

Figure S1. A total of 23 genes in the red module were associated with the percentage of blast cells in BM. The correlation coefficients were calculated by Pearson's method with Bonferroni multiple testing correction and a two-tailed value of $P < 0.05$ indicated a statistically significant difference, $n=173$. BM, bone marrow.

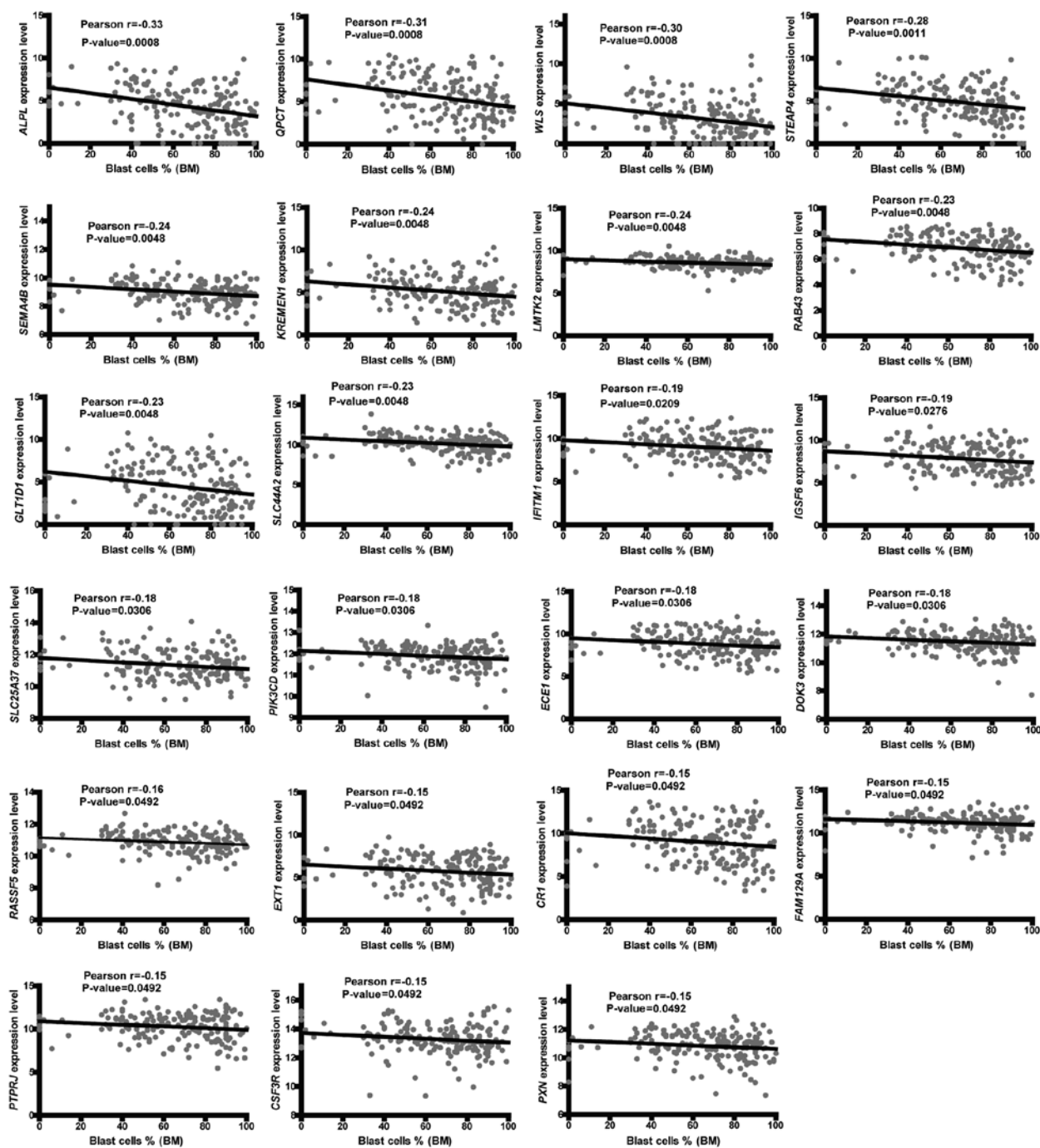


Figure S2. The candidate genes were downregulated in the AML samples compared with the healthy samples, which was confirmed by the RNA_seq data. The base mean is reported as the mean of the normalized counts of all ten samples. Differences were tested for significance according to unpaired t-tests, and $P < 0.05$ indicated a statistically significant difference. AML, Acute myeloid leukemia.

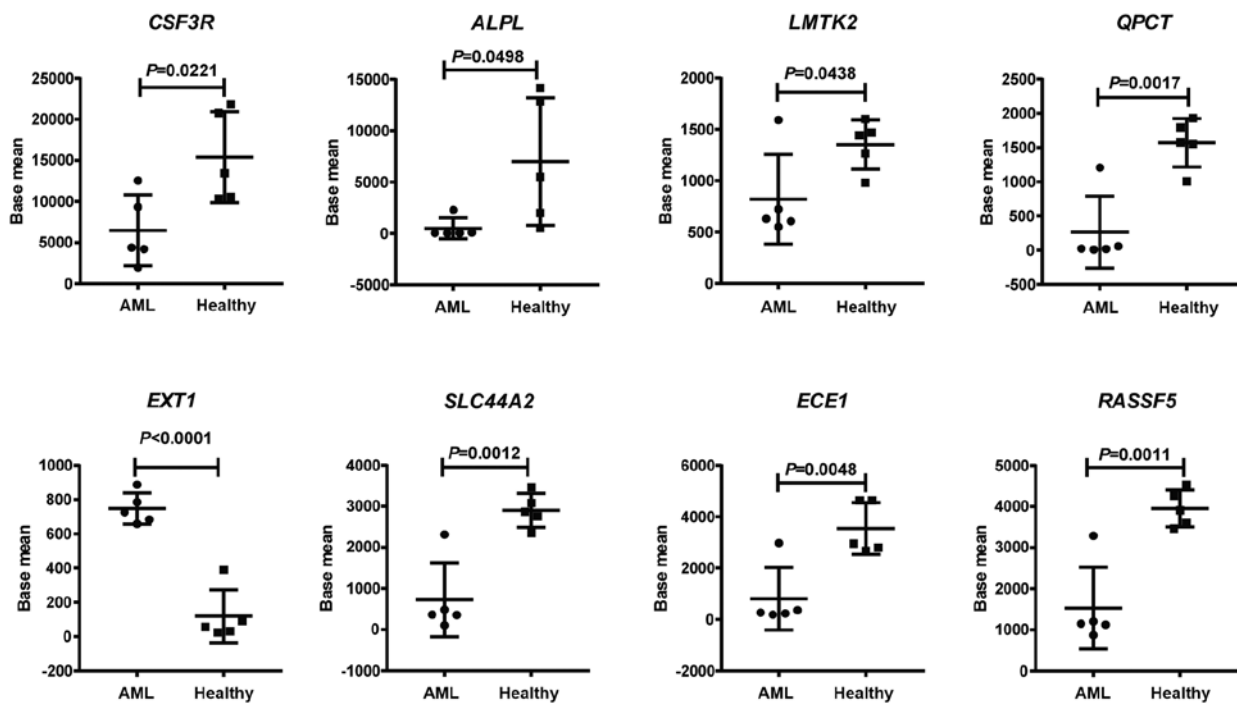


Table SI. The sequences of the forward and reverse primers for reverse transcription-quantitative PCR.

Gene symbols	Forward primers (5'-3')	Reverse primers (5'-3')
<i>ALPL</i>	CCACGTCTTCACATTTGGTG	AGACTGCGCCTGGTAGTTGT
<i>CSF3R</i>	ATCTTCTGGACCAACGCTCA	GGTCAAGGTCATCAGGGTGA
<i>LMTK2</i>	CTGGAATTAAGAGCCACGCC	TAGGCAAGGAGTTCGTTTCGT
<i>GAPDH</i>	GATATTGTTGCCATCAATGAC	TTGATTTTGGAGGGATCTCG

Table SII. Overview of the RNA_seq data.

Sample	Total_reads	Total clean bases	Clean reads Q20 (%)	Clean reads Q30 (%)
AML1	93038886	13955832900	97.13	93.23
AML2	104746950	15712042500	97.23	93.43
AML3	114959054	17243858100	97.21	93.38
AML4	102851730	15427759500	97.19	93.35
AML5	108821740	16323261000	97.25	93.5
Healthy 1	101210308	15181546200	97.42	93.83
Healthy 2	111545596	16731839400	97.25	93.49
Healthy 3	110930060	16639509000	97.18	93.35
Healthy 4	86989436	13048415400	96.19	90.85
Healthy 5	86915180	13037277000	96.29	91.06

Table SIII. The top 20 up and down differentially expressed genes.

Nuber.	Upregulated genes		Downregulated genes	
	GeneID	log2 ^{Fold}	GeneID	log2 ^{Fold}
1	lnc-HOXB2-2	6.31	lnc-PCYT1A-3	-6.96
2	lnc-IGSF10-3	6.22	lnc-UBAC2-4	-5.89
3	lnc-IGSF10-1	6.04	lnc-ZBP1-3	-5.70
4	lnc-C1orf228-5	6.01	55287	-5.69
5	3216	5.95	XLOC_125282	-5.57
6	lnc-EVX1-17	5.92	100996385	-5.52
7	114815	5.86	56344	-5.51
8	lnc-NAPG-4	5.84	lnc-CMAHP-4	-5.47
9	3203	5.83	59341	-5.44
10	lnc-HOXB4-1	5.80	146723	-5.43
11	lnc-CREG2-1	5.78	lnc-MEST-5	-5.40
12	lnc-SLC35G4-3	5.77	10439	-5.33
13	lnc-MED12L-3	5.76	10158	-5.32
14	lnc-HOXA7-1	5.74	lnc-C5orf25-5	-5.31
15	lnc-IRX3-4	5.74	lnc-GLT25D2-1	-5.31
16	3215	5.72	101926935	-5.30
17	203430	5.72	7045	-5.29
18	79191	5.71	lnc-OR4E2-6	-5.28
19	lnc-UGT8-2	5.70	lnc-KLF14-4	-5.26
20	lnc-GATA5-2	5.69	lnc-MAG-2	-5.25

Table SIV. Information on the candidate genes in the red module network.

Node	\log_2^{Fold}	P-value	Difference	Symbol
100133161	-2.509257687	7.27911E-06	Down	LINC01001
100133331	-2.29109258	1.36086E-07	Down	LOC100133331
10092	-2.22108372	4.33023E-15	Down	ARPC5
101	-2.364516907	7.24207E-06	Down	ADAM8
10261	-3.34297105	3.72893E-10	Down	IGSF6
10365	-2.691945362	3.2959E-10	Down	KLF2
10409	-3.067890994	0.001959938	Down	BASP1
10509	-2.566642249	2.09132E-07	Down	SEMA4B
1051	-3.037972927	3.71958E-08	Down	CEBPB
10581	-2.95939889	1.01911E-06	Down	IFITM2
10938	-2.107338442	7.56968E-08	Down	EHD1
11025	-3.847394746	1.19042E-06	Down	LILRB3
11027	-2.759744837	1.45465E-08	Down	LILRA2
116496	-3.072004408	1.12099E-06	Down	FAM129A
116844	-2.802956833	0.000135308	Down	LRG1
120425	-2.90371791	0.0003698	Down	JAML
1230	-3.247403926	6.90863E-06	Down	CCR1
126364	-3.462678302	1.60455E-05	Down	LRRC25
131540	-3.841024294	0.000446085	Down	ZDHHC19
133	-3.22465554	0.00100577	Down	ADM
1378	-4.214254018	1.33925E-06	Down	CR1
140885	-2.738821615	2.147E-08	Down	SIRPA
1441	-2.321344535	3.84937E-06	Down	CSF3R
144423	-3.045006239	0.002361121	Down	GLT1D1
150372	-2.677810281	0.004359051	noDEG	NFAM1
1662	0.942485935	1.11707E-07	noDEG	DDX10
168544	-3.018061382	5.42365E-09	Down	ZNF467
1843	-2.717787387	4.64114E-08	Down	DUSP1
1889	-2.920415758	0.000139207	Down	ECE1
2131	-3.517716064	2.64458E-09	Down	EXT1
220213	-2.581897859	8.69216E-10	Down	OTUD1
2207	-3.365198416	1.00629E-08	Down	FCER1G
2212	-3.309623545	3.658E-05	Down	FCGR2A
22853	-1.708923727	1.70344E-06	Down	LMTK2
22904	-1.943207262	9.09666E-07	Down	SBNO2
23406	-3.432972361	5.65615E-13	Down	COTL1
2357	-3.996017505	2.16908E-05	Down	FPR1
23765	-2.378131945	9.70208E-05	Down	IL17RA
249	-3.994684305	0.000215609	Down	ALPL
25797	-3.013161535	0.002193281	Down	QPCT
25798	-2.787052666	1.31559E-10	Down	BRI3
26253	-3.300066916	0.000716168	Down	CLEC4E
2647	-1.965553398	1.56776E-09	Down	BLOC1S1
26873	-3.433466128	9.10408E-06	Down	OPLAH
27128	-2.019402748	1.26535E-09	Down	CYTH4
27180	-3.54593989	1.04938E-05	Down	SIGLEC9
27202	-2.748123924	0.003479717	noDEG	C5AR2
2783	-1.785093632	1.29924E-08	Down	GNB2
2799	-2.372186994	1.99585E-10	Down	GNS
284119	-2.030129077	0.051968157	noDEG	CAVIN1
284996	-2.403659041	7.87122E-13	Down	RNF149
3055	-3.163638664	4.51319E-07	Down	HCK
3274	-2.091578272	5.22407E-06	Down	HRH2
3310	-2.421011837	0.013666129	noDEG	HSPA6
339122	-3.059123913	1.06225E-06	Down	RAB43
339488	1.076591857	3.84057E-05	Up	TFAP2E

Table SIV. Continued.

Node	log ₂ ^{Fold}	P-value	Difference	Symbol
366	-3.648849908	0.000138594	Down	AQP9
3675	-3.810229945	1	noDEG	ITGA3
3684	-3.110135683	3.40481E-08	Down	ITGAM
3687	-2.637815781	2.42101E-06	Down	ITGAX
3689	-2.928576516	4.84431E-10	Down	ITGB2
374872	-2.554183855	1.81879E-06	Down	C19orf35
391	-2.274438576	1.82517E-10	Down	RHOG
3985	-2.30808997	2.22008E-06	Down	LIMK2
4067	-2.151521339	7.12497E-10	Down	LYN
409	-2.452687819	6.70066E-15	Down	ARRB2
4210	-3.010346072	0.000884635	Down	MEFV
4627	-1.739001004	2.47453E-06	Down	MYH9
4688	-2.929170239	0.000145328	Down	NCF2
51043	-2.200440716	1.03922E-08	Down	ZBTB7B
51312	-2.454689659	3.68142E-07	Down	SLC25A37
5266	-2.70331267	1	no DEG	PI3
5293	-1.835317574	1.4487E-06	Down	PIK3CD
5339	-2.419990457	6.23463E-10	Down	PLEC
53829	-3.09378304	5.14386E-05	Down	P2RY13
5447	-2.123395185	1.53858E-07	Down	POR
54502	-2.535581897	0.004811436	noDEG	RBM47
55006	0.84838788	5.15481E-05	noDEG	TRMT61B
55911	-2.084301717	3.31059E-06	Down	APOBR
56996	-2.071078836	8.18872E-08	Down	SLC12A9
57085	-2.456346782	0.000636747	Down	AGTRAP
57153	-2.834049083	9.93729E-07	Down	SLC44A2
57580	-1.945227477	1.30312E-08	Down	PREX1
5795	-2.965700785	0.000209534	Down	PTPRJ
5829	-2.765128608	1.53785E-11	Down	PXN
5914	-2.291033876	2.97367E-10	Down	RARA
60	-2.204162107	9.13586E-08	Down	ACTB
602	-2.833715453	8.39874E-13	Down	BCL3
604	-2.586763404	0.005145068	noDEG	BCL6
6282	-3.068547314	8.70787E-09	Down	S100A11
64115	-2.080664857	9.6569E-08	Down	VSIR
6648	-2.325180983	6.35514E-06	Down	SOD2
6688	-2.180822692	1.10704E-08	Down	SPI1
6813	-2.24048923	1.50106E-10	Down	STXBP2
7056	-2.656757421	0.002724124	noDEG	THBD
7096	-2.826178789	1.68973E-10	Down	TLR1
728	-3.552307535	0.000164102	Down	C5AR1
7305	-2.675973151	1.29977E-13	Down	TYROBP
7408	-2.361772838	1.04488E-08	Down	VASP
7538	-2.636897274	8.38335E-08	Down	ZFP36
7850	-3.01406299	0.009046032	noDEG	IL1R2
79650	-1.810289774	3.28829E-07	Down	USB1
79660	-2.005057006	3.11827E-05	Down	PPP1R3B
79689	-3.271853769	0.001064008	Down	STEAP4
79725	1.137633107	1.5272E-06	Up	THAP9
79930	-2.064695988	1.63654E-05	Down	DOK3
79971	-2.754019566	0.01077436	noDEG	WLS
80325	-1.868096185	5.0654E-06	Down	ABTB1
83593	-2.284108707	1.88903E-10	Down	RASSF5
838	-3.309465014	1.4259E-06	Down	CASP5
83862	-1.961706862	1.90258E-06	Down	TMEM120A
83999	-3.850473176	0.000156683	Down	KREMEN1

Table SIV. Continued.

Node	log ₂ ^{Fold}	P-value	Difference	Symbol
8519	-3.416726183	4.79903E-10	Down	IFITM1
85450	-2.173751105	7.60631E-07	Down	ITPRIP
8650	-1.956831231	8.9969E-12	Down	NUMB
8676	-2.838185383	0.000188325	Down	STX11
8843	-2.25695577	0.002082521	Down	HCAR3
9114	-2.104153519	6.03706E-09	Down	ATP6V0D1
91662	-2.826143828	0.001024686	Down	NLRP12
9586	-3.707249262	2.48781E-06	Down	CREB5
9766	-2.015309195	3.91881E-11	Down	SUSD6
978	-2.914771279	0.001830645	Down	CDA
9961	-2.164777381	2.07125E-11	Down	MVP
lnc-AC011498.1-4	-2.509561215	0.00011687	Down	lnc-AC011498.1-4
lnc-AC138035.1-2	-2.467860704	2.76779E-09	Down	lnc-AC138035.1-2
lnc-ADAM10-9	-3.085131335	0.000619403	Down	lnc-ADAM10-9
lnc-AL137145.1-1	-2.613490387	4.73943E-09	Down	lnc-AL137145.1-1
lnc-ANKRD27-10	-3.561241164	1.57894E-06	Down	lnc-ANKRD27-10
lnc-AQP9-4	-2.997251479	0.006957374	noDEG	lnc-AQP9-4
lnc-C1orf21-3	-3.542413724	3.34284E-06	Down	lnc-C1orf21-3
lnc-C20orf3-1	-3.337522047	1.4801E-06	Down	lnc-C20orf3-1
lnc-CMTM2-1	-2.503203935	0.043457985	noDEG	lnc-CMTM2-1
lnc-EGLN1-1	-2.488553234	3.83992E-05	Down	lnc-EGLN1-1
lnc-FAM157A-4	-2.954280356	8.81394E-05	Down	lnc-FAM157A-4
lnc-FBXL5-10	-2.753941597	3.97493E-06	Down	lnc-FBXL5-10
lnc-FBXO45-8	-2.109663081	1.34707E-08	Down	lnc-FBXO45-8
lnc-FGF18-2	0.856878796	0.002183407	noDEG	lnc-FGF18-2
lnc-MLF1IP-1	-3.055043555	1.06376E-09	Down	lnc-MLF1IP-1
lnc-PRR7-2	-2.159332204	5.31227E-05	Down	lnc-PRR7-2
lnc-RPLP0-4	-2.780657039	3.21348E-06	Down	lnc-RPLP0-4
lnc-RPS12-1	-3.698284306	4.73324E-05	Down	lnc-RPS12-1
lnc-STOML2-1	-2.237821724	2.92575E-06	Down	lnc-STOML2-1
lnc-TRAPPC5-1	-3.886521413	3.34956E-05	Down	lnc-TRAPPC5-1
node	log ₂ Fold	Probability	Diff	Symbol
circ_315	-3.099979588	0.990179777	Down	circ_315
circ_1344	-2.248069052	0.989867481	Down	circ_1344
circ_3259	-1.435728699	0.989748095	Down	circ_3259
circ_4310	-2.6550775	0.986747204	Down	circ_4310

DEF, differentially expressed genes; lnc, long non-coding.