Targeting C-type lectin-like molecule-1 for antibody-mediated immunotherapy in acute myeloid leukemia

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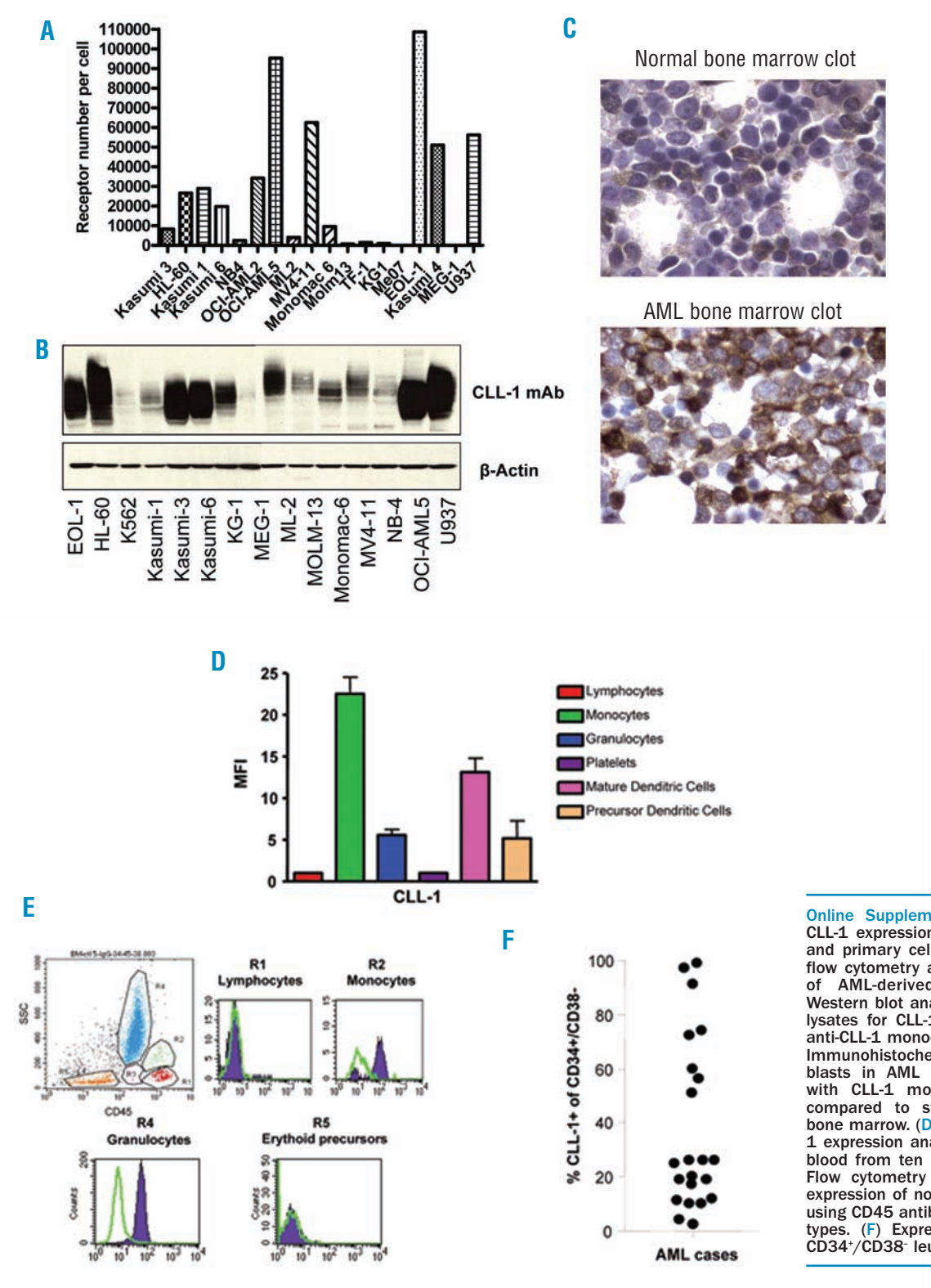
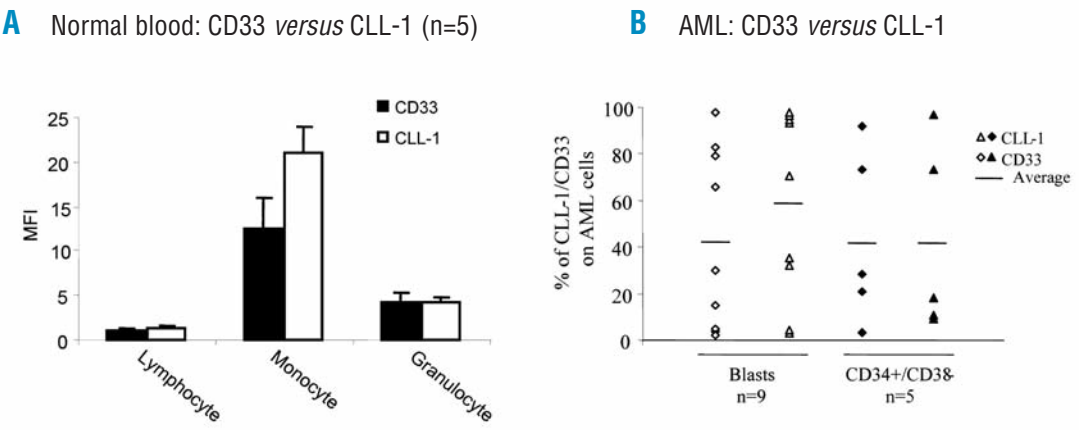


Online Supplementary Figure S1. CLL-1 expression in AML cell lines and primary cells. (A) Quantitative flow cytometry analysis of a panel of AML-derived cell lines. (B) Western blot analysis of whole cell lysates for CLL-1 expression using anti-CLL-1 monoclonal antibody. (C) Immunohistochemical staining of blasts in AML bone marrow clot with CLL-1 monoclonal antibody compared to staining in normal bone marrow. (D) Summary of CLL-1 expression analysis of peripheral blood from ten normal donors. (E) Flow cytometry analysis of CLL-1 expression of normal bone marrow using CD45 antibody to identify cell types. (F) Expression of CLL-1 in $CD34^{+}/CD38^{-}$ leukemic stem cells.



Online Supplementary Figure S2. Comparison of CLL-1 expression with CD33 expression. (A) CD33 and CLL-1 expression in normal blood; bars represent the average results from five donors. (B) CD33 and CLL-1 expression in AML blasts and CD34^{+}/CD38^{-} leukemic stem cells; individual cases are represented by dots.

Online Supplementary Table S1. Summary of information on patients' samples analyzed in this study, including classification, cytogenetic data and expression of CLL-1 and CD33.

No.	Age/Gender	Diagnosis	Cytogenetic categories	FLT3 and NPM1 mutation	% of CLL-1 (blasts)	% of CLL-1 (LSC)
1	52 / F	AML minimally differentiated	N/A	N/A	31	26
2	36 / F	AML without maturation	46, XX	N/A	32	
3	73 / M	AML without maturation	46, XY, t(8;14)(p21;q24), add(17)(q25)[7]/46,idem, add(21)(q22)[13]		59	
4	54 / M	AML without maturation	46, XY	N/A	7	
5	80 / F	AML without maturation	48,XX,+1,del(5)(q22q33),+8[13]/47-50,idem,t(11)(q10),+t(11)(q10),+19[cp2]/46-48,idem,-1,-10,-13,add(13)(p11.2),+19,-20,+mar1,+mar2,+mar3,+mar4,+1-3mar[cp5]		3	
6	86 / M	AML without maturation	46,XY,+8[13]/46,XY[19]		41	
7	90 / F	AML without maturation	N/A		74	3
8	77 / M	AML without maturation	N/A		47	
9	72 / M	AML without maturation	46,XY[20]	N/A	10	
10	62 / F	AML without maturation	46,XX,+19-22[12]/46,XX,add(13)(p11.2)[8]		51	60
11	77 / M	AML without maturation	46,XY,-3,-4,der(4)add(4)(p16)add(4)(q35),der(5)(q13q33),add(5)(p13),-7,del(9)(q31),-13,add(15)(p13),der(17)t(13;17)(q12;p11.2),-21,-22,-22,+mar1,+mar2[cp17]/41,idem,t(13)(q10)[3]		98	97
12	53 / F	AML without maturation	N/A		20	12
13	71 / F	AML with maturation	46,XX,-7[20]		23	
14	67 / F	AML with maturation	46,XX,t(5;10)(q33;q21)[5]/46,XX,[17]		6	
15	81 / F	AML with maturation	44-48,XX,der(4;17)(q10;q10),del(5)(q13q33),del(11)(q21q24),r(14),r(16),del(20)(q11.2q13),+0~5mar[cp20]		74	19
16	55 / F	AML with maturation	Cytogenetics no growth		21	
17	68 / M	AML with maturation	N/A		2	
18	50 / F	AML with maturation	46,XX,t(5;9)(p23;q34)[19]/46XX[1]		23	26
19	70 / M	AML with maturation	46,XY,+8[4]/46,XY[16]		95	
20	37 / F	AML with maturation	N/A		85	
21	46 / M	Acute myelomonocytic leukemia	46, X,-Y, -4, -5, (8)(q10), der(16)t(11;16)(q13;q11.1), -17,-18,1(21)(q10)[20]		44	4
22	79 / M	Acute myelomonocytic leukemia	46-52,X,-Y,t(1;3)(p35;p21),+8,der(11)t(11;13)(q25;q12),-12,add(12)(p11.2),-13,+1-8mar,+1x2[cp20]		69	
23	67 / M	Acute myelomonocytic leukemia	46,XY[20]	N/A	95	
24	47 / F	Acute myelomonocytic leukemia	N/A		90	20
25	68 / F	Acute myelomonocytic leukemia	46, XX, t(2;11)(q31;p15)[19]/44,XX,-14,-21[1]		98	
26	63 / F	Acute myelomonocytic leukemia	46,XX[20]	FLT3: ITD mutation: positive; D835 mutation: negative	78	
27	75 / M	Acute monocytic leukemia	46, XY, +3, t(11;22)(q23;q11.2)?c,+19[cp3]/46, XY,t(11;22)(q23;q11.2)?c[27]		68	
28	65 / M	Acute monoblastic leukemia	46,XY,del(13)(q12q14)[5]/46,XY[15]		93	56
29	80 / M	Acute monocytic leukemia	N/A		88	
30	66 / M	Acute monoblastic leukemia	46,XY[20]	N/A	38	
31	69 / M	Acute monoblastic leukemia	47,XY,-7,+8,+19[cp2]		87	51
32	64 / M	Acute monoblastic leukemia	90-92,XXYY,del(5)(q15),-7,+13,+13,der(15)t(9;15)(q12;p11.2),-21,-21,+mar1,+1mar[cp6]/47,xy,+8[2]/46,XY[12]		95	25
33	74 / F	Acute monocytic leukemia	N/A		98	
34	71 / M	Acute monocytic leukemia	46,XY,+8[4]/46,XY[16]		88	
35	82 / M	Acute monocytic leukemia	46,XY[20]	N/A	99	91
36	94 / M	Acute monocytic leukemia	N/A		98	99
37	60 / M	Acute monocytic leukemia	46,XY,t(2;11)(p16;q23)[19]/46,XY[1]		99	19
38	47 /M	Acute monocytic leukemia	46,XY,del(3)(p13p21),inv(9)(p11q12)[20]		87	72
39	71 / M	Acute monocytic leukemia	46,XY,del(11)(q23.1q23.3)[20]		82	10
40	69 / F	Acute monoblastic leukemia	N/A		90	
41	25 / F	Acute monocytic leukemia	47,XX,t(1;7)(p34.1;p13)x[9],+8[2],+19[7],der(21)t(1;21)(q12;p13)[8]/cp9]/46,XX,t(1;17)(p34.1;p13)x[11]		96	74
42	76 / M	AML with CBF-/MHY11	N/A		34	26
43	56 / F	AML with CBF-/MHY11	46,XX,inv(16)(p12.1q22)[20]		32	10
44	80 / F	AML with CBF-/MHY11	46,XX,der(16)inv(16)(p13q22)add(16,?)(p24.?)[1]/46,idem,t(8;11)(p24;q23)[19]		99	12
45	24 / F	AML with PML/PARα	46,XX,add(21)(p11.2)[2]/45,idem,der(15;8)(15;17)(q22;q21),-17[18]		19	
46	61/ F	AML with PML/PARα	46,XX,t(15;17)(q22;q12)[18]/46,XX[2]		35	
47	23 / M	AML with 11q23 abnormality	46,XY,t(6;11)(q27;q23)[20]		43	17
48	69 / F	AML with 11q23 abnormality	46,XX,t(11;19)(q23;p13.1)[18]/46,XX[4]		90	
49	82 / M	AML with multilineage dysplasia	47,XY,+21[12]/48,XY,+Y,+21[8]		64	
50	74 / M	AML with multilineage dysplasia	N/A		50	
51	64 / F	AML with multilineage dysplasia	N/A		50	
52	82 / M	AML with multilineage dysplasia	N/A		80	
					45/52 (86.5%)	12/22 (54.5%)