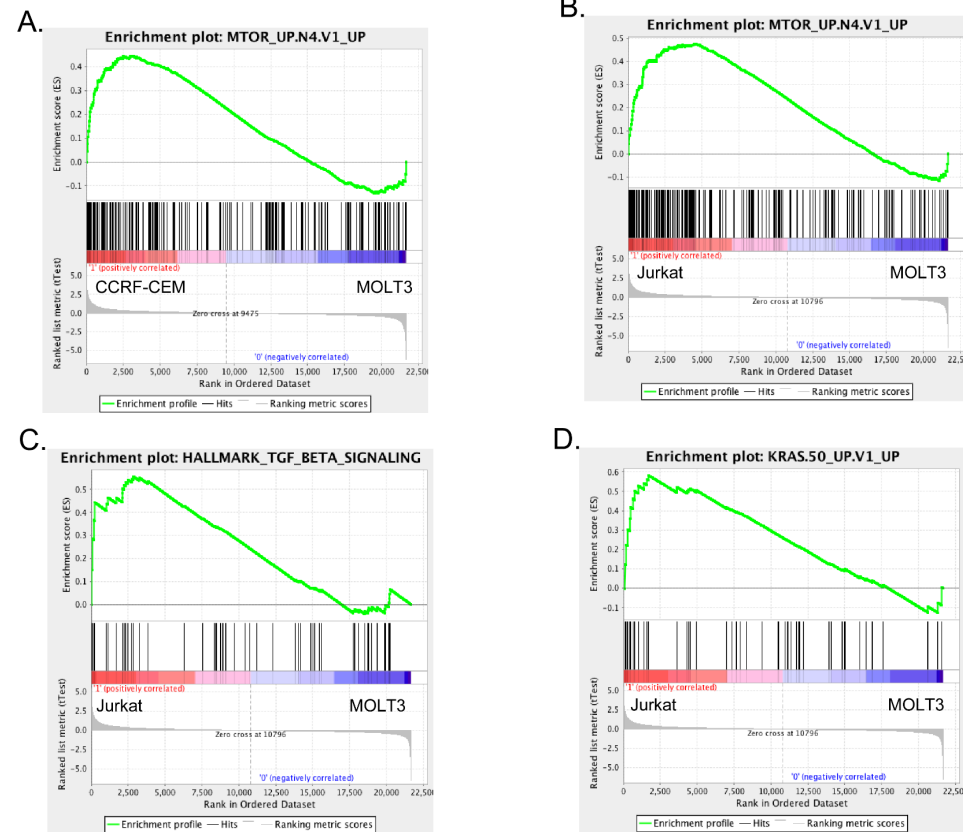


T-cell acute lymphoblastic leukemia cells display activation of different survival pathways

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Supplementary Figure S1: Gene set enrichment analysis (GSEA) showed enrichment of mTORC signaling pathway in CCRF-CEM (A) and Jurkat (B) cells as well as TGF-beta (C) and KRAS (D) in Jurkat cells.



Supplementary table S1-S4: Gene set enrichment analysis (GSEA) showed enrichment of different signaling pathways in CCRF-CEM and Jurkat cells.

Table S1: CCRF-CEM Vs MOLT3 (Hallmarks)

	GS follow link to MSigDB	SIZE	ES	NES	NOM p-val	FDR q-val	FWER p-val	RANK AT MAX	LEADING EDGE
1	HALLMARK FATTY ACID METABOLISM	153	0.50	1.83	0.000	0.008	0.009	3737	tags=34%, list=17%, signal=41%
2	HALLMARK ADIPOGENESIS	194	0.41	1.51	0.007	0.140	0.270	2495	tags=18%, list=12%, signal=20%
3	HALLMARK MTORC1 SIGNALING	198	0.41	1.50	0.005	0.096	0.277	5130	tags=40%, list=24%, signal=52%
4	HALLMARK MYC TARGETS V2	54	0.45	1.38	0.072	0.219	0.640	6489	tags=56%, list=30%, signal=79%

Table S2: CCRF-CEM Vs MOLT3 (Oncogenic Signature)

	GS follow link to MSigDB	SIZE	ES	NES	NOM p-val	FDR q-val	FWER p-val	RANK AT MAX	LEADING EDGE
1	MTOR UP.N4.V1 UP	192	0.45	1.64	0.000	0.150	0.166	3155	tags=31%, list=15%, signal=36%
2	JNK DN.V1 UP	182	0.40	1.46	0.005	0.611	0.755	1500	tags=12%, list=7%, signal=12%
3	MEL18 DN.V1 UP	136	0.41	1.45	0.010	0.442	0.782	2786	tags=18%, list=13%, signal=21%
4	CSR EARLY UP.V1 UP	155	0.38	1.37	0.037	0.772	0.970	4967	tags=32%, list=23%, signal=42%
5	CSR LATE UP.V1 DN	154	0.37	1.32	0.045	0.979	0.997	2293	tags=16%, list=11%, signal=18%
6	MTOR UP.N4.V1 DN	165	0.36	1.31	0.048	0.851	0.997	3453	tags=26%, list=16%, signal=31%
7	BMI1 DN.V1 UP	145	0.36	1.28	0.067	0.940	1.000	2504	tags=18%, list=12%, signal=20%
8	BCAT.100 UP.V1 DN	34	0.44	1.27	0.132	0.904	1.000	2007	tags=18%, list=9%, signal=19%
9	CYCLIN D1 KE .V1 DN	187	0.34	1.26	0.056	0.864	1.000	1281	tags=11%, list=6%, signal=12%
10	KRAS.LUNG UP.V1 UP	131	0.36	1.26	0.088	0.789	1.000	2392	tags=16%, list=11%, signal=18%

Table S3: Jurkat Vs MOLT3 (Hallmarks)

	GS follow link to MSigDB	SIZE	ES	NES	NOM p-val	FDR q-val	FWER p-val	RANK AT MAX	LEADING EDGE
1	HALLMARK ANDROGEN RESPONSE	98	0.54	1.72	0.000	0.036	0.034	1881	tags=21%, list=9%, signal=23%
2	HALLMARK ESTROGEN RESPONSE EARLY	196	0.49	1.70	0.000	0.025	0.047	2532	tags=25%, list=12%, signal=28%
3	HALLMARK ANGIOGENESIS	36	0.60	1.63	0.008	0.031	0.087	1533	tags=22%, list=7%, signal=24%
4	HALLMARK COAGULATION	132	0.49	1.61	0.001	0.029	0.103	2734	tags=20%, list=13%, signal=22%
5	HALLMARK TGF BETA SIGNALING	53	0.56	1.61	0.011	0.023	0.103	2848	tags=28%, list=13%, signal=33%
6	HALLMARK MTORC1 SIGNALING	198	0.46	1.58	0.003	0.028	0.146	4586	tags=37%, list=21%, signal=47%
7	HALLMARK ESTROGEN RESPONSE LATE	197	0.45	1.57	0.002	0.030	0.178	3213	tags=22%, list=15%, signal=25%
8	HALLMARK MYC TARGETS V2	54	0.54	1.54	0.014	0.035	0.229	6731	tags=72%, list=31%, signal=105%
9	HALLMARK FATTY ACID METABOLISM	153	0.45	1.52	0.004	0.036	0.263	2858	tags=19%, list=13%, signal=22%
10	HALLMARK UV RESPONSE DN	140	0.45	1.50	0.008	0.041	0.327	3114	tags=25%, list=14%, signal=29%
11	HALLMARK XENOBIOTIC METABOLISM	196	0.42	1.45	0.008	0.065	0.499	4572	tags=27%, list=21%, signal=33%
12	HALLMARK ADIPOGENESIS	194	0.41	1.43	0.016	0.068	0.543	2212	tags=18%, list=10%, signal=20%
13	HALLMARK APICAL JUNCTION	194	0.42	1.43	0.009	0.065	0.560	3283	tags=22%, list=15%, signal=26%
14	HALLMARK HEME METABOLISM	196	0.41	1.41	0.009	0.069	0.602	3307	tags=24%, list=15%, signal=28%
15	HALLMARK CHOLESTEROL HOMEOSTASIS	74	0.46	1.40	0.045	0.071	0.638	1771	tags=23%, list=8%, signal=25%

16	<u>HALLMARK PROTEIN SECRETION</u>	95	0.44	1.40	0.045	0.072	0.660	5138	tags=34%, list=24%, signal=44%
17	<u>HALLMARK KRAS SIGNALING UP</u>	193	0.40	1.38	0.018	0.077	0.715	2934	tags=20%, list=14%, signal=23%
18	<u>HALLMARK PI3K AKT MTOR SIGNALING</u>	104	0.43	1.36	0.041	0.086	0.777	2464	tags=17%, list=11%, signal=19%
19	<u>HALLMARK SPERMATOGENESIS</u>	135	0.37	1.22	0.116	0.263	0.989	2166	tags=11%, list=10%, signal=12%

Table S4: Jurkat Vs MOLT3 (Oncogenic Signature)

	GS follow link to MSigDB	SIZE	ES	NES	NOM p-val	FDR q-val	FWER p-val	RANK AT MAX	LEADING EDGE
1	STK33 SKM DN	244	0.53	1.89	0.000	0.001	0.001	2685	tags=27%, list=12%, signal=31%
2	STK33 DN	248	0.52	1.85	0.000	0.005	0.009	2365	tags=30%, list=11%, signal=33%
3	ESC V6.5 UP LATE.V1 UP	182	0.52	1.78	0.000	0.007	0.021	1991	tags=18%, list=9%, signal=20%
4	TBK1.DF UP	265	0.50	1.77	0.000	0.006	0.024	2932	tags=25%, list=14%, signal=29%
5	LTE2 UP.V1 UP	180	0.52	1.77	0.000	0.005	0.024	2707	tags=27%, list=12%, signal=31%
6	STK33 NOMO DN	254	0.49	1.75	0.000	0.007	0.039	2316	tags=24%, list=11%, signal=26%
7	RAF UP.V1 UP	189	0.50	1.73	0.001	0.008	0.052	2514	tags=30%, list=12%, signal=33%
8	MEK UP.V1 UP	189	0.49	1.69	0.000	0.013	0.100	2813	tags=25%, list=13%, signal=29%
9	RAF UP.V1 DN	186	0.49	1.68	0.000	0.014	0.114	2745	tags=25%, list=13%, signal=29%
10	KRAS.50 UP.V1 UP	46	0.58	1.65	0.009	0.018	0.162	1695	tags=24%, list=8%, signal=26%
11	MYC UP.V1 UP	166	0.49	1.65	0.000	0.016	0.163	4629	tags=40%, list=21%, signal=50%
12	MTOR UP.N4.V1 UP	192	0.48	1.64	0.000	0.016	0.180	4580	tags=43%, list=21%, signal=54%
13	ESC J1 UP LATE.V1 UP	179	0.47	1.62	0.000	0.022	0.250	1991	tags=17%, list=9%, signal=19%
14	E2F3 UP.V1 UP	180	0.46	1.58	0.001	0.030	0.354	3653	tags=31%, list=17%, signal=36%
15	LEF1 UP.V1 UP	182	0.46	1.57	0.000	0.033	0.390	2579	tags=19%, list=12%, signal=22%

16	<u>BMI1 DN.V1 UP</u>	145	0.47	1.57	0.000	0.031	0.392	1967	tags=19%, list=9%, signal=21%
17	<u>TGFB UP.V1 UP</u>	180	0.46	1.57	0.003	0.030	0.394	2495	tags=17%, list=12%, signal=19%
18	<u>CRX NRL DN.V1 DN</u>	122	0.49	1.56	0.003	0.032	0.435	2770	tags=26%, list=13%, signal=30%
19	<u>MEL18 DN.V1 DN</u>	140	0.47	1.55	0.003	0.034	0.471	2690	tags=24%, list=12%, signal=27%
20	<u>ERB2 UP.V1 UP</u>	185	0.45	1.55	0.003	0.033	0.475	3426	tags=29%, list=16%, signal=34%