Table S1. COG samples: patient characteristics

Sample	Age at dx (in years)	WBC (x10³ /µL)	Marrow Blast %	FAB	Cytogenetics	Treatment Protocol	Response to Course 1	Follow-up (days)	Status	Cause of Death	Constit. pStat3
CBF 1	13.2	24.3	51	M2	45,X,-Y,t(8:21)(q22:q22)[14]/46,XY[6]	CCG 2961	W/D (NR)	1569	Alive		-
CBF 2	3.8	19.8	32	M2	45,X,-X,t(8:21)(q22:q22)[19]/46,XX[1]	CCG 2961	CR	3629	Alive		-
CBF 3	12.9	69.2	73	M2	46,XX,der(7)t(7:9)(q22:q13),t(8:21)(q22:q22), add(9)(q13)[20]	CCG 2961	CR	485	Dead	PD	-
CBF 4	15.1	7.9	7	Unk	45,X,-Y,t(8:21)(q22:q22)[20]	AAML03P1	CR	1634	Alive		+
CBF 5	4.0	5.7	77	M2	46,XX,t(8:21)(q22;q22)	AAML03P1	CR	1197	Alive		-
CBF 6	11.1	19.7	85	M2	45,X,-Y,t(8:21)(q22:q22)[18]/46,XY[2]	CCG 2961	CR	4013	Alive		-
CBF 7	4.2	38	59	M2	46,XY,t(8:16:21)(q22:p11.2:q22)[8]/46, idem,der(9)t(1:9)(q25:q34)[20]/46,XY[2]	CCG 2961	CR	3754	Alive		-
CBF 8	11.5	31.8	28	M2	46,XX,t(8:21)(q22:q22)[20]	CCG 2961	CR	451	Dead	Infection	-
CBF 9	11.7	14	72	M2	45,X,-X,t(8:21)(q22:q22)[20]	CCG 2961	W/D (CR)	2432	Alive		-
CBF 10	16.2	25.4	85	M2	46,XY,t(8:21)(q22:q22)[20]	CCG 2961	CR	2319	Alive		-
NK 1	10.5	59.7	98	M4	46,XY[20]	CCG 2891	PR	4631	Alive		+
NK 2	11.1	13.6	40	M2	46,XX[21]	CCG 2891	CR	190	Dead	Infection	+
NK 3	3.1	575	33	M4	46,XY[20]	CCG 2891	Fail	321	Dead	PD	+
NK 4	4.9	330.7	87	M2	46,XY[20]	CCG 2891	Fail	463	Dead	Other	+
NK 5	13.3	29.6	86	M1	46,XX[20]	CCG 2891	CR	843	Dead	PD	+
NK 6	9.7	21	68	M1	46,XX[20]	CCG 2891	CR	3352	Alive		-
NK 7	10.8	63.3	66	M4	46,XY[20]	CCG 2891	CR	2944	Alive		-
NK 8	15.0	91.3	61	M1	46,XX[29]/NC[1]	CCG 2891	CR	3235	Alive		-

Abbreviations:

FAB - French American British classification

W/D - Withdrawn from study

CR - Complete Response (<5% marrow blasts)

PR - Partial Response (5-25% marrow blasts)

PD - Progressive Disease

NR – No Response

Table S2. TXCCC samples: patient characteristics

Sample	Age at dx (in years)	WBC (x10³ /μL)	Marrow Blast %	FAB	Cytogenetics	Assays Performed
1861	11	122,000	79	M2	46,XY[20]	Stim; C188-9
1733	1	19,000	90	M1	Near tetraploid with t(2;12)(q33;p13)	C188-9; CFU
2187	9	71,000	65	M4	46,XY,t(1;6;11)(q21;q27;q23)[19],46,XY[1]	Stim; C188-9; CFU
2053					Data Not Available	Stim
3190	10	400,000	95	M4	MLL-rearranged by FISH (relapse of #2187)	Stim; C188-9
3482	13	40,000	70	M5	46,XY,der(10)inv(11)(q13q23)t(10;11)(p12;q13), der(11)t(10;11)(p12;q13)[20]	Stim; CFU
1436	11	528,000	66	Unk	Unknown	C188-9
2735	7	42,000	84	M1	46,XY,t(8;21)(q22;q22)[11]	C188-9; CFU
2742	3	53,000	79(PB)	Unk	47,X,der(X)t(X;1)(q28;q21),+mar[20]	CFU

Abbreviations:

FAB - French American British classification

PB – peripheral blood

Unk – unknown

FISH – fluorescence in situ hybridization

Stim – G-CSF stimulation

C188-9 – pStat3 and/or survival inhibition with C188-9

CFU – colony forming unit assay

Table S3. C188-9 IC_{50}s for inhibition of pStat3 in AML cell lines

Cell Line	C188-9 IC_{50} (μM)
Kasumi-1	4.5
THP-1	4.8
GDM-1	5.0
NB-4	8.3
HL-60	5.3
KG-1	4.1

n=4 for Kasumi-1; n=3 for others

Table S4. C188-9 and JSI-124 EC$_{50}$s for induction of apoptosis in AML cell lines

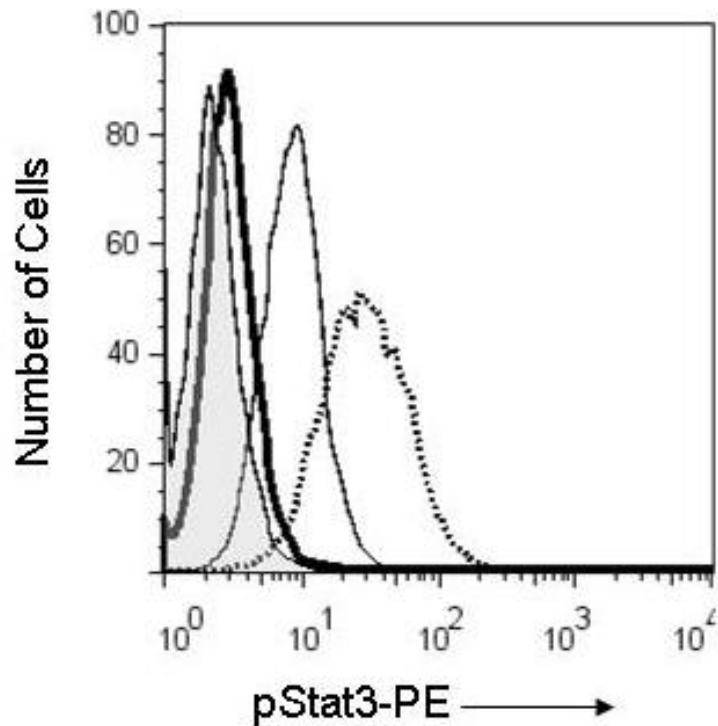| Cell Line	C188-9 EC$_{50}$ (µM) [n]	JSI-124 EC$_{50}$ (µM) [n]
Kasumi-1	8.4 [5]	1.2 [3]
THP-1	15.2 [5]	1.1 [3]
GDM-1	6.0 [4]	9.5 [3]
NB-4	20.5 [6]	13.0 [3]
HL-60	34.7 [6]	6.1 [3]
KG-1	42.8 [3]	6.5 [3]
K562	43.6 [5]	44.9 [3]

Figure S1. Immunoreactivity for pStat3 was blocked by the immunizing pY peptide. THP-1 cells were unstimulated or stimulated with G-CSF (100 ng/ml), then prepared and labeled for FACS analysis. One sample of G-CSF-stimulated cells was labeled with anti-pStat3 antibody that had been pre-incubated for one hour at 4° with the peptide used to develop the antibody (7.5 mg/100 ml reaction). Shaded: isotype control; solid line; unstimulated; dotted line: G-CSF-stimulated; Thick line: peptide-pretreated.