**Supplementary Figure Legends**

**Supplementary Figure S1.** Synergistic antitumor interactions of Ara-C and AZD5991 in AML cells.MV4-11 and U937 cells (A) and primary AML patient sample cells (B) were treated with varying concentrations of AZD5991 (AZD) and Ara-C alone or in combination for 48 h, then stained with annexin V-FITC/PI, and analyzed using a flow cytometer. The data are presented as CI vs. fraction affected (FA) plots.

**Supplementary Figure S2.** Ara-C abolishes AZD5991-induced upregulation of MCL-1 in AML cells.MV4-11 and U937 cells were treated with Ara-C and AZD5991 (AZD) alone or in combination for 48 h. Whole cell lysates were subjected to western blotting and probed with anti-MCL-1 or -β-actin antibodies. Densitometric quantification of blotting band intensity was shown below the bands.