

Supplementary Information :

Supplementary Table 1. List of SNPs Included in Analysis				
Gene Name	SNP rsID	SNP Location	MAF AML02 Cohort	MAF AML08 Cohort
SAMHD1	rs12481143	Intron Variant	0.147	0.152
TLDC2	rs1291128	Intron Variant	0.494	0.487
TLDC2	rs1291131	Intron Variant	0.111	0.109
TLDC2	rs1291133	Intron Variant	0.443	0.453
SAMHD1	rs1291141	3 Prime UTR Variant	0.246	0.264
SAMHD1	rs1291149	Intron Variant	0.235	0.249
SAMHD1	rs1935919	Intron Variant	0.180	0.159
SAMHD1	rs200444706	Intron Variant	0.434	0.431
SAMHD1	rs34143163	500B Downstream Variant	0.063	0.062
SAMHD1	rs3762214	Intron Variant	0.173	0.167
SAMHD1	rs4812586	Intron Variant	0.231	0.247
SAMHD1	rs6016755	Intron Variant	0.111	0.108
SAMHD1	rs6016783	Intron Variant	0.488	0.494
SAMHD1	rs6029941	3 Prime UTR Variant	0.443	0.451
SAMHD1	rs6030339	Intron Variant	0.177	0.161
SAMHD1	rs6030346	Intron Variant	0.069	0.062
SAMHD1	rs6030347	Intron Variant	0.191	0.158
SAMHD1	rs6065461	Intron Variant	0.259	0.225
SAMHD1	rs6072746	Intron Variant	0.377	0.393
SAMHD1	rs6102697	Intron Variant	0.198	0.180
NA	rs6103006	unknown	0.219	0.163
SAMHD1	rs7265241	3 Prime UTR Variant	0.069	0.052
SAMHD1	rs7268811	Intron Variant	0.129	0.120
SAMHD1	rs78034281	2KB Upstream Variant	0.069	0.058
SAMHD1	rs78378047	Intron Variant	0.204	0.197

Supplementary Table 2. List of SNPs in LD with Top SNPs**SNP: rs7265241 and variants with $r^2 \geq 0.8$**

Chr	Pos (hg38)	LD (r^2)	LD (D')	Variant	Ref	Alt	AFR Freq	AMR Freq	ASN Freq	EUR Freq	GENCODE Genes	dbSNP Functional Annotation
20	36880145	0.95	1	rs7273826	G	A	0.11	0.08	0.01	0.08	C20orf118	intronic
20	36881623	0.95	1	rs74584244	T	A	0.11	0.08	0.01	0.08	C20orf118	intronic
20	36884209	0.96	1	rs79879305	A	G	0.11	0.08	0.01	0.08	C20orf118	intronic
20	36885156	0.96	1	rs6129995	C	G,T	0.12	0.08	0.01	0.08	C20orf118	intronic
20	36886420	1	1	rs115579156	C	T	0.03	0.08	0.01	0.08	C20orf118	intronic
20	36891543	1	1	rs7265241	A	G	0.05	0.09	0.01	0.08	C20orf118	intronic
20	36910635	0.96	1	rs115720427	C	T	0.05	0.07	0.01	0.07	SAMHD1	intronic
20	36918472	0.96	1	rs116789513	T	A	0.05	0.07	0.01	0.07	SAMHD1	intronic
20	36919095	0.96	1	rs138727676	C	G	0.06	0.07	0.01	0.07	SAMHD1	intronic
20	36921689	0.96	1	rs7271200	A	G	0.05	0.07	0.01	0.07	SAMHD1	intronic
20	36936958	0.96	1	rs148248680	T	G	0.05	0.07	0.01	0.07	SAMHD1	intronic
20	36938337	0.96	1	rs138198428	C	T	0.06	0.07	0.01	0.07	SAMHD1	intronic

SNP: rs1291141 and variants with $r^2 \geq 0.8$

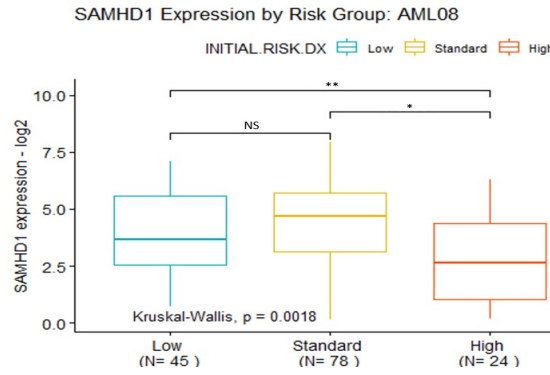
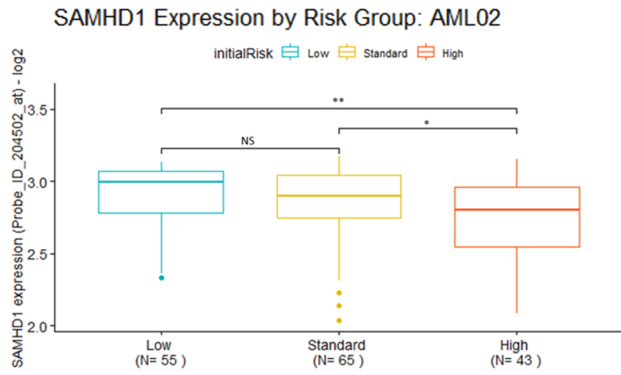
20	36879632	0.9	0.96	rs1024191	A	T	0.6	0.67	0.58	0.85	C20orf118	intronic
20	36881006	0.94	0.98	rs1291126	T	G	0.61	0.67	0.58	0.85	C20orf118	intronic
20	36887791	1	1	rs1291139	A	T	0.6	0.65	0.52	0.85	C20orf118	intronic
20	36890036	1	1	rs1291141	T	G	0.6	0.65	0.52	0.85	C20orf118	intronic
20	36897237	1	1	rs1291143	A	C	0.72	0.66	0.52	0.85	SAMHD1	intronic
20	36899487	0.98	1	rs1291144	A	G	0.63	0.65	0.52	0.84	SAMHD1	intronic
20	36900367	0.94	-1	rs138572736	TC	T	0.32	0.33	0.45	0.15	SAMHD1	intronic
20	36900598	0.95	1	rs1291146	T	C	0.32	0.62	0.52	0.84	SAMHD1	intronic
20	36901350	0.99	1	rs1291147	G	A	0.68	0.66	0.52	0.84	SAMHD1	intronic
20	36903538	0.84	1	rs6030021	A	T	0.64	0.64	0.5	0.82	SAMHD1	intronic
20	36903539	0.81	1	rs6030022	A	C	0.63	0.63	0.5	0.82	SAMHD1	intronic
20	36905059	1	1	rs1291149	C	T	0.68	0.66	0.52	0.85	SAMHD1	intronic
20	36916270	0.94	-0.97	rs4812586	A	G	0.32	0.35	0.49	0.15	SAMHD1	intronic
20	36918247	0.94	-0.97	rs7261175	G	A	0.32	0.34	0.48	0.15	SAMHD1	intronic
20	36922795	0.93	-0.97	rs2342113	A	C	0.32	0.33	0.48	0.15	SAMHD1	intronic
20	36922799	0.93	-0.97	rs6130114	C	G	0.32	0.33	0.48	0.15	SAMHD1	intronic

20	36923192	0.92	-0.97	rs6130116	G	A	0.32	0.34	0.47	0.16	SAMHD1	intronic
20	36925110	0.88	-0.95	rs6124452	C	A	0.33	0.34	0.47	0.15	SAMHD1	intronic
20	36930113	0.92	-0.97	rs4810357	A	G	0.33	0.34	0.48	0.16	SAMHD1	intronic
20	36930511	0.91	-0.97	rs57448673	C	A	0.32	0.34	0.48	0.15	SAMHD1	intronic
20	36932008	0.94	-0.97	rs6124459	G	A	0.32	0.34	0.48	0.15	SAMHD1	intronic
20	36932224	0.94	-0.97	rs62208120	G	C	0.32	0.34	0.48	0.15	SAMHD1	intronic
20	36933066	0.94	-0.97	rs6130139	T	C	0.32	0.34	0.48	0.15	SAMHD1	intronic
20	36937842	0.91	-0.97	rs6130150	G	T	0.04	0.28	0.48	0.15	SAMHD1	intronic
20	36942292	0.88	-0.97	rs6124471	C	T	0.3	0.33	0.47	0.15	SAMHD1	intronic
20	36942337	0.89	-0.96	rs6124472	G	A	0.3	0.33	0.47	0.15	SAMHD1	intronic
20	36942341	0.9	-0.97	rs6124473	C	T	0.31	0.33	0.47	0.15	SAMHD1	intronic
20	36950277	0.92	-0.96	rs4810362	A	G	0.32	0.34	0.49	0.15	SAMHD1	intronic

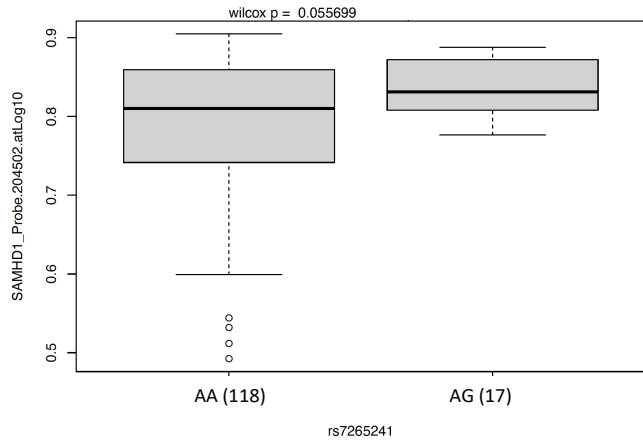
SNP: rs1291128 and variants with $r^2 \geq 0.8$

20	36879944	0.95	0.97	rs6065410	C	G	0.2	0.38	0.54	0.54	C20orf118	intronic
20	36880305	0.99	1	rs1291124	A	G	0.21	0.38	0.53	0.54	C20orf118	intronic
20	36880556	0.99	1	rs1291125	T	C	0.21	0.38	0.53	0.54	C20orf118	intronic
20	36882286	1	1	rs1291128	T	C	0.2	0.38	0.53	0.54	C20orf118	intronic
20	36882545	0.99	1	rs1291129	T	C	0.19	0.38	0.53	0.54	C20orf118	intronic
20	36882663	1	1	rs1291130	G	C	0.2	0.38	0.54	0.54	C20orf118	intronic
20	36925642	0.83	-0.97	rs6030195	G	A	0.78	0.58	0.48	0.43	SAMHD1	intronic
20	36926125	0.83	-0.97	rs6130119	C	T	0.8	0.58	0.48	0.43	SAMHD1	intronic
20	36927518	0.83	-0.97	rs6016781	C	T	0.79	0.58	0.48	0.43	SAMHD1	intronic
20	36927789	0.83	-0.97	rs6016783	T	G	0.8	0.58	0.49	0.43	SAMHD1	intronic
20	36941421	0.86	-0.97	rs6030315	C	A	0.8	0.59	0.52	0.44	SAMHD1	intronic
20	36941608	0.86	-0.97	rs1891643	G	A	0.8	0.59	0.52	0.44	SAMHD1	intronic

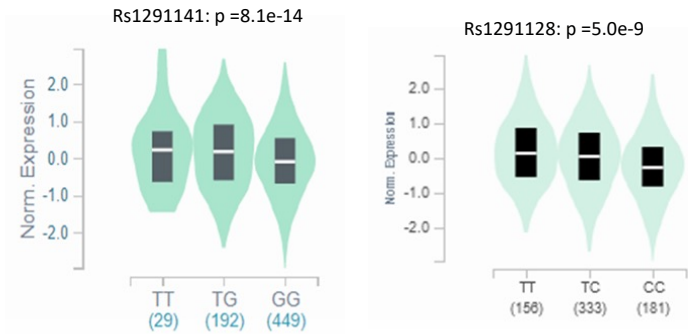
A) SAMHD1 expression by risk groups



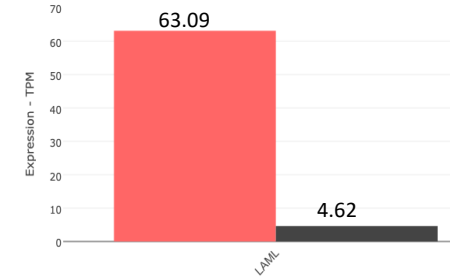
B) SAMHD1 expression by rs7265241 genotypes within AML02 cohort



C) SAMHD1 expression by rs1291141 and rs1291128 in whole blood : GTEx database



D) SAMHD1 expression in normal and tumor : TCGA- LAML cohort (median Expression level listed)



Supplementary Figure 1. SAMHD1 mRNA Expression by Initial Risk Group Assignment and by SAMHD1 SNPs.