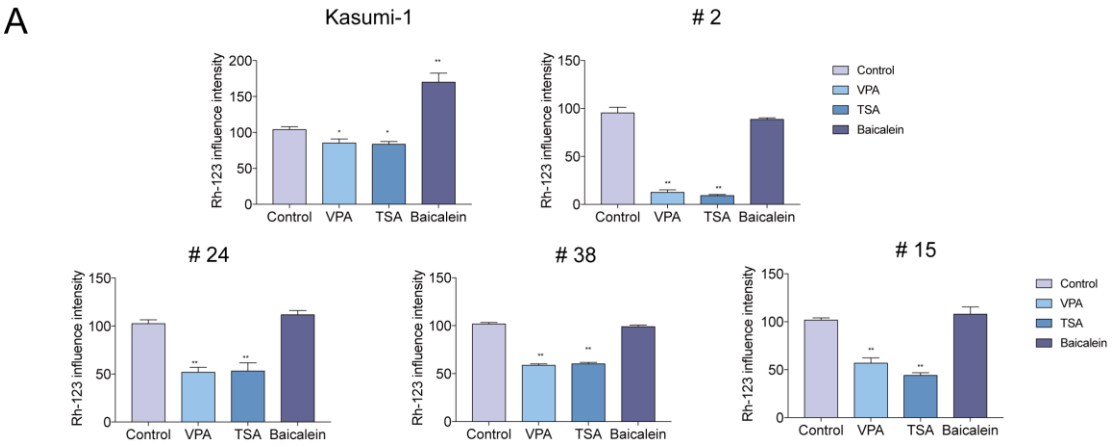
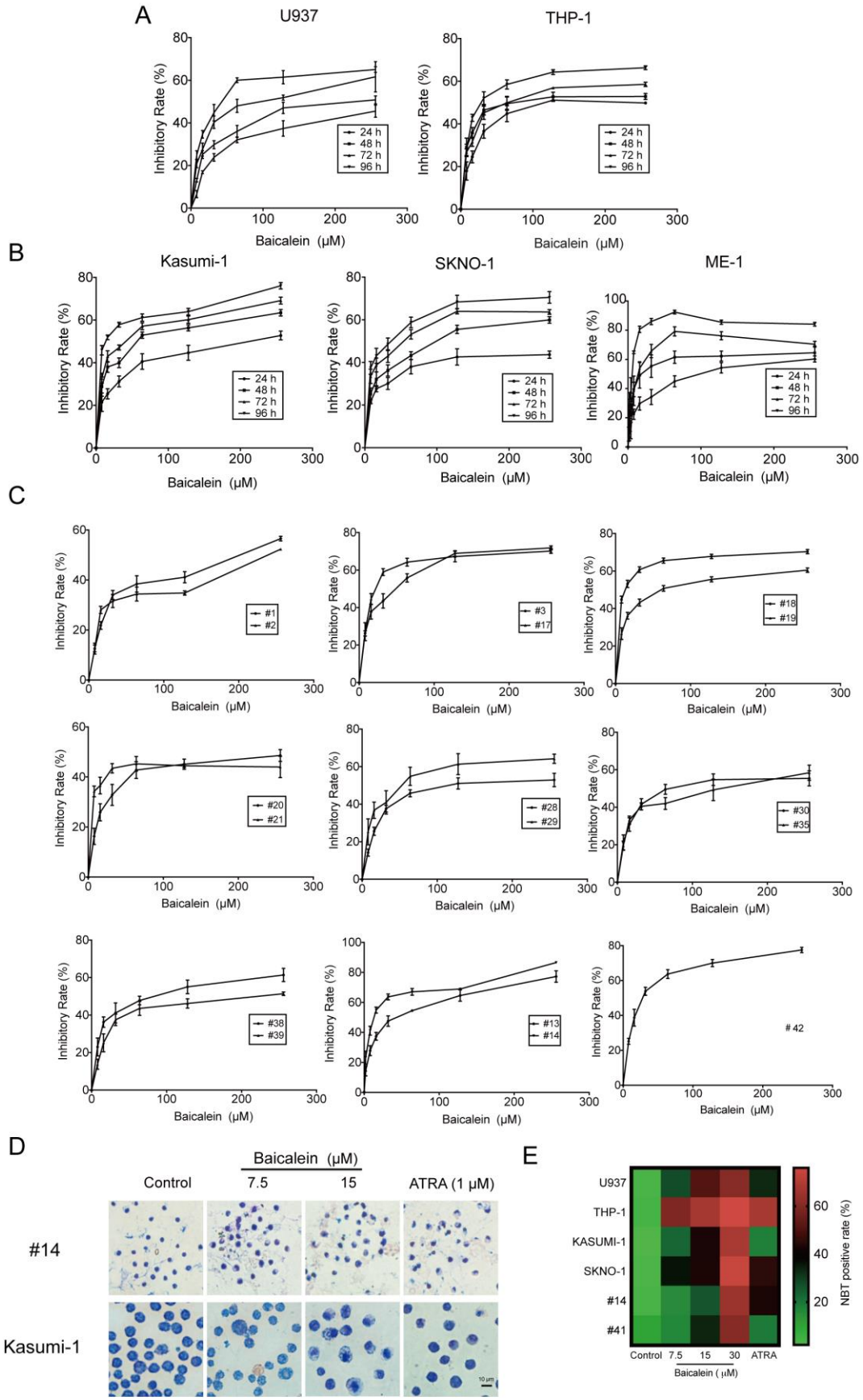
Supplementary Figure 1



Supplementary Figure 1

(A) Effects of HDAC inhibitors on the accumulation of Rhodamine 123. Cells were respectively treated with 165 nM TSA, 3 mM VPA for 24 h and 30 μM Baicalein for 96 h. Medium as a negative control. The data represent the mean of 3 different experiments. Asterisks denote statistically significant *, $P < 0.05$; **, $P < 0.01$; differences compared with controls by one-way ANOVA.

Supplementary Figure 2



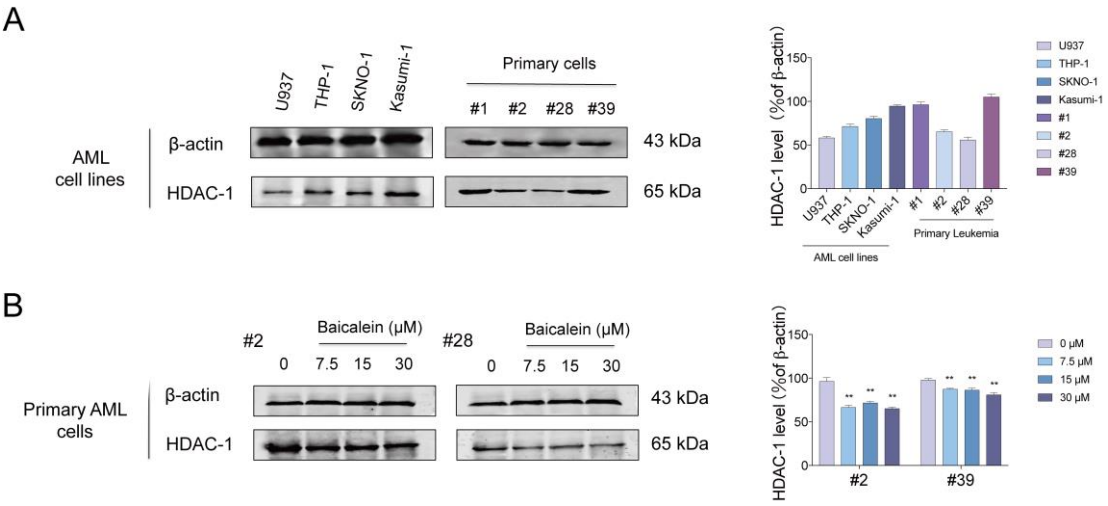
Supplementary Figure 2

(A-C) Growth inhibition of Baicalein was assessed by CCK8 assay in U937, THP-1, Kasumi-1, SKNO-1 and primary leukemia cells at 24, 48, 72, 96 hours.

(D) Representative images of Wright-Giemsa staining for morphological examination was shown. AML cells were respectively treated with 1 μM ATRA, 7.5 μM Baicalein，or 15 μM Baicalein for 96 h. Original magnification was 400 X (objective lenses 40 X) under a light microscope (IX51; Olympus, Tokyo, Japan), and images were captured using DP2-BSW software (Olympus) at room temperature.

(E) Detection of NBT-reduction activity of the AML cells after treatment with Baicalein and ATRA. NBT-positive cells with purple-black color were counted, and the overall percentage was calculated based on 100 total cells per microscopic field and counting 5 times in each group.

Supplementary Figure 3



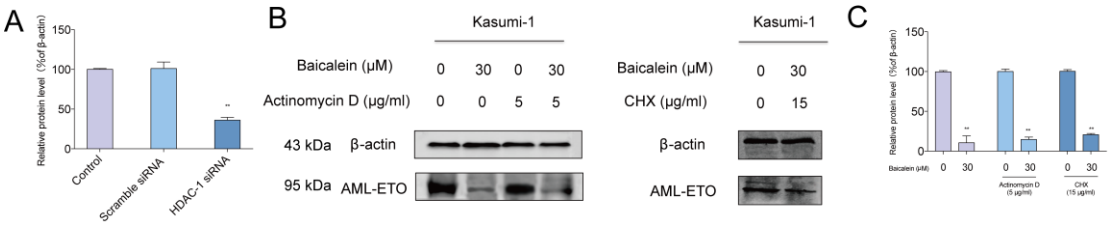
Supplementary Figure 3

(A) The background expression levels of HDAC-1 in AML cell lines and primary AML cells (#1, #2, #28, and #39) were detected by western blot assay with the indicated antibodies. β-actin was used as a loading control.

(B) The effect of Baicalein on the expression of HDAC-1 in primary AML cells (#2 and #28) was analyzed by western blot, β-actin was used as a loading control.

The data represent the mean 3 different experiments. Asterisks denote statistically significant *, $P < 0.05$; **, $P < 0.01$; differences compared with controls by one-way ANOVA.

Supplementary Figure 4



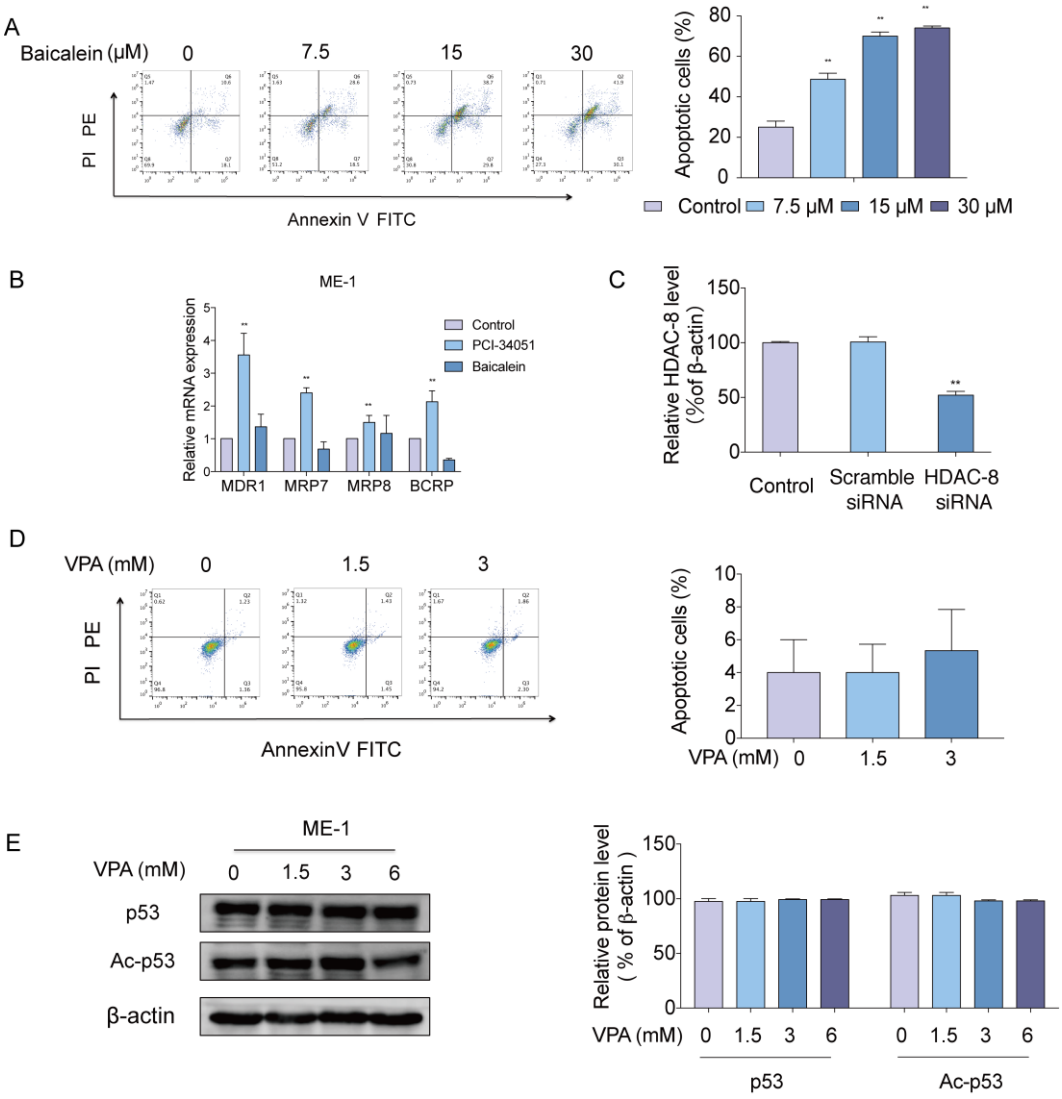
Supplementary Figure 4

(A) The efficacy of HDAC-1 siRNA transfection was monitored using western blotting.

(B, C) Kasumi-1 cells were treated with 5 μg/ml Actinomycin D, 15 μg/mL CHX, or 30 μM Baicalein plus 5 μg/ml Actinomycin D, 15 μg/mL CHX for 96 h. Western blot was performed with the indicated antibodies. β-actin was used as a loading control.

The data represent the mean 3 different experiments. Asterisks denote statistically significant *, $P < 0.05$; **, $P < 0.01$; differences compared with controls by one-way ANOVA.

Supplementary Figure 5



Supplementary Figure 5

(A) Apoptosis effects of Baicalein on inv(16) AML cells (sample # 42). AML cells were treated with DMSO, Baicalein (7.5, 15 and 30 μM) for 96 h. Results were analyzed by flow cytometry. Data were representative of 3 independent experiments.

(B) Effects of various HDAC inhibitors on ABC transporter genes expression were analyzed by RT-qPCR. Cells were respectively treated with 40 μM PCI-34051 for 24h and 30 μM Baicalein for 96 h. Medium as a negative control. Data represent the mean ± SD from three independent experiments. For analysis of RT-qPCR results, asterisks denote significant (*P < 0.05 and **P < 0.01) differences relative to controls by two-tailed Student's tests.

(C) The efficacy of HDAC-8 siRNA transfection was monitored using western blot.

(D) Apoptosis effects of VPA on ME-1 cells. AML cells were treated with DMSO, VPA (1.5 and 3 mM) for 24 h. Results were analyzed by flow cytometry. Data was representative of 3 independent experiments.
(E) ME-1 cells were treated with 1.5, 3 and 6mM VPA for 24h. The expression of p53 and Ac-p53 was detected by western blot with the indicated antibodies. β-actin was used as a loading control.

Supplementary Figure6