

Supplementary Figure Legends

Supplementary Figure S1. Effects of oridonin on expression of mature miRNAs and pri-miRNAs in K562 cells. A, Northern blot showing expression of mature miRNAs upon oridonin treatment. K562 cells were treated with vehicle or oridonin (20 μM) for 6 hours or 24 hours before total RNA was extracted and subjected to northern blot analysis. Thirty microgram (left) or five microgram (right) of total RNA per sample was used. U6 snRNA was used as a loading control. B, RT-PCR analysis of pri-miRNAs. K562 cells were treated with vehicle or 20 μM oridonin for 24 hours. Total RNAs were isolated and RT-PCRs were performed. Gapdh was used as a loading control.

Supplementary Figure S2. Regulation of oridonin on c-Myc. A, The 5'UTR and 3'UTR of c-myc show no obvious inhibitory effect on translation upon oridonin treatment. Upper, schematic representation of the c-myc gene. 5UL, full-length of 5' UTR; 5US, shorter 5' UTR; 3U, 3' UTR. Lower, dual-luciferase assays. DNA fragments corresponding to the c-myc 5UL, 5US and 3U were PCR-amplified from K562 genomic DNA and cloned into the pGL3-U vector that was modified from pGL3-control. K562 cells were transfected with indicated plasmids and treated with vehicle or oridonin (5 μM) before dual-luciferase assays were performed. Data were analyzed by normalizing firefly luciferase activity to Renilla luciferase expression for each sample. DMSO-treated samples were set to 100%. *, $P < 0.05$. $P > 0.05$ for all other groups. B, Oridonin-induced proteasome-dependent degradation of c-Myc was common in leukemia and lymphoma cells. KU812, HL60 and Daudi cells pre-incubated with vehicle or MG-132 for 2 hours were then treated with vehicle or oridonin (20 μM) for the time indicated and lysed for western

blot analysis. C, Pre-treatment with pan-caspase inhibitor zVAD-fmk (40 μ M) cannot prevent oridonin-induced downregulation of c-Myc.

Supplementary Figure S3. Oridonin increases Fbw7 expression after short-term treatment, shown by western blotting. A, K562 cells. B, KU812, HL60 and Daudi cells.