.644477E-103	1.525189E-100	546	2035	548	TAF15	17	-0.4	6.305337E-15	1.815012E-13	3556	2612
50	SLC8B1	12	-3.2	1.587047E-101	5.107434E-99	971	83	549	MXD4	4	0.9	6.345132E-15	1.823206E-13	407	799
51	VPS41	7	-2.0	3.097701E-99	9.773550E-97	1818	448	550		1	-0.7	7.501175E-15	2.151540E-13	1441	864
52	CNTRL	9	-1.9	3.296596E-98	1.020106E-95	2126	564	551	GNAQP1	2	-2.0	8.269026E-15	2.367560E-13	150	22
53	GD12	10	-1.0	2.011441E-97	6.106810E-95	6145	2958	552	HNRNPF	10	-0.3	8.648499E-15	2.471812E-13	9383	7475
54	RN75L5P	9	-0.8	1.156998E-96	3.447640E-94	57071	33789	553	PTPN6	12	-0.9	9.011653E-15	2.571037E-13	759	385
55	KNTC1	12	-2.0	5.596337E-94	1.637285E-91	1718	423	554	C9orf41	9	0.6	9.172344E-15	2.612251E-13	1459	2157
56	RPPH1	14	-0.6	7.257493E-93	2.085363E-90	41142	26183	555	RPL18AP3	12	0.3	9.563224E-15	2.718760E-13	6955	8807
57	GALNT7	4	-1.2	8.805068E-93	2.485655E-90	4329	1900	556		1	-0.6	9.870952E-15	2.801296E-13	1597	1015
58	HIST1H2AAG	6	-1.1	9.365163E-93	2.598187E-90	4726	2112	557	PP1G	2	-0.5	1.018924E-14	2.886533E-13	2513	1756
59	PTMAP2	5	-0.8	2.558076E-91	6.976610E-89	11875	6628	558	UBR7	14	-1.2	1.046820E-14	2.960348E-13	438	174
60	IQCB1	3	-2.8	3.347822E-91	8.978302E-89	1043	134	559	BRF10	12	-0.4	1.199497E-14	3.386159E-13	3758	2769
61	CDYL	6	-2.6	2.977961E-89	7.855471E-87	1060	157	560	TET1	10	-0.8	1.243241E-14	3.503500E-13	1019	576
62	HIST1H2AL	6	-1.6	5.158075E-88	1.338687E-85	3159	1022	561	CEP164	11	0.7	1.260462E-14	3.545820E-13	840	1361
63	EXT2	11	-3.7	5.704948E-88	1.457116E-85	677	36	562	CHURC1	14	-1.7	1.276591E-14	3.584925E-13	223	55
64	NFKB1	4	-3.4	7.909846E-88	1.988708E-85	746	55	563	ZNF850	19	0.5	1.424283E-14	3.992707E-13	1615	2350
65	QKI	6	-1.4	8.310700E-87	2.057346E-84	3413	1282	564	LRRK1	15	-1.4	1.485084E-14	4.155912E-13	311	101
66	HIST1H2AH	6	-1.4	1.810466E-85	4.413970E-83	3662	1379	565	ABI2	2	-0.7	1.771330E-14	4.948345E-13	1307	776
67	RNF168	3	-1.7	3.659535E-85	8.788892E-83	1905	550	566	HMG81P5	3	-0.4	1.792755E-14	4.999517E-13	5676	4200
68	ACTG1	17	0.7	4.688083E-82	1.109352E-79	10098	16337	567	RBL1	20	-0.6	1.854383E-14	5.162435E-13	2000	1303
69	HIST1H1C	6	-0.6	1.241160E-81	2.894421E-79	25657	16361	568	DTX3L	3	0.7	1.879696E-14	5.223867E-13	808	1310
70	ASCC3	6	-1.6	2.497775E-79	5.741671E-77	2168	707	569	LINS2	14	-1.7	1.908201E-14	5.293941E-13	223	55
71	MYBL2	20	-1.2	1.234375E-78	2.797510E-76	4201	1798	570	VDAC1	5	-0.4	1.931024E-14	5.348039E-13	3962	2945
72	ANKRD11	16	-1.4	3.115999E-78	6.963824E-76	2574	968	571	IFT43	14					

82	MALAT1	11	0.5	4.450616E-69	8.733520E-67	55827	77879	581	11	0.8	2.901654E-14	7.886912E-13	543	973
83	INTS9	8	-2.0	1.722018E-68	3.338432E-66	1206	281	582	8	-0.6	3.089988E-14	8.384654E-13	1739	1138
84	SATB2	2	-1.7	2.225413E-68	4.262990E-66	1687	510	583	11	-0.3	3.272425E-14	8.742844E-13	11054	9082
85	BCLAF1	6	-0.8	4.631890E-68	8.768440E-66	8567	4907	584	3	0.6	3.275283E-14	8.857575E-13	1400	2091
86	C12orf4	12	-3.1	1.319492E-67	2.440453E-65	612	55	585	2	-0.9	3.796121E-14	1.024889E-12	890	485
87	HIST1H4J	6	-1.3	1.313161E-67	2.440453E-65	2600	1050	586	4	-1.5	3.928461E-14	1.057071E-12	260	75
88	HIST2H2AA4	1	-0.7	1.906260E-67	3.485640E-65	10876	6530	587	13	-0.9	3.926064E-14	1.057071E-12	789	417
89	RBM19	12	-1.3	1.369081E-66	2.475268E-64	2370	937	588	14	1.3	4.164083E-14	1.118602E-12	142	378
90	JAK2	9	2.1	2.636364E-65	4.713525E-63	222	1004	589	1	-0.9	4.464813E-14	1.197388E-12	868	450
91	RQCD1	2	-1.6	3.823450E-65	6.760785E-63	1636	514	590	14	-0.7	4.919098E-14	1.317025E-12	1374	858
92	MTHFD1	14	-1.2	4.512087E-65	7.891738E-63	2989	1314	591	9	-0.4	5.045107E-14	1.348519E-12	5436	3978
93	HIST1H4K	6	-1.3	1.228355E-64	2.125319E-62	2406	982	592	4	1.3	5.135775E-14	1.370477E-12	111	317
94	SS18	18	-1.8	1.385730E-64	2.372104E-62	1282	340	593	11	-1.5	5.246571E-14	1.397725E-12	246	69
95	ARHGFE6	X	-1.0	1.621366E-64	2.746253E-62	4021	2019	594	1	-0.5	5.412702E-14	1.439600E-12	2784	1995
96	DMD	X	-1.8	2.086930E-64	3.498000E-62	1326	369	595	10	-0.4	5.561605E-14	1.476762E-12	3774	2811
97	MAPKAP1	9	-1.7	4.107641E-62	6.814025E-60	1374	399	596	14	0.8	5.684467E-14	1.506899E-12	575	1021
98	KIF1B	1	-1.7	6.766779E-62	1.111064E-59	1367	406	597	1	-0.7	6.044914E-14	1.599814E-12	1299	797
99	HSPA5	9	-0.7	2.267715E-61	3.685838E-59	8330	5078	598	16	0.8	6.118334E-14	1.616586E-12	478	864
100	RAI14	5	-3.3	5.224741E-61	8.407131E-59	486	32	599	9	-1.7	6.686517E-14	1.763815E-12	187	41
101	FER	5	-1.6	5.293963E-61	8.434175E-59	1566	496	600	16	0.6	7.033986E-14	1.852437E-12	1236	1842
102	RN7SKP71	12	-0.6	1.261118E-60	1.989475E-58	12670	8066	601	8	-1.4	7.463215E-14	1.962265E-12	335	116
103	ZNF638	2	-1.1	1.330977E-60	2.079296E-58	3023	1384	602	19	1.3	8.002487E-14	2.100620E-12	140	376
104	RB1	13	-1.3	3.139330E-60	4.857208E-58	2364	952	603	2	-0.9	8.569569E-14	2.242162E-12	792	421
105	ADAR	1	-0.9	6.501180E-60	9.962903E-58	4119	2140	604	20	0.8	8.567648E-14	2.242162E-12	549	968
106	HIST1H2AE	6	-1.1	7.099703E-60	1.077748E-57	3398	1574	605	20	0.5	9.594469E-14	2.506244E-12	1830	2588
107	SLC7A11	4	-1.1	5.691246E-58	8.558677E-56	3123	1488	606	3	-0.5	9.972750E-14	2.608305E-12	2291	1596
108	OLA1	2	-1.3	8.704948E-58	1.296957E-55	2136	866	607	18	1.1	1.010978E-13	2.63235E-12	218	491
109	ITPR1	3	-2.1	1.576145E-57	2.326766E-55	926	195	608	20	1.9	1.156677E-13	3.006799E-12	17	121
110	NDUFV2P1	19	-2.5	1.618797E-57	2.368005E-55	778	108	609	11	-0.6	1.204948E-13	3.127230E-12	1909	1286
111	ARL13B	3	-3.1	8.610513E-57	1.248214E-54	481	39	610	7	0.4	1.221829E-13	3.165934E-12	2752	3692
112	WHSC1	4	-0.9	1.183582E-56	1.700449E-54	4133	2148	611	4	-0.3	1.233349E-13	3.190647E-12	8087	6525
113	AIG1	6	-2.7	1.422712E-56	2.025917E-54	599	77	612	3	0.7	1.480967E-13	3.825078E-12	722	1186
114	HIST2H2AA3	1	-0.7	4.356062E-56	6.148543E-54	11412	6907	613	19	-0.7	1.508687E-13	3.890430E-12	1298	784
115	PIK3C2A	11	-1.4	7.905224E-56	1.106113E-53	1784	678	614	17	-0.5	1.524536E-13	3.925010E-12	2625	1861
116	CAMKK2	12	1.7	1.003779E-55	1.392397E-53	333	1142	615	X	0.7	1.614244E-13	4.194930E-12	740	1210
117	RAPGEF1	9	-2.1	8.799420E-55	1.210183E-52	821	173	616	1	-0.7	1.625079E-13	4.170518E-12	1251	746
118	B4GALT1	9	1.2	5.348329E-54	7.293217E-52	976	2217	617	8	-0.7	1.733818E-13	4.442495E-12	1452	884
119	PKM	15	-0.6	3.077459E-53	4.161293E-51	11116	7323	618	16	-0.7	1.824132E-13	4.666471E-12	1091	648
120	EPRS	1	-0.6	1.408335E-52	1.888460E-50	9941	6521	619	6	-0.3	1.875176E-13	4.789438E-12	10161	8343
121	ARHGAP15	2	-1.7	1.353817E-51	1.800353E-49	1042	294	620	11	-0.2	1.923948E-13	4.919990E-12	19903	16875
122	SPTBN2	11	1.2	1.375106E-51	1.813674E-49	930	2168	621	19	0.4	1.984393E-13	5.052352E-12	2550	3424
123	HSPA8	11	-0.4	3.668283E-51	4.760188E-49	65461	48620	622	22	0.8	2.007873E-13	5.104057E-12	488	872
124	PRKAR2B	7	1.2	3.664370E-51	4.760188E-49	808	1910	623	10	-1.9	2.063070E-13	5.236098E-12	126	17
125	NUP210	3	-0.8	6.409968E-51	8.251423E-49	5673	3335	624	12	-0.3	2.080813E-13	5.272812E-12	11648	9658
126	ALMS1	2	-1.5	1.204029E-50	1.537622E-48	1429	491	625	3	-2.1	2.175846E-13	5.504958E-12	79	3
127	SLC4A7	3	-1.2	1.228151E-50	1.556077E-48	2048	872	626	6	-0.6	2.252393E-13	5.689680E-12	1715	1123
128	SHPRH	6	-1.7	8.718673E-50	1.096033E-47	1079	318	627	21	-0.6	2.304646E-13	5.812548E-12	1956	1321
129	POLB	8	-2.9	1.030966E-49	1.285990E-47	450	43	628	2	0.7	2.504190E-13	6.305935E-12	700	1149
130	RMRP	9	-0.5	1.339027E-49	1.657406E-47	22699	16231	629	5	-0.4	2.601612E-13	6.541021E-12	3822	2849
131	EPG5	18	-2.4	1.373534E-49	1.687140E-47	606	95	630	8	-1.1	2.618100E-13	6.572206E-12	512	229
132	UBXN7	3	-1.2	1.810006E-49	2.206425E-47	2271	992	631	2	-0.9	2.646371E-13	6.632828E-12	633	317
133	SPIDR	8	-2.6	2.109193E-48	2.551807E-46	505	67	632	15	-0.8	2.749728E-13	6.881161E-12	953	534
134	MIR3687	21	0.8	3.996570E-48	4.799165E-46	3833	6679	633	7	-0.8	2.792988E-13	6.978566E-12	880	492
135	U2SURP	3	-0.6	4.249066E-48	5.064572E-46	7668	4877	634	10	-0.9	2.808146E-13	7.005564E-12	682	350
136	1	1	-1.3	5.080291E-48	6.010806E-46	1729	697	635	8	-0.3	2.829854E-13	7.048791E-12	7268	5854
137	GRAP2	22	-1.2	1.082696E-47	1.271654E-45	2105	928	636	7	-0.3	2.952645E-13	7.343278E-12	8175	6628
138	HIST1H2BO	6	-1.4	4.414718E-47	5.147625E-45	1471	559	637	10	-0.4	2.984016E-13	7.409846E-12	3795	2867
139	PICALM	11	-0.6	1.122846E-46	1.299836E-44	6847	4350	638	18	-0.5	3.008232E-13	7.458468E-12	2149	1482
140	RASA2	3	-2.6	1.140137E-46	1.310424E-44	490	63	639	11	0.8	3.092724E-13	7.656157E-12	552	953
141	MRPL16	11	-1.0	1.165620E-46	1.330213E-44	2966	1516	640	19	-0.3	3.780573E-13	9.344578E-12	5498	4318
142	DTD2	14	-2.8	1.248915E-46	1.415231E-44	446	46	641	1	-0.4	3.804821E-13	9.39089E-12	3048	2231
143	KIF2C	1	-1.3	1.598056E-46	1.798204E-44	1725	678	642	3	-0.9	3.822240E-13	9.418630E-12	739	393
144	GNL2	1	-0.9	1.723198E-46	1.925554E-44	3244	1729	643	3	-1.0	3.851074E-13	9.475173E-12	560	265
145	THRAP3	1	-0.7	3.770856E-46	4.184610E-44	5593	3386	644	1	0.7	4.179488E-13	1.026750E-11	751	1216
146	HIST1H2AB	6	-1.1	6.900842E-46	7.605578E-44	2179	989	645	17	0.5	4.492073E-13	1.101859E-11	1248	1840
147	SNORD3B-1	17	1.4	1.183948E-45	1.295981E-43	525	1399	646	5	0.3	4.506305E-13	1.103667E-11	4322	5481
148	AP2B1	17	0.7	1.532850E-45	1.666560E-43	2941	4891	647	19	0.9	4.630036E-13	1.132248E-11	341	678
149	X	X	-2.7	1.549731E-45	1.673606E-43	445	52	648	1	0.8	4.689168E-13	1.144968E-11	505	898
150	HIST1H2BJ	6	-1.1	1.938583E-45	2.079583E-43	2228	1026	649	10	1.2	5.092808E-13	1.241642E-11	147	368
151	PDS5A	4	0.7	9.378051E-45	9.993525E-43	3489	5650	650	7	-0.8	5.207233E-13	1.267618E-11	955	555
152	TRNT1	3	-1.3	2.546443E-44	2.695712E-42	1419	544	651	3	-0.3	5.346000E-13	1.299433E-11	7879	6395
153	HIF1A	14	-1.7	2.855470E-44	3.003095E-42	902	256	652	8	0.5	5.512659E-13	1.337921E-11	1250	1846
154	ASNS	7	-0.8	6.734361E-44	7.036533E-42	3855	2200	653	19	0.5	5.872284E-13	1.423056E-11	1274	1865
155	HIST2H2BF	1	-1.0	8.080870E-44	8.388986E-42	2969	1517	654	8	-0.5	5.911772E-13	1.430471E-11	2492	1761
156	HIST2H2BE	1	-0.7	8.164609E-44	8.421585E-42	6760	4243	655	X	-0.4	6.035467E-13	1.458209E-11	3736	2791
157	NCL	2	-0.4	1.310887E-43	1.343534E-41	41156	30373	656	2	-0.2	6.057406E-13	1.461315E-11	19353	16398
158	INO80D	2	-1.8	1.471607E-43	1.498710E-41	875	239	657	10	-0.6	6.090651E-13	1.467136E-11	1702	1138
159	DIAPH3	13	-1.4	2.552721E-43	2.583386E-41	1240	450	658	6					

169	THOP1	19	0.8	6.785305E-42	6.460494E-40	1845	3353	668	NAP1L1	12	0.3	8.182463E-13	1.939087E-11	5741	7126
170	ATE1	10	-1.8	1.584511E-41	1.499786E-39	782	203	669	HNRNPD1	4	-0.3	8.913508E-13	2.109224E-11	5369	4232
171	ACER3	11	2.2	2.019066E-41	1.899929E-39	100	531	670	MLH1	3	-0.6	8.988731E-13	2.123901E-11	1350	861
172	HNRNPR	1	-0.6	4.189515E-41	3.919389E-39	5952	3802	671	LEPROT	1	-0.6	9.020232E-13	2.128219E-11	1816	1230
173	SLC8A3	14	-3.1	5.038812E-41	4.686678E-39	305	20	672	TUBB6	18	0.5	9.191471E-13	2.165446E-11	1379	2027
174	ENOX2	X	-2.3	5.741544E-41	5.309608E-39	511	83	673	ARHGAP21	10	-0.7	9.568374E-13	2.248343E-11	1254	773
175	HNRNPC	14	-0.5	6.443017E-41	5.924262E-39	9696	6625	674	RRM2	2	-0.3	9.571280E-13	2.248343E-11	11211	9283
176	EXOSC7	3	-2.4	1.081673E-40	9.889322E-39	471	74	675	PLXNA3	X	1.5	1.028498E-12	2.412474E-11	71	238
177	UNC13B	9	-1.8	1.427672E-40	1.297891E-38	721	185	676	PARP11	12	-1.3	1.078569E-12	2.526237E-11	321	118
178	KDM5C	X	-1.2	1.493047E-40	1.349698E-38	1627	687	677	IDH2	15	0.6	1.086646E-12	2.541457E-11	965	1472
179	SENP6	6	-1.0	2.223093E-40	1.998424E-38	2100	1018	678	TNIP1	5	0.8	1.144280E-12	2.672367E-11	530	938
180	LRBA	4	-1.0	3.133752E-40	2.801400E-38	2009	964	679	WDR36	5	-0.4	1.200754E-12	2.800193E-11	4053	3105
181	NOSTRIN	2	-1.3	3.417201E-40	3.037911E-38	1358	536	680	DTL	1	-0.5	1.233688E-12	2.872833E-11	2115	1478
182	KIAA0247	14	-2.1	8.099897E-40	7.161288E-38	606	125	681	EEF1A1P13	5	0.3	1.288457E-12	2.996035E-11	6605	8317
183	HIST1H2BG	6	-1.1	1.005117E-39	8.837893E-38	1998	933	682	E1F2A	3	-0.5	1.316998E-12	3.057982E-11	2672	1945
184	TAF3	10	-2.3	1.106364E-39	9.675273E-38	498	84	683	GZE3	14	-0.6	1.348826E-12	3.127371E-11	1513	997
185	DDX21	10	-0.5	1.199802E-39	1.043568E-37	18826	13732	684	KIF21B	1	-0.7	1.477992E-12	3.421923E-11	1082	655
186	TARS	5	-0.5	1.342008E-39	1.160981E-37	9576	6644	685	VEP1	3	-1.0	1.516592E-12	3.506247E-11	532	252
187	CDCC91	12	-2.3	2.065850E-39	1.777625E-37	487	79	686	ETL1	5	-0.3	1.521356E-12	3.512215E-11	5521	4368
188	CREB5	7	1.1	3.463175E-39	2.964146E-37	891	1911	687	RPL71	6	0.3	1.552892E-12	3.579883E-11	4960	6242
189	PDHX	11	-1.8	3.485483E-39	2.967455E-37	710	186	688	BRC1A	17	0.4	1.558722E-12	3.588182E-11	2759	3655
190	HSP90B1	12	-0.5	4.905197E-39	4.154186E-37	11161	7888	689	FBX07	22	-0.4	1.620714E-12	3.725559E-11	3322	2493
191	RABGAP1L	1	-2.0	1.225106E-38	1.032104E-36	597	129	690	MAP1A	15	1.2	1.624550E-12	3.729049E-11	130	340
192	PTPRC	1	-1.0	2.759063E-38	2.312296E-36	2214	1099	691	BRC3	X	-0.9	1.662896E-12	3.811632E-11	599	300
193	EFN5	5	-2.1	4.244600E-38	3.538853E-36	542	111	692	ABCA3	16	0.7	1.712513E-12	3.919780E-11	610	1018
194	SLC38A1	12	-0.6	1.177208E-37	9.764151E-36	5370	3414	693	SRM2	16	0.3	1.925631E-12	4.401325E-11	6721	8230
195	WDR6	3	1.2	1.678430E-37	1.385006E-35	709	1608	694	RSU1	10	-0.7	2.108851E-12	4.813265E-11	1220	767
196	PLD1	3	-2.0	3.608061E-37	2.962107E-35	591	135	695	AGP5	2	-0.5	2.276797E-12	5.189226E-11	2402	1726
197	GAB2	11	-1.2	3.785917E-37	3.092345E-35	1510	651	696	RPL26	17	0.3	2.296492E-12	5.226712E-11	7205	8816
198	VPS13B	8	-1.3	3.870683E-37	3.145614E-35	1134	433	697	UTP11L	1	-0.5	2.318513E-12	5.269378E-11	1943	1342
199	GGNBP2	17	-1.3	1.149652E-36	9.296005E-35	1168	545	698	MLC1	22	0.6	2.384586E-12	5.411900E-11	941	1454
200	STRN	2	-1.1	1.200331E-36	9.657263E-35	1759	826	699	MEPCE	7	0.6	2.409085E-12	5.459800E-11	1112	1673
201	WARS2	1	-2.6	1.866040E-36	1.493853E-34	356	44	700	C14orf159	14	1.7	2.425549E-12	5.489384E-11	34	155
202	PDZD8	10	-0.8	3.257712E-36	2.595042E-34	3411	1978	701	2	2	-0.6	2.439210E-12	5.512546E-11	1499	961
203	CSNK1A1	5	-1.3	3.669022E-36	2.908288E-34	1225	482	702	TOP1	20	-0.3	2.621530E-12	5.916275E-11	6270	5023
204	ZNF106	15	0.8	5.406132E-36	4.264219E-34	1824	3157	703	SLC39A8	4	-0.4	2.655847E-12	5.985327E-11	3780	2889
205	GVINP2	11	-3.1	7.062532E-36	5.543571E-34	226	9	704	LINC00534	8	-1.8	2.698633E-12	6.073245E-11	122	19
206	MK167	10	-0.5	8.351375E-36	6.523397E-34	10690	7647	705	SON	21	-0.3	2.745501E-12	6.161975E-11	7014	5658
207	BZW2	7	-1.0	1.029454E-35	8.002387E-34	2106	1057	706	PABPC1	8	0.2	2.745719E-12	6.161975E-11	43308	49751
208	CD2AP	6	-0.7	1.046966E-35	8.099389E-34	4236	2631	707	TTL	2	-0.5	2.794556E-12	6.262842E-11	2162	1514
209	KPNA2	17	-0.6	1.508227E-35	1.161190E-33	7050	4797	708	CKS2	9	-0.6	2.965823E-12	6.637421E-11	1674	1119
210	PROSER1	13	-1.1	3.155007E-35	2.417487E-33	1736	820	709	ARHGAP26	5	-0.9	3.068748E-12	6.848713E-11	612	312
211	NUP155	5	-0.6	6.033519E-35	4.601202E-33	4997	3193	710	EEF1A1P19	5	0.5	3.066034E-12	6.848713E-11	1674	2343
212	CERKL	2	-1.5	4.182164E-34	3.174302E-32	868	285	711	PARP2	14	-0.9	3.170533E-12	7.066072E-11	606	305
213	UBC	12	-0.5	4.846710E-34	3.661427E-32	8270	5788	712	E2F1	20	1.0	3.330581E-12	7.412501E-11	260	537
214	IRAK1	X	0.6	4.876244E-34	3.666525E-32	3047	4759	713	PLK2	5	0.7	3.362777E-12	7.473819E-11	726	1163
215		11	0.6	7.677666E-34	5.746108E-32	4048	6084	714	HUWE1	X	-0.3	3.444774E-12	7.645497E-11	6063	4856
216	KIAA1109	4	-2.3	7.757858E-34	5.779041E-32	382	59	715	TET2	4	-0.9	3.592246E-12	7.961823E-11	683	364
217	KIF5B	10	-0.7	1.385072E-33	1.027060E-31	3976	2475	716	TMPO	12	-0.3	3.602577E-12	7.973738E-11	5803	4632
218	MAP2K1	15	-1.7	2.923651E-33	2.158003E-31	658	186	717	TMEM67	8	-1.3	3.608115E-12	7.975025E-11	314	113
219	LDHA	11	-0.4	3.315328E-33	2.435933E-31	20280	15403	718	B2M	15	-0.3	3.695313E-12	8.156555E-11	4731	3709
220	QTRT1	19	1.2	4.361284E-33	3.189883E-31	474	1146	719	PRKAB1	12	0.8	3.747663E-12	8.260774E-11	461	817
221	SOS1	2	0.9	4.508083E-33	3.282333E-31	1236	2304	720	WDR62	19	0.6	3.885054E-12	8.551901E-11	1062	1588
222	DOT1L	19	0.8	4.806425E-33	3.483792E-31	1621	2815	721		16	-0.7	3.917199E-12	8.610881E-11	1153	719
223	MICU1	10	-1.6	5.514487E-33	3.979085E-31	689	206	722	ERAP1	5	1.1	4.005319E-12	8.788625E-11	183	415
224	HIST2H2AC	1	-0.6	6.299616E-33	4.525318E-31	7049	4741	723	HXDCD	17	1.4	4.064244E-12	8.892632E-11	68	221
225	SAMD5	6	-1.0	6.669847E-33	4.769978E-31	1819	892	724	TTC13	1	-1.3	4.400386E-12	9.633552E-11	285	100
226	AQP3	9	1.5	7.943360E-33	5.655602E-31	666	784	725	UCP2	11	-0.6	4.956082E-12	1.083537E-10	1667	1116
227	CDCC41	12	-1.7	8.334226E-33	5.907755E-31	238	173	726	MYO9A	15	0.7	4.971236E-12	1.085375E-10	662	1083
228	CDK6	7	-0.6	1.220250E-32	8.611861E-31	5981	3963	727	CCT2	12	-0.3	5.162286E-12	1.125560E-10	9221	7619
229	CTXN1	19	1.5	1.433450E-32	1.007234E-30	266	802	728	HDGF	1	-0.3	5.297599E-12	1.153500E-10	8710	7031
230	SQSTM1	5	0.7	1.995932E-32	1.396372E-30	1865	3114	729	ZNF252P	8	0.9	5.396695E-12	1.173489E-10	340	647
231	NASP	1	-0.6	2.209722E-32	1.539249E-30	6011	4072	730	STXBPS	6	-0.5	5.431774E-12	1.179523E-10	2230	1581
232	NSMCE2	8	-1.9	3.306274E-32	2.293158E-30	524	125	731	HNRNPAB	5	-0.3	5.541862E-12	1.201807E-10	8419	6775
233	MON2	12	-1.6	3.828345E-32	2.643858E-30	704	214	732	GUSB	7	0.9	5.551825E-12	1.202348E-10	277	550
234	ATP11A	13	1.3	1.007955E-31	6.931201E-30	350	933	733	DPY19L2P1	7	-1.5	5.564146E-12	1.203396E-10	213	60
235	HIST1H1D	6	-1.1	1.051372E-31	7.198993E-30	1435	663	734	HECTD4	12	0.6	5.674835E-12	1.225688E-10	906	1380
236	NFATC1	18	-1.1	1.521913E-31	1.037674E-29	1342	600	735		17	0.5	5.829449E-12	1.257395E-10	1128	1665
237	MKNK1	1	-2.0	1.995396E-31	1.354764E-29	489	107	736	CEBPZ	2	-0.5	5.905794E-12	1.272157E-10	2147	1516
238	TUG1	22	0.8	2.592237E-31	1.752592E-29	1264	2287	737	BBS2	16	1.2	5.918860E-12	1.273267E-10	141	350
239	PREP	6	-1.0	4.413900E-31	2.971718E-29	1594	762	738	CCTS	5	-0.3	6.373180E-12	1.368990E-10	8083	6547
240	NCOR2	12	0.7	5.869929E-31	3.935543E-29	1832	3041	739	CSDE1	1	-0.3	6.380849E-12	1.368990E-10	11700	9827
241	INSR	19	0.8	7.737822E-31	5.166361E-29	1523	2623	740	POLD1	19	0.5	6.810718E-12	1.459271E-10	1242	1801
242	SCMH1	1	-2.5	1.727803E-30											

256	SLC38A2	12	-0.5	4.133050E-29	2.597848E-27	9003	6565	755 TP73-AS1	1	1.7	1.171299E-11	2.460491E-10	21	120
257	CLSTN1	1	1.4	4.334681E-29	2.713983E-27	247	715	756 EPHX1	1	1.1	1.232703E-11	2.586104E-10	158	378
258	NUPL1	13	-0.7	4.401916E-29	2.745397E-27	2921	1772	757 POLQ	3	0.6	1.242859E-11	2.604017E-10	782	1237
259	HNRNP2B1	7	-0.3	4.765464E-29	2.960659E-27	27638	21754	758 EIF3B	7	-0.3	1.251583E-11	2.618884E-10	8096	6672
260	PTMAP5	13	-0.6	5.498934E-29	3.403205E-27	5116	3374	759 RPL28	19	0.3	1.278151E-11	2.671004E-10	11313	13478
261	SFMBT2	10	-2.3	6.159397E-29	3.782857E-27	309	46	760 RAB11A	15	-0.5	1.291812E-11	2.696050E-10	2480	1792
262		2	0.7	6.154770E-29	3.782857E-27	1832	3034	761 RPL6P27	18	0.3	1.313071E-11	2.736868E-10	10157	12133
263	FAM117A	17	0.8	6.212764E-29	3.801125E-27	1559	2667	762 TRHDE	12	-0.5	1.325949E-11	2.760136E-10	2397	1742
264	MATR3	5	-0.4	7.983251E-29	4.865852E-27	11387	8508	763 NUP35	2	-0.8	1.344597E-11	2.795337E-10	668	358
265	ESYT2	7	-0.9	8.600879E-29	5.222519E-27	2110	1155	764 GTF3C2	2	-0.8	1.393273E-11	2.892794E-10	707	389
266	CAP1	1	-0.7	9.256898E-29	5.599727E-27	3592	2278	765 SMARCA2	9	-0.6	1.468698E-11	3.045467E-10	1583	1064
267	TRIM5	11	-1.9	9.317558E-29	5.615312E-27	434	95	766 DDX1	2	-0.3	1.471524E-11	3.047400E-10	5665	4526
268	TIMM23	10	-1.0	9.489515E-29	5.697604E-27	1429	676	767 UBA6	4	-0.3	1.513904E-11	3.131135E-10	5113	4050
269	PTPN12	7	-1.3	1.253207E-28	7.496416E-27	927	371	768	16	-0.9	1.599638E-11	3.304207E-10	630	336
270	HIST1H2BM	6	-0.8	1.413078E-28	8.421422E-27	2386	1371	769 KIAA0947	5	-0.4	1.605931E-11	3.312954E-10	2750	2021
271	HIST1H2AI	6	-0.6	2.055027E-28	1.220201E-26	4483	2852	770 TIMM23B	10	-1.1	1.614780E-11	3.326944E-10	402	172
272	FAM83A	8	-0.4	4.775527E-28	2.825110E-26	10942	8094	771	7	-0.7	1.616891E-11	3.327032E-10	1141	709
273	EHBP1	2	-1.7	5.092863E-28	3.001805E-26	551	154	772 ANKRD28	3	-0.6	1.627143E-11	3.343851E-10	1489	987
274	CUX1	7	-1.4	5.542874E-28	3.255123E-26	723	248	773 JAK1	1	0.6	1.673452E-11	3.434633E-10	948	1414
275	DNTTIP2	1	-0.6	6.167193E-28	3.608593E-26	3461	2200	774 WDR12	2	-0.4	1.730946E-11	3.548109E-10	3393	2589
276	AMD1	6	-0.6	9.091320E-28	5.300306E-26	4669	3085	775 FAM83F	22	1.0	1.942721E-11	3.977140E-10	233	481
277	MPZL1	1	-0.9	1.277016E-27	7.418218E-26	1642	849	776 METTL2B	7	-0.7	1.998581E-11	4.086299E-10	1044	649
278	ALDH1A2	15	-0.6	1.308279E-27	7.572490E-26	4736	3206	777 SRRT	7	-0.4	2.014534E-11	4.113689E-10	3675	2829
279	HSP90AB1	6	-0.4	1.393431E-27	8.036453E-26	32745	25074	778	5	-1.0	2.028123E-11	4.136188E-10	446	206
280	PSMD2	3	-0.5	1.743083E-27	1.001713E-25	6506	4584	779 GMNN	6	-0.6	2.048714E-11	4.172894E-10	1447	963
281	NIPBL	5	-0.7	2.187976E-27	1.252908E-25	2500	1475	780 PRPF31	19	-0.5	2.056203E-11	4.182852E-10	1743	1202
282	MSH2	2	-0.7	2.432902E-27	1.388221E-25	2603	1557	781 EIF4A3	17	-0.4	2.094802E-11	4.255993E-10	2690	1976
283	FBXO30	6	-1.0	2.575586E-27	1.464444E-25	1383	676	782 KATZA	17	0.7	2.107162E-11	4.275706E-10	604	997
284	CYP2R1	11	-2.2	2.801949E-27	1.587541E-25	329	52	783 IDS	X	-0.7	2.268718E-11	4.597725E-10	1047	671
285	PRPF4B	6	-0.6	3.274322E-27	1.848671E-25	3692	2378	784 UBE3A	15	-0.4	2.351402E-11	4.759297E-10	3484	2674
286	CEP63	3	-1.7	3.569744E-27	2.006599E-25	496	132	785 SMG1	16	0.3	2.449321E-11	4.951259E-10	3465	4409
287	CLEC16A	16	-1.5	3.578982E-27	2.006599E-25	630	202	786 TFR4	13	0.4	2.467864E-11	4.982485E-10	2966	3855
288	NCR3LG1	11	0.7	4.316869E-27	2.411900E-25	1471	2476	787 RCCD1	15	0.8	2.771536E-11	5.588569E-10	366	666
289	POLR2B	4	-0.6	4.665284E-27	2.597546E-25	3955	2592	788 RALA	7	-0.7	2.813604E-11	5.666295E-10	906	534
290	MTNDZP28	1	-0.5	5.783983E-27	3.209313E-25	5786	4001	789 DEK	6	-0.3	3.074612E-11	6.184197E-10	5207	4159
291	PRPF6	20	-0.9	7.813459E-27	4.320494E-25	1967	1055	790 FRMD8	11	0.7	3.552782E-11	7.137055E-10	533	887
292	PLA2G4A	1	-1.9	8.563870E-27	4.719221E-25	422	91	791 NMD3	3	-0.4	3.572189E-11	7.167095E-10	2803	2100
293	CDC15	11	1.6	1.142974E-26	6.276997E-25	157	537	792 EIF1A1P11	1	0.3	3.596647E-11	7.195157E-10	4796	6019
294	HIST1H4B	6	-1.0	1.614159E-26	8.834503E-25	1531	741	793 MRPS22	3	-0.6	3.687667E-11	7.380380E-10	1410	942
295	NPM1	5	-0.4	1.668773E-26	9.102450E-25	15814	12255	794 DYM	18	-0.9	3.859654E-11	7.714994E-10	617	325
296	XRCC5	2	-0.4	2.136780E-26	1.161586E-24	10983	8268	795 SPIN4	X	0.6	3.892283E-11	7.770561E-10	913	1388
297	SODR	2	-0.9	3.249688E-26	1.760631E-24	1580	831	796 FAM65C	20	1.4	4.006333E-11	7.988340E-10	74	230
298	CMPK1	1	0.6	7.012000E-26	3.786245E-24	2300	3521	797 TRMT10C	3	-0.5	4.040198E-11	8.045894E-10	1589	1085
299	PIGK	1	-1.6	7.519650E-26	4.046779E-24	507	146	798 RCC1	1	-0.4	4.079019E-11	8.113163E-10	3283	2458
300	FAM50A	X	-1.5	1.516573E-25	8.134394E-24	598	196	799 KIAA2018	3	-0.6	4.122597E-11	8.189716E-10	1357	903
301	DCAF6	1	-1.0	1.523298E-25	8.143319E-24	1346	665	800 XRCCA	5	-1.3	4.178139E-11	8.289819E-10	278	100
302	TMSB4X	X	-0.6	2.687140E-25	1.431747E-23	3523	2247	801 SPAG5	17	-0.5	4.417950E-11	8.754832E-10	1655	1140
303	DACH1	13	-1.8	2.971501E-25	1.578034E-23	406	98	802 WDR34	9	0.6	4.589004E-11	9.082615E-10	917	1373
304	MED13L	12	0.7	3.406892E-25	1.803299E-23	1553	2546	803 ZNF134	19	0.8	4.837778E-11	9.563230E-10	326	607
305	PCNT	21	-1.0	3.998078E-25	2.109281E-23	1213	585	804 CDC42E2	5	0.5	5.008842E-11	9.889237E-10	1416	1982
306	RPL34	4	0.5	4.119272E-25	2.166118E-23	4305	6059	805 EIF1AY	Y	-0.6	5.070077E-11	9.997869E-10	1366	908
307	SRPK1	6	-0.5	4.226027E-25	2.215016E-23	4938	3401	806 PFDN5	12	-0.4	5.184556E-11	1.021110E-09	2636	1955
308	SKAP2	7	-1.6	6.986775E-25	3.650136E-23	714	260	807 CHD7	8	-0.3	5.282972E-11	1.039221E-09	4917	3892
309	PRRC2B	9	0.6	7.420415E-25	3.864139E-23	2383	3626	808 PRDX3	10	-0.4	5.612752E-11	1.101942E-09	3200	2442
310	CALB1	8	0.6	8.105395E-25	4.207223E-23	2405	3644	809 SF3B1	2	-0.3	5.615516E-11	1.101942E-09	6300	5086
311	HELZ	17	0.8	8.623801E-25	4.461916E-23	1084	1962	810 LPL	8	-0.9	5.670788E-11	1.11433E-09	532	269
312	EIF5B	2	-0.5	9.092056E-25	4.689111E-23	7228	5180	811 OSBPL3	7	-0.5	5.769194E-11	1.129344E-09	1751	1224
313	DAZAP2	12	-0.8	1.009104E-24	5.187695E-23	2122	1240	812 FBN1	15	0.5	5.936065E-11	1.160598E-09	1112	1614
314	CAND1	12	-0.5	1.196944E-24	6.133768E-23	4254	2900	813 VP53	17	-0.7	6.180329E-11	1.205613E-09	932	568
315	AHNAK	11	-0.5	1.245172E-24	6.360653E-23	5101	3557	814 PSMC4	19	-0.4	6.181284E-11	1.205613E-09	3129	2372
316	PAN3	13	-1.2	1.304167E-24	6.640935E-23	945	404	815	4	1.4	6.356573E-11	1.238300E-09	72	230
317	EXOC6	10	-0.9	1.421308E-24	7.214597E-23	1564	835	816 NAMPT	7	-0.5	6.612746E-11	1.286647E-09	2309	1680
318	RANBP2	2	-0.5	1.435984E-24	7.266167E-23	6370	4573	817 ZC3H13	13	-0.4	6.828535E-11	1.327028E-09	2585	1911
319	ABCA7	19	0.9	1.494482E-24	7.538465E-23	735	1418	818 SIRT3	11	1.0	7.621546E-11	1.479352E-09	192	412
320	NID1	1	0.7	1.717241E-24	8.635041E-23	1467	2407	819 TLE3	15	0.5	7.769727E-11	1.506297E-09	1277	1809
321	KIAA0586	14	-1.0	2.040972E-24	1.023093E-22	1185	578	820 WBP1L	10	0.6	7.926517E-11	1.534845E-09	812	1236
322	CNHN	5	-0.8	2.495643E-24	1.247124E-22	1779	996	821 TTC27	2	-0.5	8.050865E-11	1.557049E-09	1756	1225
323	ZCCHC7	9	-1.3	5.250145E-24	2.615483E-22	667	247	822 KAT6B	10	-1.0	8.404389E-11	1.621523E-09	391	177
324	PPP6R1	19	-0.5	5.549011E-24	2.755838E-22	4742	3282	823 PRPF40A	2	-0.3	8.400316E-11	1.621523E-09	6362	5162
325	CD4	12	-0.7	5.621445E-24	2.783221E-22	2218	1312	824 SLC39A4	8	0.9	8.592295E-11	1.655792E-09	368	688
326	IFRD1	7	0.9	6.963992E-24	3.437350E-22	715	1380	825	11	0.3	8.779720E-11	1.689886E-09	8276	10198
327	ATP6V1G1	9	-1.2	7.056602E-24	3.472409E-22	893	387	826 FASTKD2	2	-0.6	8.991047E-11	1.728494E-09	1205	783
328	STEAP3	2	0.9	8.173599E-24	4.009798E-22	648	1276	827 CDC88C	14	-0.9	9.278080E-11	1.781546E-09	493	244
329	H1FO	22	-0.4	8.442532E-24	4.129142E-22	11763	8955	828 ZFAS1	20	0.8	9.408128E-11	1.804364E-09	642	1120
330	LRPPRC	2	-0.4	1.097390E-23	5.350939E-22	9390	7105	829 DHTKD1	10	1.1	9.605275E-11	1.839982E-09	159	370
331	NTSDC1	6	-1.5											

343	TP53	17	0.7	1.439883E-22	6.754855E-21	1473	2365	842	IFFO1	12	-1.8	1.420170E-10	2.679010E-09	77	6
344	GCSAML	1	-1.3	1.734381E-22	8.112770E-21	670	258	843	NABP1	2	0.5	1.441409E-10	2.715892E-09	977	1442
345	ZNHIT3	17	-1.7	1.890243E-22	8.816202E-21	393	103	844	FAM49A	2	-0.8	1.488241E-10	2.800853E-09	637	353
346	ROBO1	3	-1.4	2.105289E-22	9.790813E-21	596	216	845	KTN1	14	-0.3	1.538044E-10	2.891200E-09	7193	5937
347	TRRAP	7	0.7	2.166999E-22	1.004875E-20	1671	2640	846	EEF1A1P12	2	-0.4	1.576692E-10	2.960392E-09	2382	1752
348	CENPF	1	-0.4	2.595495E-22	1.200118E-20	8597	6514	847	AHSA1	14	-0.3	1.602476E-10	3.005297E-09	6187	5038
349	WDFY1	2	-1.0	2.936340E-22	1.353829E-20	1181	596	848	RAB8B	15	0.7	1.644640E-10	3.080781E-09	664	1052
350	GABRB2	5	-0.9	3.785505E-22	1.740359E-20	1303	672	849	OGFOD3	17	1.1	1.675858E-10	3.135607E-09	146	343
351	CREBZF	11	1.2	4.039127E-22	1.851669E-20	314	763	850	PLOD1	1	0.5	1.715654E-10	3.206340E-09	987	1441
352	RAD21	8	-0.4	4.260626E-22	1.947663E-20	8819	6704	851	VPS13A	9	-0.4	1.745466E-10	3.258271E-09	2244	1649
353	IL1RAP	3	-1.0	5.143685E-22	2.344675E-20	1032	497	852	CENB1	5	-0.3	1.755721E-10	3.273616E-09	4887	3902
354	ERH	14	-0.7	5.477806E-22	2.489926E-20	2406	1503	853	MARS	12	-0.3	1.759039E-10	3.276007E-09	4136	3270
355	DDX18	2	-0.5	6.085339E-22	2.758287E-20	3911	2691	854		2	0.5	1.771908E-10	3.296159E-09	2816	3871
356	PCCP1	2	-0.6	7.426270E-22	3.356632E-20	2651	1703	855	SYTL4	X	-0.9	1.797740E-10	3.340351E-09	563	298
357	SBNO1	12	-0.4	8.893311E-22	4.008467E-20	7610	5727	856	CD24BPA	1	0.4	1.813389E-10	3.365542E-09	1803	2435
358	GOLGA8A	15	-0.9	9.041561E-22	4.063904E-20	1406	764	857	RNMT	18	-0.5	1.874862E-10	3.475623E-09	1801	1281
359	PLXNB2	22	0.9	9.490311E-22	4.253721E-20	764	1420	858	VPS9D1-AS1	16	1.1	1.958556E-10	3.626597E-09	146	335
360	KCNQ5	6	-2.2	1.086833E-21	4.857840E-20	214	29	859	ABHD17A	19	-0.8	2.042043E-10	3.776841E-09	771	440
361	MPRIIP	17	-0.8	1.201024E-21	5.353374E-20	1598	905	860	TNK2	3	0.9	2.050782E-10	3.788649E-09	245	485
362	KIAA1324L	7	1.9	1.704514E-21	7.576610E-20	68	301	861	HPGD	4	-0.3	2.127088E-10	3.925112E-09	5958	4844
363	H2BFS	21	-0.9	1.833574E-21	8.127836E-20	1398	758	862	TMEM185B	2	1.3	2.200725E-10	4.056343E-09	87	243
364	MAP4	3	-0.6	1.868694E-21	8.260756E-20	4180	2814	863	CENPP	9	-1.6	2.262535E-10	4.165498E-09	145	35
365	KIAA0930	22	0.6	1.956895E-21	8.626959E-20	1646	2566	864	PARP16	15	1.1	2.328920E-10	4.282817E-09	140	337
366	RYBP	3	0.6	2.085155E-21	9.167274E-20	2638	1700	865	OFD1	X	0.6	2.504000E-10	4.599528E-09	675	1076
367	HNRNPU	1	-0.3	2.473823E-21	1.084640E-19	19334	15632	866	SLC244RG	20	1.0	2.565467E-10	4.707062E-09	186	398
368	EDIL3	5	-1.7	2.770296E-21	1.211327E-19	371	95	867	RDX	11	-0.5	2.569070E-10	4.708303E-09	1563	1081
369	PGK1	X	-0.4	3.013163E-21	1.313951E-19	6766	5050	868	PCGF5	10	0.6	2.603073E-10	4.765193E-09	879	1304
370	SLC9A8	20	-2.1	4.016849E-21	1.746895E-19	245	42	869	POLK	5	-0.9	2.678215E-10	4.891618E-09	552	285
371	P4HTM	3	-2.3	4.201172E-21	1.822131E-19	177	18	870	LCP2	5	0.5	2.677332E-10	4.891618E-09	1117	1600
372	HDAC2	6	-0.5	4.240734E-21	1.834346E-19	6722	3373	871	FBXO34	14	-0.6	2.706825E-10	4.938267E-09	1025	654
373	KIF11	10	-0.5	5.585551E-21	2.409574E-19	3975	2777	872	DCTN6	8	-1.0	2.753698E-10	5.018091E-09	362	162
374	ATR	3	-0.8	5.814998E-21	2.501848E-19	1571	889	873	COBLL1	2	-0.7	2.990342E-10	5.443166E-09	935	582
375	COG4	16	-1.6	7.674907E-21	3.293251E-19	432	123	874	GOLGA8B	15	-0.7	3.047246E-10	5.540479E-09	845	513
376	FAM83H	8	0.8	8.436202E-21	3.610290E-19	1066	1840	875	NCAPH	2	-0.5	3.057528E-10	5.546638E-09	1509	1034
377	HNRNPKP2	2	-1.0	9.123709E-21	3.894154E-19	971	467	876	WDR90	16	0.6	3.056445E-10	5.546638E-09	615	973
378	ORAI2	7	1.1	1.230176E-20	5.236711E-19	353	794	877	NAA15	4	-0.3	3.101990E-10	5.620960E-09	4590	3680
379	CNRIP1	2	0.7	1.273840E-20	5.408274E-19	1443	2279	878	EPS8L1	19	1.0	3.114517E-10	5.637311E-09	190	402
380	SERPINH1	11	0.8	1.298064E-20	5.496616E-19	827	1488	879	RARS	5	-0.4	3.121640E-10	5.643855E-09	2593	1944
381	ELOVL6	4	-0.6	1.404114E-20	5.930079E-19	2534	1624	880	TBC1D31	8	-0.6	3.165975E-10	5.717588E-09	1215	800
382	MIB1	18	0.5	1.867435E-20	7.866204E-19	2602	3757	881	SPAST	2	-0.6	3.206473E-10	5.784233E-09	1318	885
383	TPPAL	20	1.0	1.996376E-20	8.387386E-19	438	914	882	UVRAG	11	-0.9	3.216380E-10	5.795607E-09	589	313
384	VPS29	12	-1.0	2.002165E-20	8.389800E-19	944	455	883	PCCB	3	0.5	3.226057E-10	5.806541E-09	1037	1495
385	SSR3	3	-0.2	2.210910E-20	9.240453E-19	4712	3301	884	HMG5	5	-0.7	3.297565E-10	5.928617E-09	992	618
386	ANKMY2	7	-1.5	3.032074E-20	1.263966E-18	470	153	885	CNDE	16	-1.2	3.513174E-10	6.309206E-09	260	96
387	CHD3	17	-0.5	3.171595E-20	1.318712E-18	3737	2574	886	SLC38A10	17	0.6	3.700450E-10	6.638121E-09	884	1331
388	RBPJ	4	0.8	3.791135E-20	1.572246E-18	834	1487	887	CHD9	16	-0.5	3.825706E-10	6.855172E-09	1672	1180
389	VPS8	3	-1.8	3.958918E-20	1.637608E-18	322	78	888	C21orf33	21	0.5	3.972770E-10	7.110660E-09	1098	1566
390	TBD2	19	1.4	4.211437E-20	1.737596E-18	190	525	889	PHP	6	-0.4	3.994600E-10	7.141901E-09	3276	2529
391	MAN1A2	1	-0.9	4.569973E-20	1.880702E-18	1133	580	890	D5C2	18	0.5	4.117868E-10	7.354120E-09	996	1448
392	INPP5D	2	0.7	5.139316E-20	2.109611E-18	974	1653	891	PPM1H	12	-0.5	4.132888E-10	7.372761E-09	1663	1160
393	IPO11	5	-0.6	5.526021E-20	2.262575E-18	2678	1740	892	AP1G1	16	-0.4	4.268577E-10	7.606386E-09	2168	1583
394	FAM134A	2	-1.1	5.753578E-20	2.349767E-18	793	347	893	ESRRG	1	-1.0	4.281257E-10	7.620543E-09	399	185
395	PCNA	20	-0.5	6.105788E-20	2.487297E-18	5004	3646	894	ULK1	12	1.1	4.312057E-10	7.666886E-09	163	376
396	MSI2	17	-1.3	6.879465E-20	2.795391E-18	573	217	895	ZNF320	19	0.6	4.383343E-10	7.785030E-09	740	1144
397	GSPT1	16	-0.4	7.183418E-20	2.911546E-18	8927	6904	896	SIPAL1L	14	0.8	4.512939E-10	8.006362E-09	363	642
398	ADAM15	1	0.7	7.443053E-20	3.009200E-18	1054	1778	897	SFPQ	1	-0.2	4.527815E-10	8.023907E-09	10797	9171
399	STRBP	9	-0.7	7.766923E-20	3.132270E-18	2088	1293	898	RULM	X	-0.4	4.538744E-10	8.034425E-09	3197	2453
400	ANP32A	15	-0.6	8.570637E-20	3.447753E-18	2697	1738	899	SNORD3A	17	0.8	4.592610E-10	8.120845E-09	385	669
401	SH2D1A	X	-1.7	9.619373E-20	3.859983E-18	332	85	900	NDIFP1	5	-0.3	4.622377E-10	8.164508E-09	4630	3723
402	TRIM24	7	0.9	9.879300E-20	3.954423E-18	543	1058	901	MAN2A2	15	0.4	4.952949E-10	8.738805E-09	1963	2608
403	SLC18A2	10	0.5	1.100173E-19	4.392775E-18	3111	4339	902	RRP36	6	-0.6	4.973320E-10	8.765136E-09	1227	821
404	NPM1P27	5	-0.3	1.112770E-19	4.432073E-18	17505	14176	903	PCYOX1L	5	1.1	5.022569E-10	8.842249E-09	128	304
405	PRR9	1	1.8	1.209422E-19	4.805138E-18	61	270	904	FECH	18	-0.4	5.155009E-10	9.065492E-09	2395	1783
406	ANAPC10	4	-2.0	1.229758E-19	4.873900E-18	229	41	905	GALNT5	2	-0.4	5.425955E-10	9.531554E-09	2982	2286
407	HNRNPA3	2	-0.4	1.531554E-19	6.055095E-18	5062	3700	906	ZNF385B	2	-1.8	5.487755E-10	9.629604E-09	62	3
408	STX3	11	-1.2	1.602229E-19	6.318986E-18	691	283	907	KIAA0319L	1	-1.2	5.514050E-10	9.665205E-09	243	90
409	CBX3	7	-0.5	1.731327E-19	6.811438E-18	4430	3077	908	ZDHHC2	8	0.4	5.835833E-10	1.021811E-08	1504	2065
410	TCF3	19	0.4	1.842962E-19	7.232951E-18	4979	6741	909	MBOAT2	2	-0.4	5.871349E-10	1.026912E-08	2315	1713
411	KDM5B	1	-0.7	2.172888E-19	8.507040E-18	2058	1283	910	ZNF302	19	0.7	5.942814E-10	1.038283E-08	406	696
412	PSAT1	9	-0.5	2.180191E-19	8.514917E-18	3323	2281	911	DLC1	8	-0.5	6.057426E-10	1.057159E-08	1967	1415
413	ZNF614	19	0.8	2.422173E-19	9.437092E-18	767	1358	912	TET3	2	0.4	6.141339E-10	1.070642E-08	1651	2246
414	CBX5	12	-0.4	2.502223E-19	9.725428E-18	6093	4539	913	ARPC2	2	-0.4	6.278831E-10	1.093427E-08	2602	1958
415	BIRC3	11	2.4	2.624945E-19	1.017783E-17	7	117	914	HNRNPA3P3	X	-0.8	6.481895E-10	1.127569E-08	618	347
416	G6PD	X	0.6	2.674838E-19	1.0346										

430 LDOC1L	22	1.2	6.371351E-19	2.384219E-17	218	552	929 PCF11	11	-0.4	8.984124E-10	1.537910E-08	2320	1723
431 POLR3G	5	-0.8	6.635680E-19	2.477372E-17	1423	812	930 PIM1	6	-0.3	9.241161E-10	1.580229E-08	4174	3321
432 R3HDM1	2	0.7	1.085179E-18	4.042039E-17	941	1580	931 GPR125	4	0.6	9.266922E-10	1.582952E-08	636	989
433 HSPA4	5	-0.3	1.248308E-18	4.638918E-17	9615	7567	932 NCOR1	17	-0.4	9.346901E-10	1.594920E-08	3043	2356
434 TXNIP	1	0.8	1.376450E-18	5.103329E-17	893	1524	933 PDIA3	15	-0.3	9.675208E-10	1.649192E-08	3944	3127
435 PANK3	5	-0.4	1.585254E-18	5.863981E-17	5035	3714	934 TROVE2	1	-0.3	1.003116E-09	1.708057E-08	5974	4923
436 CHD4	12	-0.4	1.945229E-18	7.179054E-17	6841	5170	935 LBR	1	-0.3	1.013791E-09	1.722588E-08	5305	4330
437 TGM2	20	0.4	2.210436E-18	8.139159E-17	4387	5885	936 ANK1	8	0.2	1.013093E-09	1.722588E-08	11617	13560
438 HEBP1	12	1.2	2.344031E-18	8.611370E-17	253	614	937 PDLIM1	10	0.4	1.037882E-09	1.761663E-08	1669	2243
439 DENND5A	11	1.0	2.378936E-18	8.719696E-17	360	770	938 FOXRED2	22	0.4	1.047736E-09	1.776515E-08	1672	2250
440 MYO16	13	-0.8	2.822414E-18	1.032170E-16	1435	835	939 GGACT	13	1.2	1.072971E-09	1.817387E-08	90	237
441 HGSNAT	8	1.2	2.883335E-18	1.052058E-16	260	618	940	22	0.6	1.101335E-09	1.863468E-08	686	1085
442 EIF2S1	14	-0.4	3.298848E-18	1.200945E-16	5252	3905	941 ZNF317	19	0.5	1.111571E-09	1.878812E-08	1066	1513
443 DIXDC1	11	-1.5	4.072349E-18	1.479191E-16	362	109	942 ARHGAP31	3	-1.5	1.134243E-09	1.915121E-08	137	33
444 CDC26	8	-1.4	4.792450E-18	1.736831E-16	408	135	943 SHMT2	12	-0.4	1.152097E-09	1.941193E-08	2661	2030
445 RPL18	19	0.3	5.638901E-18	2.039001E-16	10613	13327	944 PRRC2C	1	-0.3	1.151899E-09	1.941193E-08	8212	6882
446 CUL3	2	-0.5	5.858376E-18	2.113613E-16	3220	2226	945 MYCBP2	13	0.4	1.164837E-09	1.960606E-08	1754	2339
447 RPS15	19	0.4	7.235605E-18	2.604656E-16	4499	6000	946 ANAPC10P1	1	-1.7	1.292700E-09	2.173546E-08	78	9
448 USP14	18	-0.5	7.690918E-18	2.762379E-16	3151	2191	947 ARHGFE2	1	-0.4	1.294858E-09	2.174901E-08	2780	2115
449 SPATA13	13	-1.5	7.888156E-18	2.826911E-16	393	127	948 BRX1	5	-0.4	1.317214E-09	2.210146E-08	2129	1564
450 LRP12	8	-1.3	8.667115E-18	3.099168E-16	504	187	949 ERF	19	-0.5	1.327960E-09	2.225855E-08	1634	1163
451	17	-1.9	8.842667E-18	3.154930E-16	244	50	950 HMG3	6	-0.8	1.335500E-09	2.234838E-08	600	338
452 SLC35G1	10	1.5	8.970424E-18	3.193431E-16	107	354	951 ALAD	9	0.8	1.336098E-09	2.234838E-08	278	515
453 KIAA1147	7	-1.5	1.163164E-17	4.131673E-16	383	124	952 RPL5	1	0.3	1.351864E-09	2.258863E-08	6252	7460
454 AKAP1	17	0.7	1.190421E-17	4.219177E-16	1033	1675	953	16	-0.3	1.371876E-09	2.289923E-08	4001	3187
455 PTBP3	9	-0.4	1.701234E-17	6.016386E-16	6531	4952	954 WDR43	2	-0.3	1.383707E-09	2.307278E-08	4330	3478
456 NBEAL2	3	0.6	1.712080E-17	6.041465E-16	1471	2291	955 DNMT1	19	-0.3	1.386877E-09	2.310170E-08	7585	6295
457 MIS18BP1	14	-0.5	1.743393E-17	6.138499E-16	3075	2121	956 WWP2	16	0.8	1.409201E-09	2.344929E-08	335	598
458 CORO1C	12	-0.4	1.770184E-17	6.219222E-16	5052	3763	957 SNORD3B-2	17	1.1	1.507076E-09	2.505202E-08	151	340
459 RNF130	5	0.8	1.791377E-17	6.279968E-16	789	1384	958 USP25	21	-0.5	1.537302E-09	2.552811E-08	1512	1061
460 SRSF1	17	-0.4	2.003668E-17	7.008918E-16	6931	5326	959 NDS1	5	0.7	1.596486E-09	2.648356E-08	479	783
461 AMFR	16	0.5	2.062941E-17	7.200603E-16	2340	3313	960 ARHGAP32	11	0.4	1.624321E-09	2.691756E-08	2110	2744
462 SMARCAS5	4	-0.4	2.142273E-17	7.461323E-16	5444	4104	961 SPATS2L	2	-0.5	1.667098E-09	2.759803E-08	1688	1213
463 ARID5B	10	-1.6	2.490434E-17	8.655198E-16	335	98	962 TLK1P1	9	-1.7	1.685549E-09	2.787479E-08	76	7
464 ALDH5A1	6	0.8	2.563967E-17	8.891552E-16	683	1205	963 ZNF3	7	0.7	1.711285E-09	2.827134E-08	502	811
465 ITPR2	12	0.6	2.836740E-17	9.816341E-16	1459	2223	964 ESAM	11	-0.7	1.734277E-09	2.862180E-08	798	483
466 SNORD3D	17	1.4	2.929144E-17	1.009269E-15	156	437	965 TAF7	5	0.5	1.739118E-09	2.867229E-08	1027	1476
467 CDC113	16	1.4	2.927832E-17	1.009269E-15	136	396	966 PYROXD1	12	-1.4	1.744677E-09	2.873450E-08	177	53
468 MCL1	1	-0.5	2.977972E-17	1.023901E-15	3553	2538	967 ZNF621	3	0.6	1.810860E-09	2.979402E-08	697	1068
469 USP15	12	-0.4	3.408638E-17	1.169475E-15	5110	3767	968 CPS1	2	-1.0	1.906011E-09	3.132750E-08	392	187
470 HNRNPM	19	-0.4	4.306790E-17	1.474480E-15	7740	6030	969 SCARNA10	12	-1.0	2.058266E-09	3.379547E-08	411	197
471 DDT4	10	-1.2	5.283793E-17	1.805128E-15	574	236	970 MED16	19	0.6	2.071704E-09	3.398144E-08	758	1131
472 G3BP1	5	-0.3	5.539050E-17	1.888323E-15	10219	8174	971 ACAD10	12	0.9	2.119448E-09	3.472917E-08	189	386
473 ALS2	2	-0.7	5.59845E-17	1.905013E-15	1431	847	972 GPD2	2	-0.6	2.152301E-09	3.523161E-08	1105	725
474 CLTC	17	-0.3	5.631175E-17	1.911629E-15	12057	9756	973 ST7	7	-0.9	2.255742E-09	3.688734E-08	438	219
475 YARS	1	-0.5	6.200901E-17	2.100604E-15	4146	3011	974 EEF1A1P6	7	0.2	2.258903E-09	3.690154E-08	35870	41781
476	19	0.5	7.726820E-17	2.612022E-15	1874	2725	975 PPP2R5E	14	0.5	2.279985E-09	3.720815E-08	844	1237
477 FAM160A2	11	-1.7	8.197612E-17	2.765362E-15	270	64	976 MYL5	4	1.5	2.317378E-09	3.778007E-08	28	121
478 NCAPG	4	-0.5	8.857988E-17	2.981880E-15	2562	1743	977 BAHD1	15	-0.8	2.365545E-09	3.852629E-08	667	379
479 TRPM7	15	-0.5	9.056200E-17	3.042240E-15	2746	1887	978 R3HDM4	19	0.5	2.369419E-09	3.855038E-08	1054	1496
480 HMGB2	4	-0.3	9.735622E-17	3.263665E-15	9609	7673	979 MRFAP1	4	-0.3	2.419843E-09	3.933100E-08	3473	2731
481 CWC22	2	-0.9	1.049624E-16	3.511329E-15	1270	689	980	2	1.3	2.511007E-09	4.077156E-08	67	198
482 SF3A1	22	-0.4	1.110335E-16	3.706722E-15	4502	3315	981 GVINP1	11	-1.7	2.545169E-09	4.128459E-08	52	2
483 LONRF2	2	0.8	1.133199E-16	3.775218E-15	639	1178	982 CACNA1H	16	1.7	2.566939E-09	4.159579E-08	8	72
484 ZNF525	19	0.9	1.198900E-16	3.985846E-15	578	1074	983 PPDPF	20	1.1	2.625074E-09	4.249503E-08	126	292
485 HEMGN	9	-0.4	1.254624E-16	4.162505E-15	5967	4553	984 TANC2	17	-1.0	2.639130E-09	4.267963E-08	385	185
486 MTS51	8	-0.5	1.365359E-16	4.520575E-15	2772	1905	985 TKT	3	-0.3	2.642650E-09	4.269365E-08	6468	5273
487 RNF219	13	-1.1	1.380664E-16	4.557711E-15	600	263	986 TBC1D15	12	-0.6	2.652478E-09	4.280944E-08	1097	701
488 RPS5	19	0.3	1.382240E-16	4.557711E-15	9958	12261	987 EXOC3	5	-0.7	2.685566E-09	4.330004E-08	749	455
489 APBA2	15	-1.4	1.414779E-16	4.655461E-15	422	150							
490 TPX2	20	-0.4	1.640425E-16	5.386953E-15	5576	4240							
491 C11orf49	11	-2.0	1.674461E-16	5.487525E-15	174	25							
492 ZNF654	3	-1.6	1.739997E-16	5.690711E-15	288	79							
493 ARHGAP19	10	-0.9	1.763717E-16	5.756587E-15	887	459							
494 HIST1H4H	6	-0.7	1.963515E-16	6.395733E-15	1430	850							
495 CDC14	3	0.6	2.085778E-16	6.780252E-15	1382	2112							
496 MTURN	7	-0.7	2.115699E-16	6.863650E-15	1327	781							
497 COG6	13	-1.1	2.198768E-16	7.118789E-15	565	243							
498 CEP128	14	-1.6	2.246579E-16	7.258976E-15	289	78							
499 PLXND1	3	0.6	2.373053E-16	7.652265E-15	1378	2093							
500 TYW1	7	-1.2	2.387945E-16	7.684886E-15	481	190							
501 GAL	11	0.5	2.500995E-16	8.032636E-15	2016	2879							
502 FAT1	4	0.5	2.660890E-16	8.529159E-15	1799	2608							
503 FTO	16	-1.4	2.818409E-16	9.016109E-15	408	140							
504 UBE2E1	3	-0.7	3.061680E-16	9.774899E-15	1581	980							
505 DLAT	11	-0.5	3.353257E-16	1.068461E-14	3589	2596							
506 CYCS	7	-0.4	3.437339E-16	1.093087E-14	6598	5120							
507 SMC3	10	-0.5	4.193201E-16	1.330824E-14	3363	2368							
508 KDM4B	19	0.8	4.352898E-16	1.378789E-14	552	1015							
509 CIZ1	9	0.5	4.733929E-16	1.496535E-14	1736	2529							
510 CKAP2	13	-0.5	5.252516E-16	1.657220E-14	2832	1955							
511 NOLC1	10	-0.3	5.535455E-16	1.743072E-14	9509	7581							
512 EHD2	19	1.2	5.591871E-16	1.757398E-14	202	491							
513 ZNF75A	16	1.0	5.750535E-16	1.803740E-14	348	719							
514 GPR158	10	-1.1	5.772405E-16	1.807077E-14	606	273							
515 NLGN2	17	1.4	6.250185E-16	1.952849E-14	110	338							

517	CHST2	3	0.8	7.634632E-16	2.376187E-14	692	1195
518	DLGAP5	14	-0.5	7.866960E-16	2.443769E-14	3019	2138
519	SNX19	11	0.7	7.898002E-16	2.448685E-14	766	1285
520	PK3	X	-1.3	7.939020E-16	2.456669E-14	463	177
521	ZNF761	19	0.7	8.094935E-16	2.500108E-14	839	1394
522	LTV1	6	-0.6	8.604978E-16	2.652542E-14	2156	1425
523	CELF2	10	0.4	8.679757E-16	2.670477E-14	2789	3811
524	NUP88	17	-0.5	8.700396E-16	2.671719E-14	2421	1650
525	FUT8	14	-0.8	9.604924E-16	2.943864E-14	1004	543
526	BIRC6	2	-0.5	1.091449E-15	3.338879E-14	3453	2499
527	RN7SL3	14	-0.4	1.160091E-15	3.542130E-14	4025	2963
528	TCEB3	1	-0.6	1.319753E-15	4.021997E-14	1991	1303
529	UROS	10	1.0	1.370607E-15	4.169081E-14	340	700
530	MACC1	7	-0.7	1.429188E-15	4.339068E-14	1521	933
531	RN7SKP80	22	-0.4	1.517642E-15	4.598941E-14	9880	7455
532	NFATC3	16	-0.7	1.563695E-15	4.729591E-14	1453	883
533	ZC3H15	2	-0.5	1.735632E-15	5.239785E-14	3330	2399
534	CCT8	21	-0.4	1.744200E-15	5.255789E-14	6047	4689
535	ZIK1	19	1.2	1.871586E-15	5.629100E-14	186	464
536	MED1	17	-0.5	1.913146E-15	5.743363E-14	2822	1979
537	FBL	19	-0.3	2.066722E-15	6.192854E-14	7017	5501
538	CDK8	13	1.0	2.141801E-15	6.405896E-14	328	696
539	ATP2B1	12	0.6	2.191696E-15	6.542965E-14	1408	2103
540	CFL1	11	-0.4	2.323797E-15	6.913532E-14	7425	5797
541	SRM	1	0.5	2.324418E-15	6.913532E-14	2624	3612
542	EPS8	12	-0.9	2.349579E-15	6.975475E-14	909	483
543	MBNL2	13	-0.5	2.385840E-15	7.070082E-14	2416	1653
544	UCHL5	1	-0.4	2.430786E-15	7.190033E-14	3627	2656
545	GATAD2A	19	0.3	2.472194E-15	7.299096E-14	6953	8695
546	PPP3R1	2	-0.5	2.536566E-15	7.475436E-14	2324	1584
547	HNRNPUP1	14	-0.9	2.546614E-15	7.491327E-14	978	523
548	NRD1	1	-0.4	2.659456E-15	7.808997E-14	3858	2847
549	RAP1GAP2	17	0.8	2.680396E-15	7.856147E-14	504	923
550	CPED1	7	-0.4	2.709409E-15	7.926745E-14	4394	3291
551	THUMP3	3	-0.7	2.722419E-15	7.950353E-14	1387	847
552	ZNF607	19	1.7	2.837089E-15	8.270218E-14	60	237
553	HNRNPA3P5	13	-0.8	3.384689E-15	9.848650E-14	1104	630
554	ZNF813	19	0.7	3.695431E-15	1.073343E-13	739	1237
555	PSMD12	17	-0.5	3.933682E-15	1.140484E-13	3049	2182
556	SP110	2	-1.1	5.225214E-15	1.512211E-13	527	229
557	NAMPTL	10	-0.6	5.920708E-15	1.710415E-13	1915	1251
558	ATHL1	11	1.5	6.067125E-15	1.749572E-13	76	268
559	TAF15	17	-0.4	6.305337E-15	1.815012E-13	3556	2612
560	MXD4	4	0.9	6.345132E-15	1.823206E-13	407	799
561		1	-0.7	7.501175E-15	2.151540E-13	1441	864
562	GNAQP1	2	-2.0	8.269026E-15	2.367560E-13	150	22
563	HNRNPF	10	-0.3	8.648499E-15	2.471812E-13	9383	7475
564	PTPN6	12	-0.9	9.011653E-15	2.571037E-13	759	385
565	C9orf41	9	0.6	9.172344E-15	2.612251E-13	1459	2157
566	RPL18AP3	12	0.3	9.563224E-15	2.718760E-13	6955	8807
567		1	-0.6	9.870952E-15	2.801296E-13	1597	1015
568	PIIG	2	-0.5	1.018924E-14	2.886533E-13	2513	1756
569	UBR7	14	-1.2	1.046820E-14	2.960348E-13	438	174
570	RNF10	12	-0.4	1.199497E-14	3.386159E-13	3758	2769
571	TE1	10	-0.8	1.243241E-14	3.503500E-13	1019	576
572	CEP164	11	0.7	1.260462E-14	3.545820E-13	840	1361
573	CHURC1	14	-1.7	1.276591E-14	3.584925E-13	223	55
574	ZNF850	19	0.5	1.424283E-14	3.992707E-13	1615	2350
575	LRRK1	15	-1.4	1.485084E-14	4.155912E-13	311	101
576	ABI2	2	-0.7	1.771330E-14	4.948345E-13	1307	776
577	HMGB1P5	3	-0.4	1.792755E-14	4.999517E-13	5676	4200
578	RBL1	20	-0.6	1.854383E-14	5.162435E-13	2000	1303
579	DTX3L	3	0.7	1.879696E-14	5.223867E-13	808	1310
580	LIN52	14	-1.7	1.908201E-14	5.293941E-13	223	55
581	VDAC1	5	-0.4	1.931024E-14	5.348039E-13	3962	2945
582	IFT43	14	-2.0	1.942444E-14	5.370423E-13	125	14
583	AP3S1	5	-0.9	1.948739E-14	5.378587E-13	746	381
584	MYO1D	17	-0.8	1.958434E-14	5.396089E-13	961	530
585	HEXB	5	-0.7	2.014266E-14	5.540438E-13	1354	837
586	PRPS1	X	0.7	2.375892E-14	6.523972E-13	917	1454
587	DIS3	13	-0.5	2.551590E-14	6.994486E-13	2875	2062
588	MCPH1	8	-0.8	2.603338E-14	7.124203E-13	1078	619
589		X	-1.5	2.659696E-14	7.266072E-13	280	83
590	GARS	7	-0.3	2.667406E-14	7.274784E-13	7206	5735
591	RHOBTB3	5	-0.5	2.896949E-14	7.886912E-13	2283	1578
592		11	0.8	2.901654E-14	7.886912E-13	543	973
593	C5P1	8	-0.6	3.089988E-14	8.384654E-13	1739	1138
594	CAPRIN1	11	-0.3	3.227425E-14	8.742844E-13	11054	9082
595	ATP2C1	3	0.6	3.275283E-14	8.857575E-13	1400	2091
596	COX7A2L	2	-0.9	3.796121E-14	1.024889E-12	890	485
597	MAML3	4	-1.5	3.928461E-14	1.057071E-12	260	75
598	LIG4	13	-0.9	3.926064E-14	1.057071E-12	789	417
599	NFKBIA	14	1.3	4.164083E-14	1.118602E-12	142	378
600	NUF2	1	-0.9	4.464813E-14	1.197388E-12	868	450
601	NIN	14	-0.7	4.919098E-14	1.317025E-12	1374	858
602	ANP32B	9	-0.4	5.045107E-14	1.348519E-12	5436	3978
603	FGFR3	4	1.3	5.135775E-14	1.370477E-12	111	317

604	SLC36A4	11	-1.5	5.246571E-14	1.397725E-12	246	69
605	WDR3	1	-0.5	5.412702E-14	1.439600E-12	2784	1995
606	KIF20B	10	-0.4	5.561605E-14	1.476762E-12	3774	2811
607	PYGL	14	0.8	5.684467E-14	1.506899E-12	575	1021
608	HS2ST1	1	-0.7	6.044914E-14	1.599814E-12	1299	797
609	CAPN15	16	0.8	6.118334E-14	1.616586E-12	478	864
610	SUSD3	9	-1.7	6.686517E-14	1.763815E-12	187	41
611	CREBBP	16	0.6	7.033986E-14	1.852437E-12	1236	1842
612	EXT1	8	-1.4	7.463215E-14	1.962265E-12	335	116
613	ZNF772	19	1.3	8.002487E-14	2.100620E-12	140	376
614	PMS1	2	-0.9	8.569569E-14	2.242162E-12	792	421
615	NCOA6	20	0.8	8.567648E-14	2.242162E-12	549	968
616	RPS2P7	20	0.5	9.594469E-14	2.506244E-12	1830	2588
617	ATPGV1A	3	-0.5	9.972750E-14	2.600835E-12	2291	1596
618	CTIF	18	1.1	1.010978E-13	2.632305E-12	218	491
619	HEL22	20	1.9	1.156677E-13	3.006799E-12	17	121
620	UBASH3B	11	-0.6	1.204948E-13	3.127230E-12	1909	1286
621	HSPB1	7	0.4	1.221829E-13	3.165934E-12	2752	3692
622	HNRNPDL	4	-0.3	1.233349E-13	3.190647E-12	8087	6525
623	GSK3B	3	0.7	1.480967E-13	3.825078E-12	722	1186
624	PPP1R12C	19	-0.7	1.508687E-13	3.890430E-12	1298	784
625	ARHGDI1A	17	-0.5	1.524536E-13	3.925010E-12	2625	1861
626	GNL3L	X	0.7	1.614244E-13	4.149330E-12	740	1210
627	SORT1	1	-0.7	1.625079E-13	4.170518E-12	1251	746
628	TNFRSF10B	8	-0.7	1.733818E-13	4.442495E-12	1452	884
629	HIST1H3F	6	-0.7	1.824132E-13	4.666471E-12	1091	648
630	SPN	16	-0.3	1.875176E-13	4.789438E-12	10161	8343
631	EIF4G2	11	-0.2	1.929348E-13	4.919990E-12	19903	16875
632	ZNF480	19	0.4	1.984393E-13	5.052352E-12	2550	3424
633	LZTR1	22	0.8	2.007873E-13	5.104057E-12	488	872
634	ABLIM1	10	-1.9	2.063070E-13	5.236098E-12	126	17
635	LDHB	12	-0.3	2.080813E-13	5.272812E-12	11648	9658
636	HTR1F	3	-2.1	2.175846E-13	5.504958E-12	79	3
637	HIST1H3I	6	-0.6	2.252393E-13	5.689680E-12	1715	1123
638	SAMSN1	21	-0.6	2.304646E-13	5.812548E-12	1956	1321
639	CEP68	2	0.7	2.504190E-13	6.305935E-12	700	1149
640	LMNB1	5	-0.4	2.601612E-13	6.541021E-12	3822	2849
641	HEY1	8	-1.1	2.618100E-13	6.572206E-12	512	229
642	PLCL1	2	-0.9	2.646371E-13	6.632828E-12	633	317
643	EFTUD1	15	-0.8	2.749728E-13	6.881161E-12	953	534
644	ELMO1	7	-0.8	2.792988E-13	6.978566E-12	880	492
645	NFKB2	10	-0.9	2.808146E-13	7.005564E-12	682	350
646	PCM1	8	-0.3	2.829854E-13	7.048791E-12	7268	5854
647	YWHAG	7	-0.3	2.952645E-13	7.343278E-12	8175	6628
648	GTPBP4	10	-0.4	2.984016E-13	7.409846E-12	3795	2867
649	RBBP8	18	-0.5	3.008232E-13	7.458468E-12	2149	1482
650	DEAF1	11	0.8	3.092724E-13	7.656157E-12	552	953
651	UBA2	19	-0.3	3.780573E-13	9.344578E-12	5498	4318
652	KIF14	1	-0.4	3.804821E-13	9.390089E-12	3048	2231
653	SCAP	3	-0.9	3.822240E-13	9.418630E-12	739	393
654	RSRC1	3	-1.0	3.851074E-13	9.475173E-12	560	265
655	ZYG11B	1	0.7	4.179488E-13	1.026750E-11	751	1216
656	CPD	17	0.5	4.492073E-13	1.101859E-11	1248	1840
657	CAST	5	0.3	4.506305E-13	1.103667E-11	4322	5481
658	SPPL2B	19	0.9	4.630036E-13	1.132248E-11	341	678
659	SLC35E2B	1	0.8	4.689168E-13	1.144968E-11	505	898
660	ZNF22	10	1.2	5.092808E-13	1.241642E-11	147	368
661	SHFM1	7	-0.8	5.207233E-13	1.267618E-11	955	555
662	SMARCC1	3	-0.3	5.346000E-13	1.299433E-11	7879	6395
663	AGPAT6	8	0.5	5.512659E-13	1.337921E-11	1250	1846
664	ZNF28	19	0.5	5.872284E-13	1.423056E-11	1274	1865
665	EIF4EBP1	8	-0.5	5.911772E-13	1.430471E-11	2492	1761
666	STAG2	X	-0.4	6.035467E-13	1.458209E-11	3736	2791
667	PTMA	2	-0.2	6.057406E-13	1.461315E-11	19353	16398
668	SRGN	10	-0.6	6.090651E-13	1.467136E-11	1702	1138
669	HIST1H4L	6	-0.7	6.565401E-13	1.579131E-11	1102	640
670	HAUS6	9	-0.4	6.633852E-13	1.593214E-11	3274	2443
671	IKZF1	7	-0.4	6.677133E-13	1.601218E-11	3000	2212
672	AHCYL2	7	-1.5	6.708073E-13	1.606244E-11	245	70
673	TRMT6	20	-0.7	6.728339E-13	1.608703E-11	1269	761
674	ANGEL1	14	0.7	6.839133E-13	1.632767E-11	691	1137
675	IFT74	9	-1.2	7.017467E-13	1.672860E-11	394	159
676	CKAP5	11	-0.3	7.264789E-13	1.729256E-11	7444	6026
677	AFG3L1P	16	-1.5	7.906146E-13	1.879140E-11	231	64
678	HBBP1	11	-0.8	7.937160E-13	1.883729E-11	880	498
679	NAP1L1	12	0.3	8.182463E-13	1.939087E-11	5741	7126
680	HNRNPDL	4	-0.3	8.913508E-13	2.109224E-11	5369	4232
681	MLH1	3	-0.6	8.988731E-13	2.123901E-11	1350	861
682	LEPROT	1	-0.6	9.020232E-13	2.128219E-11	1816	1230
683	TUBB6	18	0.5	9.191471E-13	2.165446E-11	1379	2027
684	ARHGAP21	10	-0.7	9.568374E-13	2.248343E-11	1254	773
685	RRM2	2	-0.3	9.571280E-13	2.248343E-11	11211	9283
686	PLXNA3	X	1.5	1.028498E-12	2.412474E-11	71	238
687	PARP11	12	-1.3	1.078569E-12	2.526237E-11	321	118
688	IDH2	15	0.6	1.086646E-12	2.541457E-11	965	1472
689	TNIP1	5	0.8	1.144280E-12	2.672367E-11	530	938
690	WDR36	5	-0.4	1.200754E-12	2.800193E-11	4053	3105

691 DTL	1	-0.5	1.233688E-12	2.872833E-11	2115	1478
692 EEF1A1P13	5	0.3	1.288457E-12	2.996035E-11	6605	8317
693 EIF2A	3	-0.5	1.316998E-12	3.057982E-11	2672	1945
694 G2E3	14	-0.6	1.348826E-12	3.127371E-11	1513	997
695 KIF21B	1	-0.7	1.477992E-12	3.421923E-11	1082	655
696 VEPH1	3	-1.0	1.516592E-12	3.506247E-11	532	252
697 ETF1	5	-0.3	1.521356E-12	3.512215E-11	5521	4368
698 RPL7L1	6	0.3	1.552892E-12	3.579883E-11	4960	6242
699 BRCA1	17	0.4	1.558722E-12	3.588182E-11	2759	3655
700 FBXO7	22	-0.4	1.620714E-12	3.725559E-11	3322	2493
701 MAP1A	15	1.2	1.624550E-12	3.729049E-11	130	340
702 BRCC3	X	-0.9	1.662896E-12	3.811632E-11	599	300
703 ABCA3	16	0.7	1.712513E-12	3.919780E-11	610	1018
704 SRRM2	16	0.3	1.925631E-12	4.401325E-11	6721	8230
705 RSU1	10	-0.7	2.108851E-12	4.813265E-11	1220	767
706 AGPS	2	-0.5	2.276797E-12	5.189226E-11	2402	1726
707 RPL26	17	0.3	2.296492E-12	5.226712E-11	7205	8816
708 UTP11L	1	-0.5	2.318513E-12	5.269378E-11	1943	1342
709 MLC1	22	0.6	2.384586E-12	5.411900E-11	941	1454
710 MEPC1	7	0.6	2.409085E-12	5.459800E-11	1112	1673
711 C14orf159	14	1.7	2.425549E-12	5.489384E-11	34	155
712	2	-0.6	2.439210E-12	5.512546E-11	1499	961
713 TOP1	20	-0.3	2.621530E-12	5.916275E-11	6270	5023
714 SLC39A8	4	-0.4	2.655847E-12	5.985327E-11	3780	2889
715 LINC00534	8	-1.8	2.698633E-12	6.073245E-11	122	19
716 SON	21	-0.3	2.745501E-12	6.161975E-11	7014	5658
717 PABPC1	8	0.2	2.745719E-12	6.161975E-11	43308	49751
718 TTL	2	-0.5	2.794556E-12	6.262842E-11	2162	1514
719 CKS2	9	-0.6	2.965823E-12	6.637421E-11	1674	1119
720 ARHGAP26	5	-0.9	3.068748E-12	6.848713E-11	612	312
721 EEF1A1P19	5	0.5	3.066034E-12	6.848713E-11	1674	2343
722 PARP2	14	-0.9	3.170533E-12	7.066072E-11	606	305
723 E2F1	20	1.0	3.330581E-12	7.412501E-11	260	537
724 PLK2	5	0.7	3.362777E-12	7.473819E-11	726	1163
725 HUWE1	X	-0.3	3.444774E-12	7.645497E-11	6063	4856
726 TET2	4	-0.9	3.592246E-12	7.961823E-11	683	364
727 TMPO	12	-0.3	3.602577E-12	7.973738E-11	5803	4632
728 TMEM67	8	-1.3	3.608115E-12	7.975025E-11	314	113
729 B2M	15	-0.3	3.695313E-12	8.156555E-11	4731	3709
730 PRKAB1	12	0.8	3.747663E-12	8.260774E-11	461	817
731 WDR62	19	0.6	3.885054E-12	8.551901E-11	1062	1588
732	16	-0.7	3.917199E-12	8.610881E-11	1153	719
733 ERAP1	5	1.1	4.003519E-12	8.788625E-11	183	415
734 HEXDC	17	1.4	4.056424E-12	8.892632E-11	68	221
735 TTC13	1	-1.3	4.400386E-12	9.633552E-11	285	100
736 UCP2	11	-0.6	4.956082E-12	1.083537E-10	1667	1116
737 MYO9A	15	0.7	4.971236E-12	1.085375E-10	662	1083
738 CCT2	12	-0.3	5.162286E-12	1.125560E-10	9221	7619
739 HDGF	1	-0.3	5.297599E-12	1.153500E-10	8710	7031
740 ZNF252P	8	0.9	5.396695E-12	1.173489E-10	340	647
741 STXBPS	6	-0.5	5.431774E-12	1.179523E-10	2230	1581
742 HNRNPAB	5	-0.3	5.541862E-12	1.201807E-10	8419	6775
743 GUSB	7	0.9	5.551825E-12	1.202348E-10	277	550
744 DPY19L2P1	7	-1.5	5.564146E-12	1.203396E-10	213	60
745 HECTD4	12	0.6	5.674835E-12	1.225688E-10	906	1380
746	17	0.5	5.829449E-12	1.257395E-10	1128	1665
747 CEBPZ	2	-0.5	5.905794E-12	1.272157E-10	2147	1516
748 BBS2	16	1.2	5.918860E-12	1.273267E-10	141	350
749 CCT5	5	-0.3	6.373180E-12	1.368990E-10	8083	6547
750 CSDE1	1	-0.3	6.380849E-12	1.368990E-10	11700	9827
751 POLD1	19	0.5	6.810718E-12	1.459271E-10	1242	1801
752 HSPA2	14	1.3	6.991365E-12	1.495985E-10	96	271
753 MIR4426	1	-0.9	7.512532E-12	1.605367E-10	1035	552
754 NF1	17	-1.3	8.116869E-12	1.732209E-10	299	112
755 NPM1P24	10	-0.4	8.316939E-12	1.772554E-10	3389	2547
756 USP16	21	-0.6	8.338424E-12	1.774783E-10	1658	1112
757 DDX24	14	-0.5	8.419442E-12	1.789660E-10	2334	1681
758 VTI1A	10	-1.0	8.483407E-12	1.800877E-10	457	210
759 HNRNP2	X	-0.7	8.721269E-12	1.848932E-10	1217	757
760 RPS2P46	17	0.3	8.932419E-12	1.891205E-10	11004	13191
761 PACRGL	4	0.8	8.966804E-12	1.895990E-10	501	866
762 IGF2BP3	7	-0.7	9.822900E-12	2.074282E-10	1014	608
763 CBFA2T2	20	1.1	1.004159E-11	2.117683E-10	156	379
764	17	-1.8	1.026750E-11	2.162492E-10	123	19
765 HIST1H3J	6	-0.8	1.112409E-11	2.339840E-10	840	484
766 TP73-AS1	1	1.7	1.171299E-11	2.460491E-10	21	120
767 EPHX1	1	1.1	1.232703E-11	2.586104E-10	158	378
768 POLQ	3	0.6	1.242859E-11	2.604017E-10	782	1237
769 EIF3B	7	-0.3	1.251583E-11	2.618884E-10	8096	6672
770 RPL28	19	0.3	1.278151E-11	2.671004E-10	11313	13478
771 RAB11A	15	-0.5	1.291812E-11	2.696050E-10	2480	1792
772 RPL6P27	18	0.3	1.313071E-11	2.736868E-10	10157	12133
773 TRHDE	12	-0.5	1.325949E-11	2.760136E-10	2397	1742
774 NUP35	2	-0.8	1.344597E-11	2.795337E-10	668	358
775 GTF3C2	2	-0.8	1.393273E-11	2.892794E-10	707	389
776 SMARCA2	9	-0.6	1.468698E-11	3.045467E-10	1583	1064
777 DDX1	2	-0.3	1.471524E-11	3.047400E-10	5665	4526

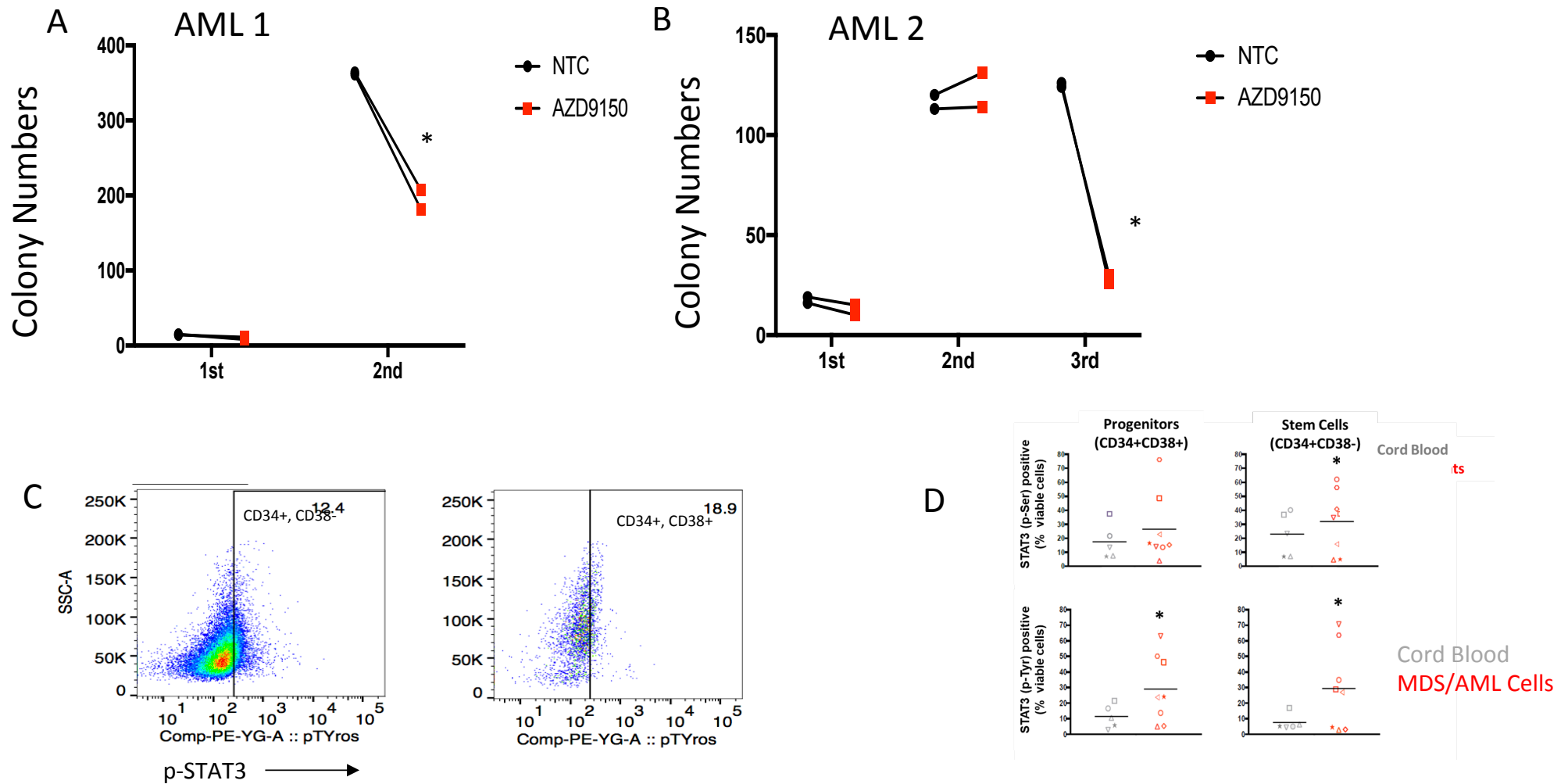
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780	KIAA0947	5	-0.4	1.605931E-11	3.312954E-10	2750	2021
781	TIMM23B	10	-1.1	1.614780E-11	3.326944E-10	402	172
782		7	-0.7	1.616891E-11	3.327032E-10	1141	709
783	ANKRD28	3	-0.6	1.627143E-11	3.343851E-10	1489	987
784	JAK1	1	0.6	1.673452E-11	3.434633E-10	948	1419
785	WDR12	2	-0.4	1.730946E-11	3.548109E-10	3393	2584
786	FAM83F	22	1.0	1.942721E-11	3.977140E-10	233	481
787	METTL2B	7	-0.7	1.998581E-11	4.086299E-10	1044	649
788	SRRT	7	-0.4	2.014534E-11	4.113689E-10	3675	2829
789		5	-1.0	2.028123E-11	4.136188E-10	446	206
790	GMNN	6	-0.6	2.048714E-11	4.172894E-10	1447	963
791	PRPF31	19	-0.5	2.056203E-11	4.182852E-10	1743	1202
792	EIF4A3	17	-0.4	2.094802E-11	4.255993E-10	2690	1976
793	KAT2A	17	0.7	2.107162E-11	4.275706E-10	604	997
794	IDS	X	-0.7	2.268718E-11	4.597725E-10	1047	641
795	UBE3A	15	-0.4	2.351402E-11	4.759297E-10	3484	2674
796	SMG1	16	0.3	2.449321E-11	4.951259E-10	3465	4409
797	TFDP1	13	0.4	2.467864E-11	4.982485E-10	2966	3855
798	RCCD1	15	0.8	2.771536E-11	5.588569E-10	366	666
799	RALA	7	-0.7	2.813604E-11	5.666295E-10	906	534
800	DEK	6	-0.3	3.074612E-11	6.184197E-10	5207	4159
801	FRMD8	11	0.7	3.552782E-11	7.137055E-10	533	887
802	NMD3	3	-0.4	3.572189E-11	7.167095E-10	2803	2100
803	EEF1A1P11	1	0.3	3.590647E-11	7.195157E-10	4796	6019
804	MRPS22	3	-0.6	3.687667E-11	7.380380E-10	1410	942
805	DYM	18	-0.9	3.859654E-11	7.714994E-10	617	325
806	SPIN4	X	0.6	3.892283E-11	7.770561E-10	913	1388
807	FAM65C	20	1.4	4.006333E-11	7.988340E-10	74	230
808	TRMT10C	3	-0.5	4.040198E-11	8.045894E-10	1589	1085
809	RCC1	1	-0.4	4.079019E-11	8.113163E-10	3283	2458
810	KIAA2018	3	-0.6	4.122597E-11	8.189716E-10	1357	903
811	XRCC4	5	-1.3	4.178139E-11	8.289819E-10	278	100
812	SPAG5	17	-0.5	4.417950E-11	8.754832E-10	1655	1140
813	WDR34	9	0.6	4.589004E-11	9.082615E-10	917	1373
814	ZNF134	19	0.8	4.837778E-11	9.563230E-10	326	607
815	CDC425E2	5	0.5	5.008842E-11	9.889237E-10	1416	1982
816	EIF1AY	Y	-0.6	5.070077E-11	9.997869E-10	1366	908
817	PFDN5	12	-0.4	5.184556E-11	1.021110E-09	2636	1955
818	CHD7	8	-0.3	5.282972E-11	1.039221E-09	4917	3892
819	PRDX3	10	-0.4	5.612752E-11	1.101942E-09	3200	2442
820	SF3B1	2	-0.3	5.615516E-11	1.101942E-09	6300	5086
821	LPL	8	-0.9	5.670788E-11	1.111433E-09	532	269
822	OSBPL3	7	-0.5	5.769194E-11	1.129344E-09	1751	1224
823	FBN1	15	0.5	5.936065E-11	1.160598E-09	1112	1614
824	VPS53	17	-0.7	6.180329E-11	1.205613E-09	932	568
825	PSMC4	19	-0.4	6.181284E-11	1.205613E-09	3129	2372
826		4	1.4	6.356573E-11	1.238300E-09	72	230
827	NAMPT	7	-0.5	6.612746E-11	1.286647E-09	2309	1680
828	ZC3H13	13	-0.4	6.828535E-11	1.327028E-09	2585	1911
829	SIRT3	11	1.0	7.621546E-11	1.479352E-09	192	412
830	TLE3	15	0.5	7.769727E-11	1.506297E-09	1277	1809
831	WBP1L	10	0.6	7.926517E-11	1.534845E-09	812	1236
832	TTC27	2	-0.5	8.050865E-11	1.557049E-09	1756	1225
833	KAT6B	10	-1.0	8.404389E-11	1.621523E-09	391	177
834	PRPF40A	2	-0.3	8.400316E-11	1.621523E-09	6362	5162
835	SLC39A4	8	0.9	8.592295E-11	1.655792E-09	368	688
836		11	0.3	8.779720E-11	1.689886E-09	8276	10198
837	FASTKD2	2	-0.6	8.991047E-11	1.728494E-09	1205	783
838	CCDC88C	14	-0.9	9.278080E-11	1.781546E-09	493	244
839	ZFAS1	20	0.8	9.408128E-11	1.804364E-09	642	1120
840	DHTKD1	10	1.1	9.605275E-11	1.839982E-09	159	370
841	HSPA9	5	-0.2	9.973069E-11	1.908165E-09	13718	11687
842	LAPTM4B	8	-0.3	1.007582E-10	1.925534E-09	4696	3711
843	DPP7	9	0.5	1.011938E-10	1.931565E-09	1487	2075
844	GSTK1	7	0.8	1.078406E-10	2.056000E-09	416	728
845		X	-0.5	1.125509E-10	2.143262E-09	2034	1443
846	PHGDH	1	-0.6	1.155092E-10	2.196996E-09	1174	751
847	ATAD2	8	-0.3	1.200228E-10	2.280149E-09	6475	5311
848	CDS2	20	-1.0	1.234774E-10	2.343013E-09	485	234
849	AGRN	1	0.7	1.272342E-10	2.411455E-09	556	922
850	HIST1H3B	6	-0.4	1.357610E-10	2.570035E-09	3938	2985
851	TNRC18	7	0.4	1.377713E-10	2.605026E-09	2127	2829
852	TMC6	17	0.5	1.396023E-10	2.636551E-09	1245	1772
853	IFFO1	12	-1.8	1.420170E-10	2.679010E-09	77	6
854	NABP1	2	0.5	1.441409E-10	2.715892E-09	977	1442
855	FAM49A	2	-0.8	1.488241E-10	2.800853E-09	637	353
856	KTN1	14	-0.3	1.538044E-10	2.891200E-09	7193	5937
857	EEF1A1P12	2	-0.4	1.576692E-10	2.960392E-09	2382	1752
858	AHSA1	14	-0.3	1.602476E-10	3.005297E-09	6187	5038
859	RAB8B	15	0.7	1.644640E-10	3.080781E-09	664	1052
860	OGFOD3	17	1.1	1.675858E-10	3.135607E-09	146	343
861	PLOD1	1	0.5	1.715654E-10	3.206340E-09	987	1441
862	VPS13A	9	-0.4	1.745466E-10	3.258271E-09	2244	1649
863	CCNB1	5	-0.3	1.755721E-10	3.273616E-09	4887	3902
864	MARS	12	-0.3	1.759039E-10	3.276007E-09	4136	3270

865		2	0.5	1.771908E-10	3.296159E-09	2816	3871
866 SYTL4	X		-0.9	1.797740E-10	3.340351E-09	563	298
867 CDC42BPA		1	0.4	1.813389E-10	3.365542E-09	1803	2435
868 RNMT		18	-0.5	1.874862E-10	3.475623E-09	1801	1281
869 VPS9D1-AS1		16	1.1	1.958556E-10	3.626597E-09	146	335
870 ABHD17A		19	-0.8	2.042043E-10	3.776841E-09	771	440
871 TNK2		3	0.9	2.050782E-10	3.788649E-09	245	485
872 HPGD		4	-0.3	2.127088E-10	3.925112E-09	5958	4844
873 TMEM185B		2	1.3	2.200725E-10	4.056343E-09	87	243
874 CENPP		9	-1.6	2.262535E-10	4.165498E-09	145	35
875 PARP16		15	1.1	2.328920E-10	4.282817E-09	140	337
876 OFD1	X		0.6	2.504000E-10	4.599528E-09	675	1076
877 SLC2A4RG		20	1.0	2.565467E-10	4.707062E-09	186	398
878 RDX		11	-0.5	2.569070E-10	4.708303E-09	1563	1081
879 PCGF5		10	0.6	2.603073E-10	4.765193E-09	879	1304
880 POLK		5	-0.9	2.678215E-10	4.891618E-09	552	285
881 LCP2		5	0.5	2.677332E-10	4.891618E-09	1117	1600
882 FBXO34		14	-0.6	2.706825E-10	4.938267E-09	1025	654
883 DCTN6		8	-1.0	2.753698E-10	5.018091E-09	362	162
884 COBLL1		2	-0.7	2.990342E-10	5.443166E-09	935	582
885 GOLGA8B		15	-0.7	3.047246E-10	5.540479E-09	845	513
886 NCAPH		2	-0.5	3.057528E-10	5.546638E-09	1509	1034
887 WDR90		16	0.6	3.056445E-10	5.546638E-09	615	973
888 NAA15		4	-0.3	3.101990E-10	5.620960E-09	4590	3680
889 EPS8L1		19	1.0	3.114517E-10	5.637311E-09	190	402
890 RARS		5	-0.4	3.121640E-10	5.643855E-09	2593	1944
891 TBC1D31		8	-0.6	3.165975E-10	5.717588E-09	1215	800
892 SPAST		2	-0.6	3.206473E-10	5.784233E-09	1318	885
893 UVRAG		11	-0.9	3.216380E-10	5.795607E-09	589	313
894 PCCB		3	0.5	3.226057E-10	5.806541E-09	1037	1495
895 HMGNS5	X		-0.7	3.297565E-10	5.928617E-09	992	618
896 CRNDE		16	-1.2	3.513174E-10	6.309206E-09	260	96
897 SLC38A10		17	0.6	3.700450E-10	6.638121E-09	884	1331
898 CHD9		16	-0.5	3.825706E-10	6.855172E-09	1672	1180
899 C21orf33		21	0.5	3.972707E-10	7.110660E-09	1098	1566
900 PHIP		6	-0.4	3.994600E-10	7.141901E-09	3276	2529
901 DSC2		18	0.5	4.117868E-10	7.354120E-09	996	1448
902 PPM1H		12	-0.5	4.132888E-10	7.372761E-09	1663	1160
903 AP1G1		16	-0.4	4.268577E-10	7.606386E-09	2168	1583
904 ESRRG		1	-1.0	4.281257E-10	7.620543E-09	399	185
905 ULK1		12	1.1	4.312057E-10	7.666886E-09	163	376
906 ZNF320		19	0.6	4.383343E-10	7.785030E-09	740	1144
907 SIPA1L1		14	0.8	4.512939E-10	8.006362E-09	363	642
908 SFPQ		1	-0.2	4.527815E-10	8.023907E-09	10797	9171
909 RLIM	X		-0.4	4.538744E-10	8.034425E-09	3197	2453
910 SNORD3A		17	0.8	4.592610E-10	8.120845E-09	385	669
911 NDFIP1		5	-0.3	4.622377E-10	8.164508E-09	4630	3723
912 MAN2A2		15	0.4	4.952949E-10	8.738805E-09	1963	2608
913 RRP36		6	-0.6	4.973320E-10	8.765136E-09	1227	821
914 PCYOX1L		5	1.1	5.022569E-10	8.842249E-09	128	304
915 FECH		18	-0.4	5.155009E-10	9.065492E-09	2395	1783
916 GALNT5		2	-0.4	5.425955E-10	9.531554E-09	2982	2286
917 ZNF385B		2	-1.8	5.487755E-10	9.629604E-09	62	3
918 KIAA0319L		1	-1.2	5.514050E-10	9.665205E-09	243	90
919 ZDHHC2		8	0.4	5.835833E-10	1.021811E-08	1504	2065
920 MBOAT2		2	-0.4	5.871349E-10	1.026912E-08	2315	1713
921 ZNF302		19	0.7	5.942814E-10	1.038283E-08	406	696
922 DLC1		8	-0.5	6.057426E-10	1.057159E-08	1967	1415
923 TET3		2	0.4	6.141339E-10	1.070642E-08	1651	2246
924 ARPC2		2	-0.4	6.278831E-10	1.093427E-08	2602	1958
925 HNRNPA3P3	X		-0.8	6.481895E-10	1.127569E-08	618	347
926 DCAF13		8	-0.4	6.517467E-10	1.131371E-08	2682	2029
927 MGEA5		10	-0.4	6.517810E-10	1.131371E-08	2977	2272
928 PUS10		2	-1.2	6.574083E-10	1.139909E-08	247	90
929 DGKD		2	-0.7	7.035453E-10	1.218595E-08	807	481
930 TEX15		8	-0.4	7.107354E-10	1.229725E-08	2061	1508
931 MIER1		1	-0.5	7.353137E-10	1.270884E-08	2009	1461
932 SEC22B		1	-0.7	7.393487E-10	1.276487E-08	903	539
933 UBE2N		12	-0.4	7.818760E-10	1.348464E-08	2399	1782
934 SYCP2L		6	-1.7	8.073810E-10	1.390960E-08	55	2
935 ATP5E		20	-0.5	8.394949E-10	1.444739E-08	1522	1053
936 PTGES3		12	-0.3	8.447848E-10	1.452290E-08	8193	6660
937 CUL4B	X		-0.5	8.690841E-10	1.492469E-08	1453	1007
938 SAMM50		22	-0.6	8.944125E-10	1.534328E-08	1142	747
939 ADAT2		6	-0.8	8.976571E-10	1.537910E-08	571	313
940 PCF11		11	-0.4	8.984124E-10	1.537910E-08	2320	1723
941 PIM1		6	-0.3	9.241161E-10	1.580229E-08	4174	3321
942 GPR125		4	0.6	9.266922E-10	1.582952E-08	636	989
943 NCOR1		17	-0.4	9.346901E-10	1.594920E-08	3043	2356
944 PDIA3		15	-0.3	9.675208E-10	1.649192E-08	3944	3127
945 TROVE2		1	-0.3	1.003116E-09	1.708057E-08	5974	4923
946 LBR		1	-0.3	1.013791E-09	1.722588E-08	5305	4330
947 ANK1		8	0.2	1.013093E-09	1.722588E-08	11617	13560
948 PDLIM1		10	0.4	1.037882E-09	1.761663E-08	1669	2243
949 FOXRED2		22	0.4	1.047736E-09	1.776515E-08	1672	2250
950 GGACTION		13	1.2	1.072971E-09	1.817387E-08	90	237
951		22	0.6	1.101335E-09	1.863468E-08	686	1085

952 ZNF317	19	0.5	1.111571E-09	1.878812E-08	1066	1513
953 ARHGAP31	3	-1.5	1.134243E-09	1.915121E-08	137	33
954 SHMT2	12	-0.4	1.152097E-09	1.941193E-08	2661	2030
955 PRRC2C	1	-0.3	1.151899E-09	1.941193E-08	8212	6882
956 MYCBP2	13	0.4	1.164837E-09	1.960606E-08	1754	2339
957 ANAPC10P1	1	-1.7	1.292700E-09	2.173546E-08	78	9
958 ARHGEF2	1	-0.4	1.294858E-09	2.174901E-08	2780	2115
959 BRX1	5	-0.4	1.317214E-09	2.210146E-08	2129	1564
960 ERF	19	-0.5	1.327960E-09	2.225855E-08	1634	1163
961 HMG3	6	-0.8	1.335500E-09	2.234838E-08	600	338
962 ALAD	9	0.8	1.336098E-09	2.234838E-08	278	515
963 RPL5	1	0.3	1.351864E-09	2.258863E-08	6252	7460
964	16	-0.3	1.371876E-09	2.289923E-08	4001	3187
965 WDR43	2	-0.3	1.383707E-09	2.307278E-08	4330	3478
966 DNMT1	19	-0.3	1.386877E-09	2.310170E-08	7585	6295
967 WWP2	16	0.8	1.409201E-09	2.344929E-08	335	598
968 SNORD3B-2	17	1.1	1.507076E-09	2.505202E-08	151	340
969 USP25	21	-0.5	1.537302E-09	2.552811E-08	1512	1061
970 NDST1	5	0.7	1.596486E-09	2.648356E-08	479	783
971 ARHGAP32	11	0.4	1.624321E-09	2.691756E-08	2110	2744
972 SPATS2L	2	-0.5	1.667098E-09	2.759803E-08	1688	1213
973 TLK1P1	9	-1.7	1.685549E-09	2.787479E-08	76	7
974 ZNF3	7	0.7	1.711285E-09	2.827134E-08	502	811
975 ESAM	11	-0.7	1.734277E-09	2.862180E-08	798	483
976 TAF7	5	0.5	1.739118E-09	2.867229E-08	1027	1476
977 PYROXD1	12	-1.4	1.744677E-09	2.873450E-08	177	53
978 ZNF621	3	0.6	1.810860E-09	2.979402E-08	697	1068
979 CPS1	2	-1.0	1.906011E-09	3.132750E-08	392	187
980 SCARNA10	12	-1.0	2.058266E-09	3.379547E-08	411	197
981 MED16	19	0.6	2.071704E-09	3.398144E-08	758	1131
982 ACAD10	12	0.9	2.119448E-09	3.472917E-08	189	386
983 GPD2	2	-0.6	2.152301E-09	3.523161E-08	1105	725
984 ST7	7	-0.9	2.255742E-09	3.688734E-08	438	219
985 EFF1A1P6	7	0.2	2.258903E-09	3.690154E-08	35870	41781
986 PPP2R5E	14	0.5	2.279985E-09	3.720815E-08	844	1237
987 MYL5	4	1.5	2.317378E-09	3.778007E-08	28	121
988 BAHD1	15	-0.8	2.365545E-09	3.852629E-08	667	379
989 R3HDM4	19	0.5	2.369419E-09	3.855038E-08	1054	1496
990 MRFAP1	4	-0.3	2.419843E-09	3.933100E-08	3473	2731
991	2	1.3	2.511007E-09	4.077156E-08	67	198
992 GVINP1	11	-1.7	2.545169E-09	4.128459E-08	52	2
993 CACNA1H	16	1.7	2.566939E-09	4.159579E-08	8	72
994 PDPDF	20	1.1	2.625074E-09	4.249503E-08	126	292
995 TANC2	17	-1.0	2.639130E-09	4.267963E-08	385	185
996 TKT	3	-0.3	2.642650E-09	4.269365E-08	6468	5273
997 TBC1D15	12	-0.6	2.652478E-09	4.280944E-08	1097	701
998 EXOC3	5	-0.7	2.685566E-09	4.330004E-08	749	455

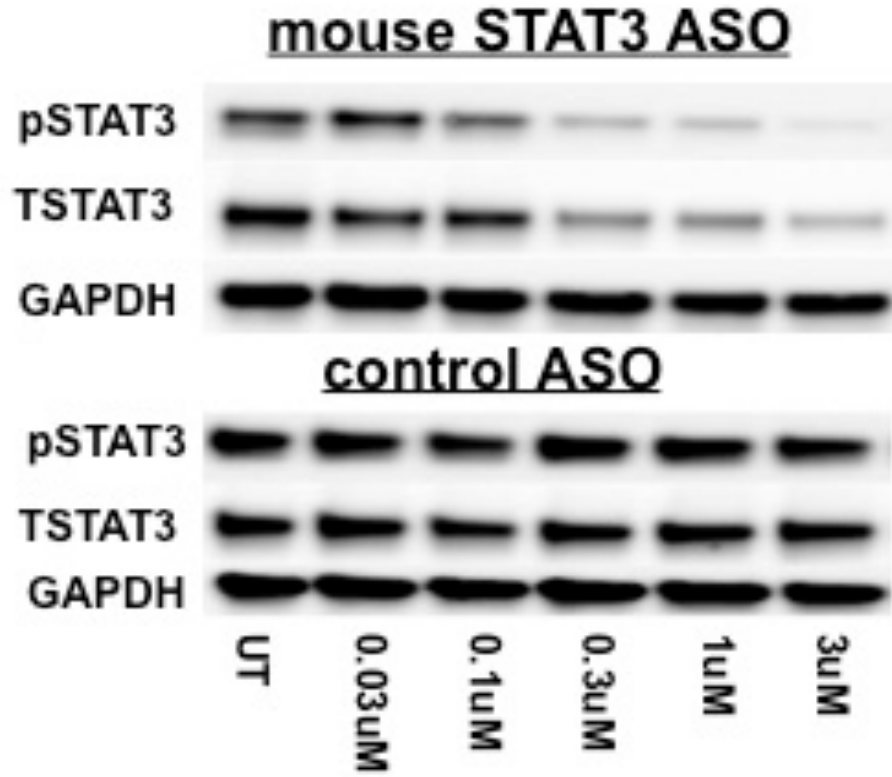
Supp Table 4. Real-time PCR Specific Primers

STAT3	Forward 5' – CAGTTTCTGGCCCCTGGAT – 3' Reverse 5' – AAGCGGCTATACTGCTGGTC – 3'
MCL-1	Forward 5' - ATGCTTCGGAAACTGGACAT - 3' Reverse 5' - TCCTGATGCCACCTTCTAGG - 3'
IL1RAP	Forward 5' – CTGCAAAGTGATGCCTCAGA – 3' Reverse 5' – CGGTCCTGCCTAGTCCAATA – 3'
IL-8	Forward 5' - ATAAAGACATACTCCAAACCTTTCCAC - 3' Reverse 5' - AAGCTTTACAATAATTTCTGTGTTGGC - 3'
CXCR2	Forward 5' - ACAGCTACTTGGGAGGCTGA – 3' Reverse 5' - TGCAGTGGTCACACCATTTT – 3'

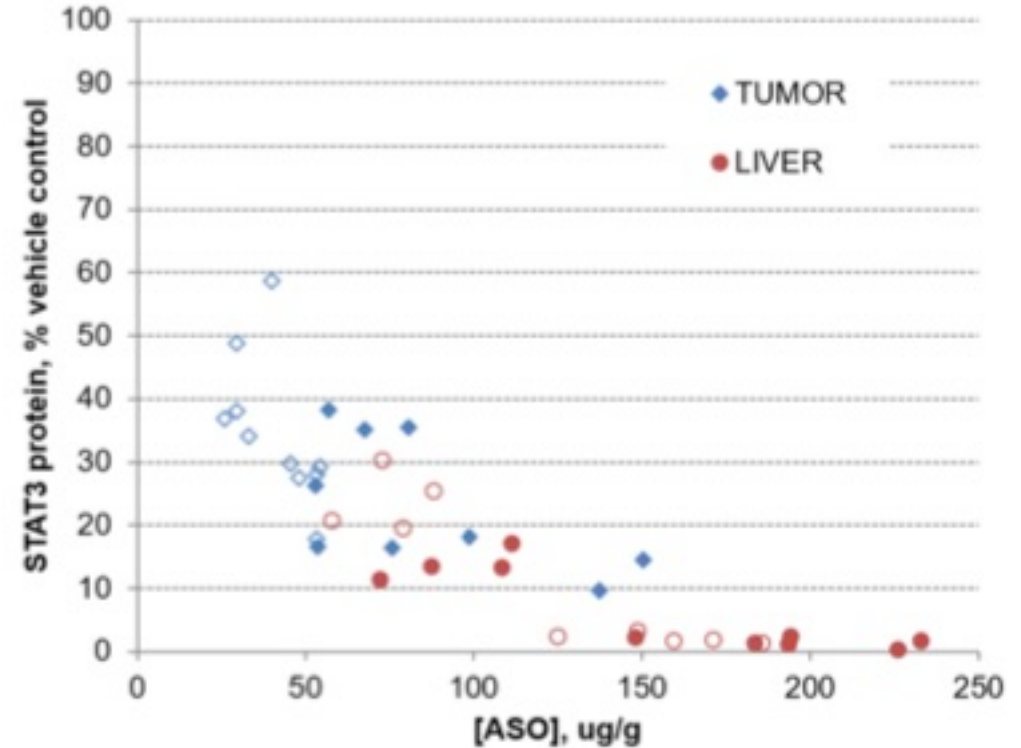


Supp Fig 1: STAT3 inhibition with AZD9150 leads to decreased replating efficiency: 2 primary AML samples were treated with AZD9150 and non targeting control (NTC) and plated in methylcellulose assays. Total colonies were read after 2 weeks. In both samples, treatment with AZD9150 led to significantly decreased replating efficiency at the 2nd (A) and 3rd cycles (B) (* P val<0.05). (C) Intracellular staining for pSTAT3 tyrosine (pY705 PE) measured in AML1 patient sample shows 12.4% positive HSCs (CD34+, CD38-) and 18.9% +ve progenitors (CD34+,CD38+) pretreatment. (D) MDS Stem & progenitor cells have a higher percentage of viable cells that express phospho-STAT3 com compared to cord blood controls.

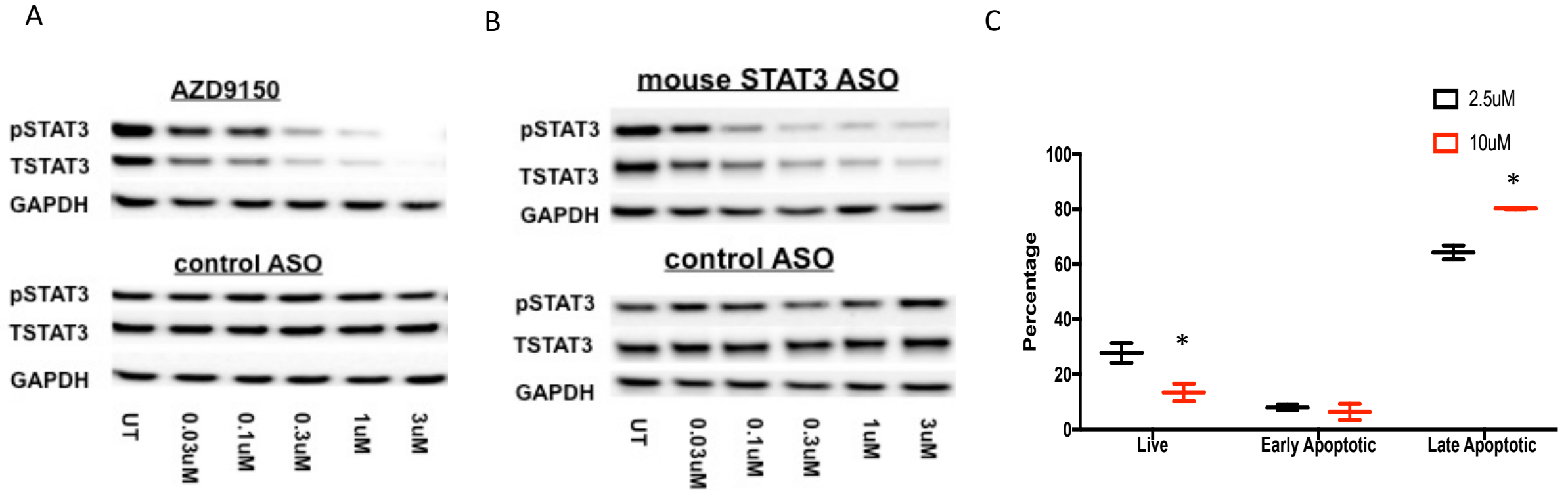
A



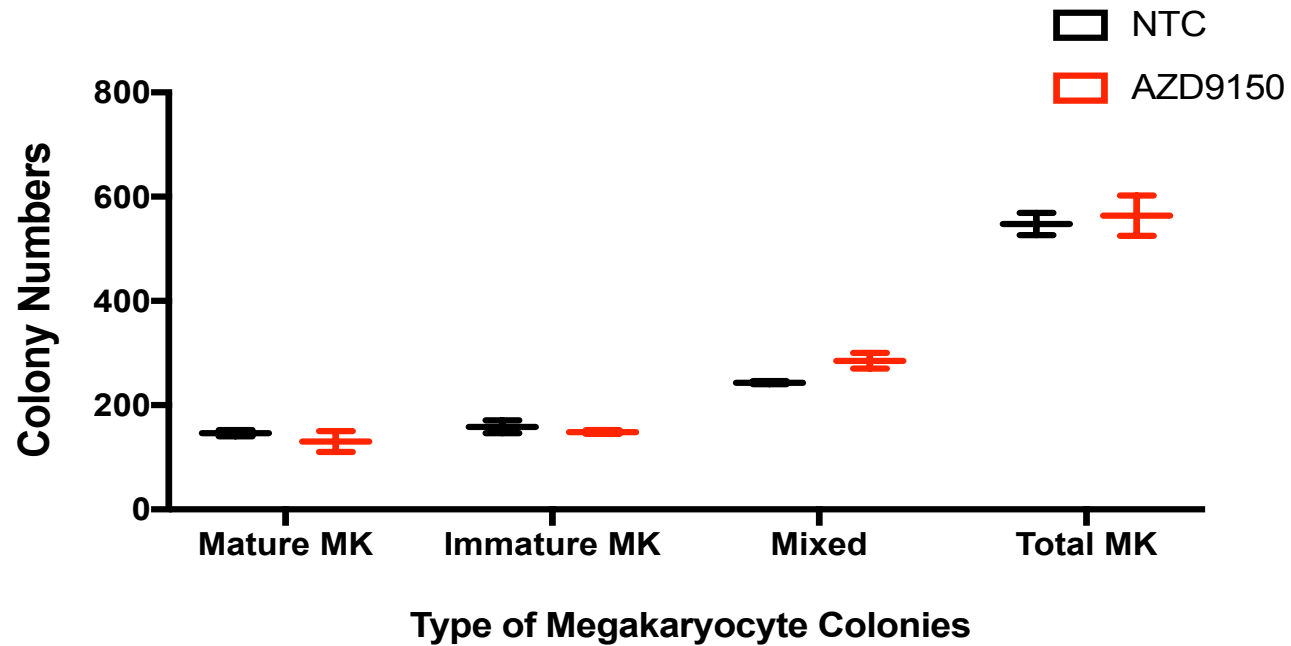
B



Supp Fig 2: STAT3 ASO uptake is seen in Liver and Spleen in vivo. STAT3 ASO uptake in the spleen and the liver is demonstrated. Fig.2A shows Mouse MDSC's from the spleen of 4T1 breast cancer tumor bearing C57BL/6 mice after they were sacrificed, harvested and the spleen was homogenized. There is consistent inhibition of p-STAT3 and total STAT3 in the spleen of the mice treated with mouse STAT3 ASO compared to the controls. (Fig.2B) Shows A431epidermoid carcinoma tumor bearing mice with AZD9150 incorporated into the tumor and mouse STAT3 ASO in the liver. The data shows that there increased knockdown of STAT3 noted at higher drug concentrations in both the organs (liver & tumor) that were tested. Open symbols in Fig.2B are 25 mg/kg dose, closed symbols are 50 mg/kg dose.

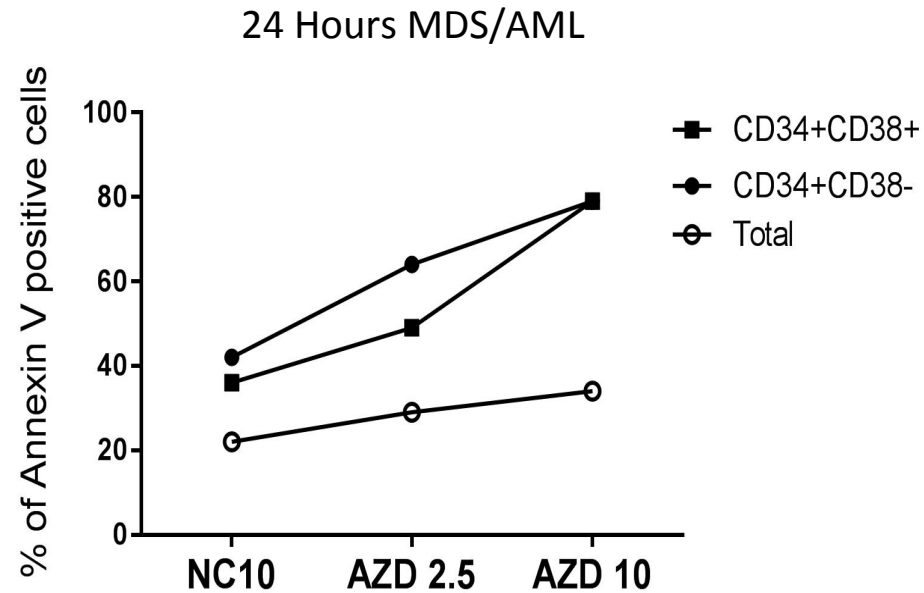


Supp Fig 3: Dose response relationship between STAT3 ASO treatment and STAT3 knockdown is seen in (A) Human CD8+T cells from peripheral blood mononuclear cells (PBMC) after treatment with AZD9150, (B) Mouse CD8+T cells from C57BL/6 spleen after treatment with mouse STAT3 ASO, where there is greater inhibition of pSTAT3 & Total STAT3 at the higher doses compared to control. (C) A higher dose of AZD9150 also resulted in more apoptosis in the CMK cell line in vitro. (* $p < 0.05$)

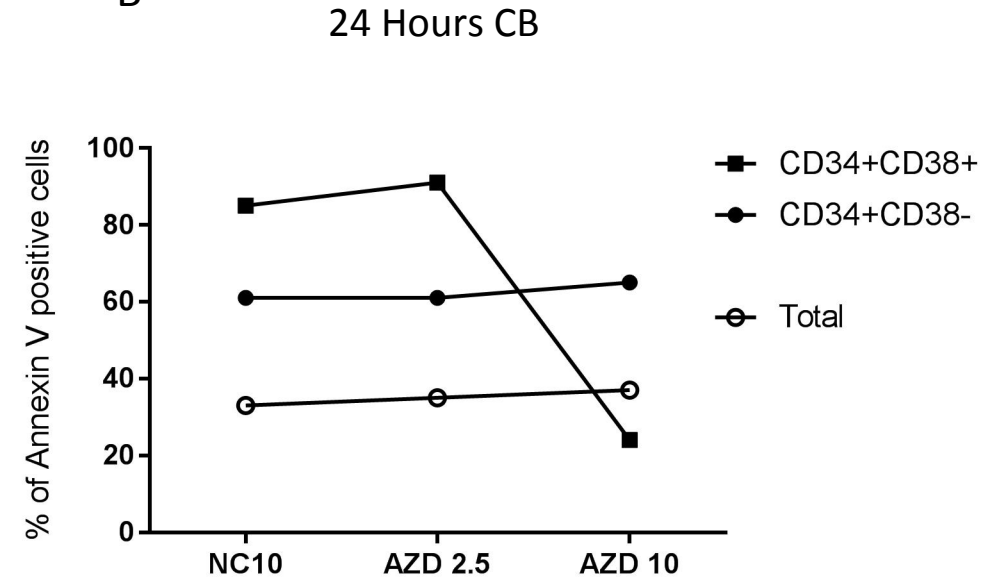


Supp Fig.4 : AZD9150 treatment does not lead to significant changes in megakaryocytic colony formation: Cord blood CD34+ cells were treated in megacult assay with AZD9150 and Non Targeting Control (NTC) at 10uM and various megakaryocytic colonies were counted after 14 days. These included Mature, Immature and Mixed Megakaryocytic (MK) colonies. No significant differences in colony numbers were seen after treatment with AZD9150 in two independent experiments. (Means + s.d are shown)

A



B



Supp Fig.5 : AZD9150 treatment lead to increased apoptosis in MDS/AML cells compared to healthy controls : AZD9150 incorporation in primary TP53 mutated MDS-AML stem cells led to increased apoptosis in stem and progenitor cell populations in a dose-dependent manner (A) as noted by the increase in the % of Annexin V positive cells in comparison to cord blood stem and progenitor cells (B)

Supplementary Materials and Methods

Mice and cell lines:

Female, 6 to 8 weeks old female Balb/c or C57BL/6 mice were obtained from Harlan 208A, MD. The mouse breast cancer cell line 4T1 were obtained from the American Type Culture Collection (ATCC, Manassas, VA) and cultured according to the recommendations of ATCC.

Isolation of mouse CD8⁺ T cells:

C57BL/6 mice were sacrificed. The spleens were harvested, rinsed with PBS and placed into a cell strainer sitting in a sterile Petri dish. The spleens were gently homogenized using the top of a 3-mL syringe as a plunger. Splenocytes were collected by passing the contents through the cell strainer. The red blood cells were removed from the cell suspension by using ACK lysis buffer (ammonium-chloride-potassium lysis buffer (Lonza 10-548E, Walkersville, MD)).

CD8⁺ T cells were isolated using the mouse CD8a⁺ T Cell Isolation Kit (Miltenyi Biotec, *Bergisch Gladbach, Germany*).

Isolation of *in vivo* differentiated myeloid-derived suppressor cells (MDSCs)

Balb/c mice received a subcutaneous (mammary gland pad) injection of 0.4×10^6 /site 4T1 tumor cells. When the tumor diameter exceeded 1000 mm³, mice were sacrificed and single cell splenocytes from the spleen were obtained as previously described. Myeloid-Derived Suppressor Cells (MDSCs) were isolated using the Anti-Mouse Ly-6G and Ly-6C Particles – DM (BD Biosciences, Franklin Lakes, NJ).

Isolation of human CD8+ T cells:

Buffy coats (leucocytes) were isolated from leukopack (AllCells, Alameda, CA). CD8+ T cells were isolated using the human CD8a+ T Cell Isolation Kit (Miltenyi Biotec, *Bergisch Gladbach, Germany*).

Western Blot Analysis:

Isolated CD8+ T cells or MDSCs were plated at 2×10^5 cells in 200 μ l culture media in a 96-well round bottom plate. Subsequently, CD8+ T cells were stimulated with 1.25 μ l/well of Dynabeads[®] mouse(or human) t-activator cd3/cd28 (ThermoFisher Scientific, Waltham, MA) and 20ng/ml IL2 (R&D Systems, Minneapolis, MN). MDSCs were cultured with 50% conditioned media. When indicated, STAT3 antisense or control antisense were added. Cells were lysed 3 days later using PhosphoSafe™ Extraction Reagent (Milipore Sigma, Billerica, MA). Protein extracts, separated by SDS-PAGE and transferred onto PVDF membranes, were probed with antibodies against p-STAT3 (CST-9145, 1:1000, Cell Signaling Technology, Danvers, MA), T-STAT3 (CST-9139, 1:5000, Cell Signaling Technology, Danvers, MA) or GAPDH (CST-2118, 1:5000, Cell Signaling Technology, Danvers, MA). Proteins of interest were detected with HRP-conjugated anti-rabbit or anti-mouse IgG antibody (1: 5000, Cell Signaling Technology, Danvers, MA) and visualized with the Pierce ECL Western blotting substrate (ThermoFisher Scientific, Waltham, MA), according to the provided protocol.

Apoptosis analysis

Apoptosis analysis was performed using Annexin V and Propidium Iodide (Thermo Fischer Scientific, Waltham, MA). In brief, 1×10^6 AML cells were incubated at varying doses of AZD9150 and ntASO. After 48 hours, the cells were harvested and washed with PBS & binding buffer. They were then incubated with 5UI of Annexin V for 15 minutes protected from light. Binding buffer was then added after another wash followed by 5 UI of propidium iodide. The cell mixture was then incubated on ice at 2-8°C and analyzed by flow cytometry using a FACSAria II Special Order System (BD Biosciences, San Jose, CA).

Megacult Assay

Cryopreserved cord blood MNCs were thawed and pre cultured overnight in growth medium IMDM (Corning) +2%FBS (Gemini Bio-products) with cytokines- rh IL3-10ng/ml (R&D systems), rh IL6-25ng/ml (R&D systems), rh SCF-50ng/ml (R&D systems), rh Flt3L-50ng/ml (R&D systems), human Low-density lipoproteins 40µg/ml (Sigma Aldrich). 16-24hrs after preculture, CD34⁺ cell enrichment was carried out according to the manufacturer's protocol (CD34 MicroBead Kit, human; Miltenyi Biotec). To enumerate megakaryocytic progenitors, colony-forming assays were performed using 5,000 CD34⁺-enriched cells in MegaCult (StemCell Technologies) supplemented with 10ng/ml of rhIL-3 (R&D systems), 10ng/ml rhIL-6 (R&D systems), 50ng/ml of rhThrombopoietin (StemCell Technologies). 10ng/ml AZD9150 and control oligonucleotide were added to the cultures, as indicated in the figures. Assays were cultured and analyzed according to the manufacturer's recommendations. Colony formation was documented using and EVOS FL Auto inverted microscope (Invitrogen) and colony quantification was done using FIJI software (<https://fiji.sc/>).