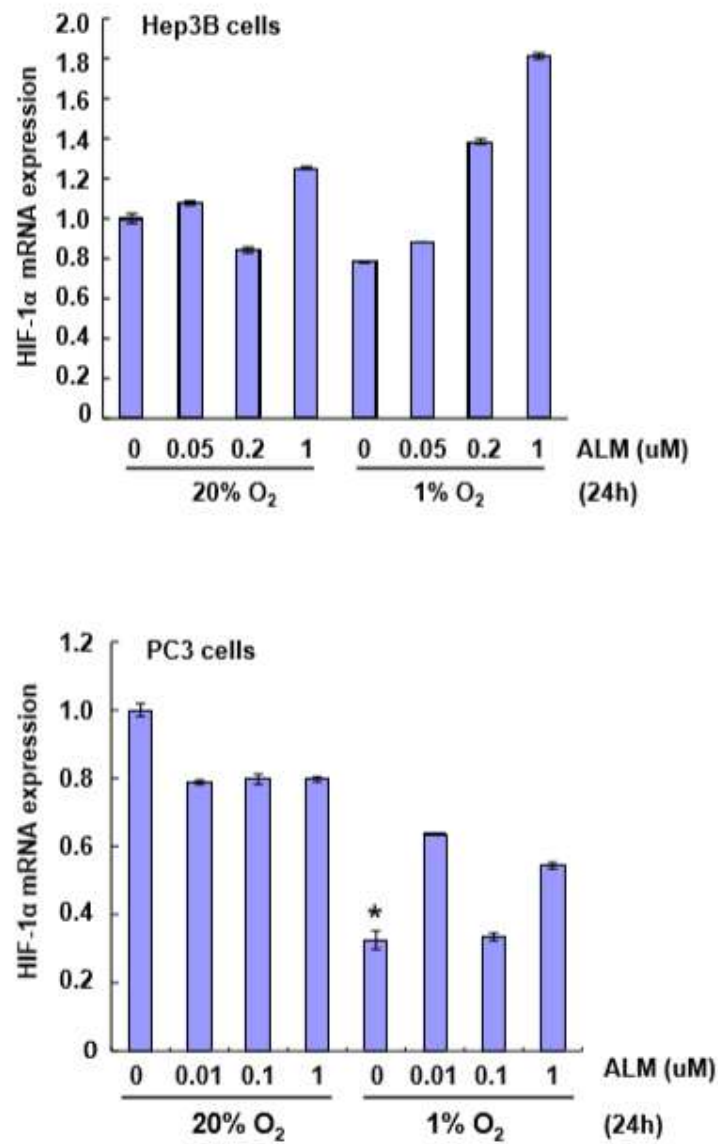
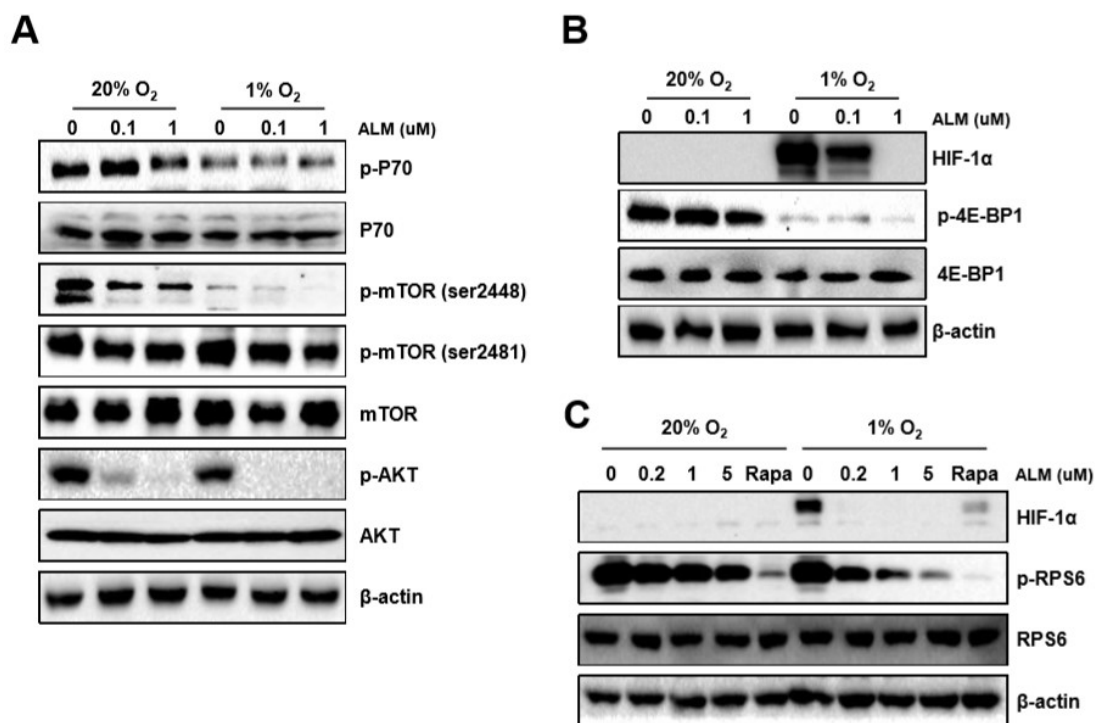


**A**

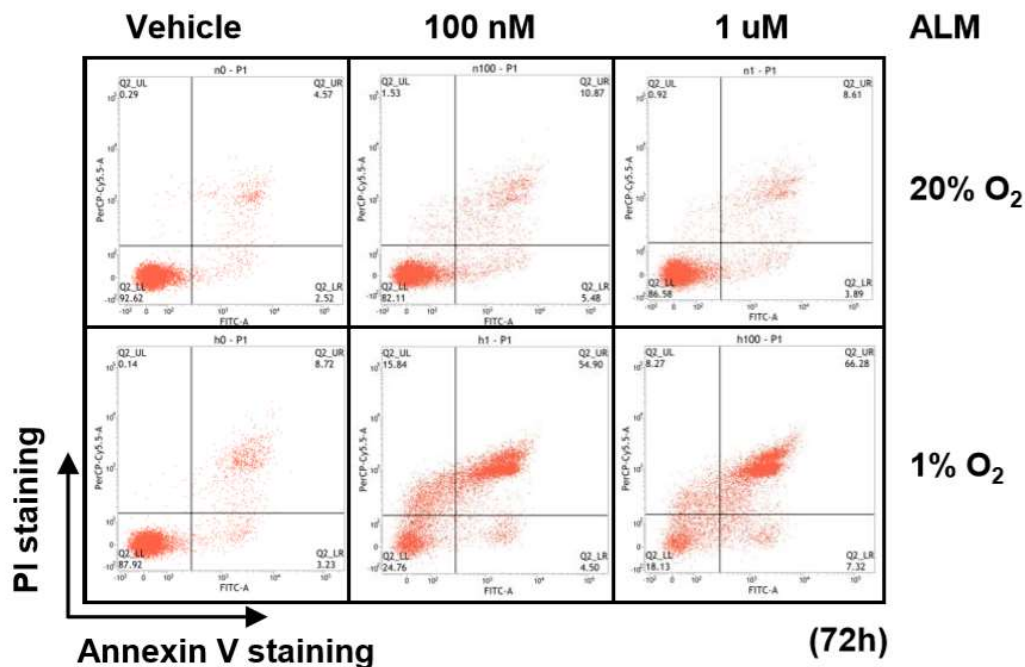
**Supplementary Figure 1. ALM has no effect on HIF-1α mRNA expression**

(A) Hep3B and PC3 cells were exposed to vehicle or the indicated concentration of ALM for 24 hours under normoxic or hypoxic conditions and total RNA was subjected to RT-PCR assays for HIF-1α. \*P < 0.05 compared to normoxic control group.

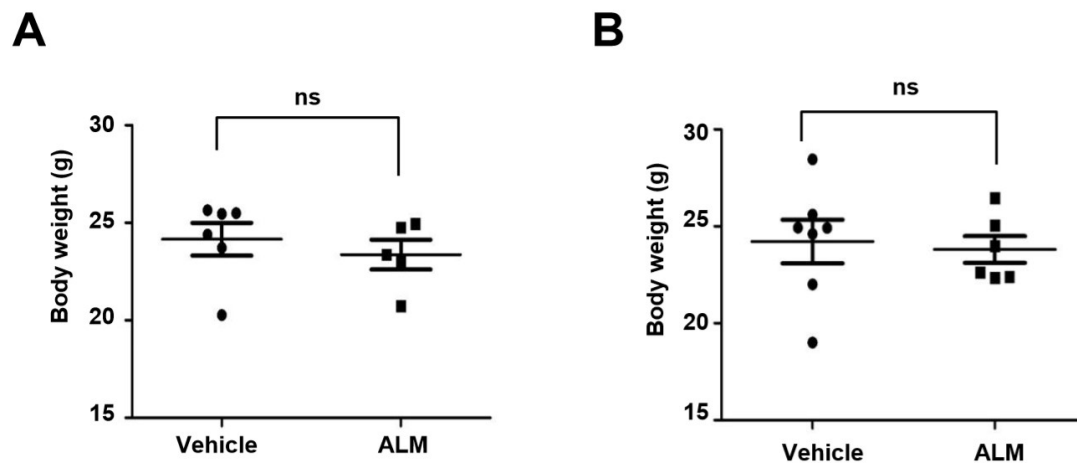


**Supplementary Figure 2. ALM inhibits HIF-1 $\alpha$  translation by down-regulating mTOR pathway**

(A-C) Hep3B cells were cultured at 20% or 1% O<sub>2</sub> for 24 hours in the presence of ALM (at the indicated concentrations), rapamycin or not, and whole cell lysates were subjected to for: (A) p-P70, p-Akt, p-mTOR (2448/2481), mTOR, (B) p-4E-BP1, (C) p-RPS6, HIF-1 $\alpha$  or  $\beta$ -actin.

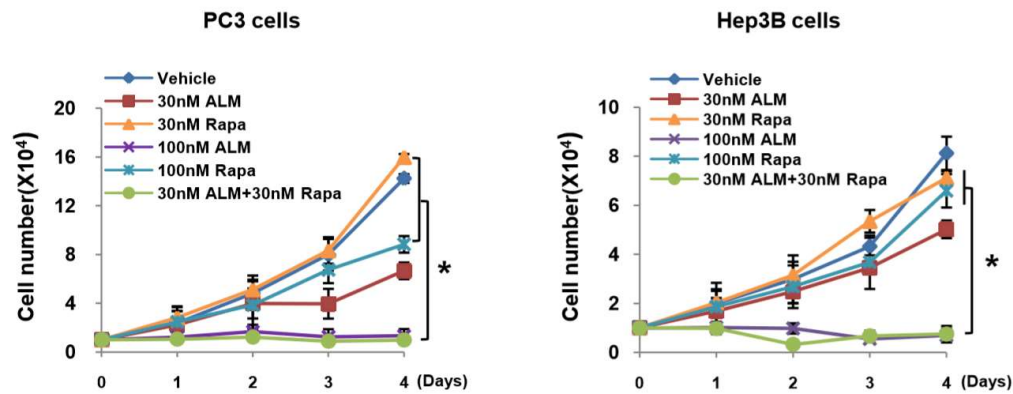


**Supplementary Figure 3. ALM induces cell apoptosis in PC3 cells.** PC3 cells were treated with indicated dose and time of ALM under normoxia/hypoxia and apoptosis population was analyzed by protocol described in Figure 3D.



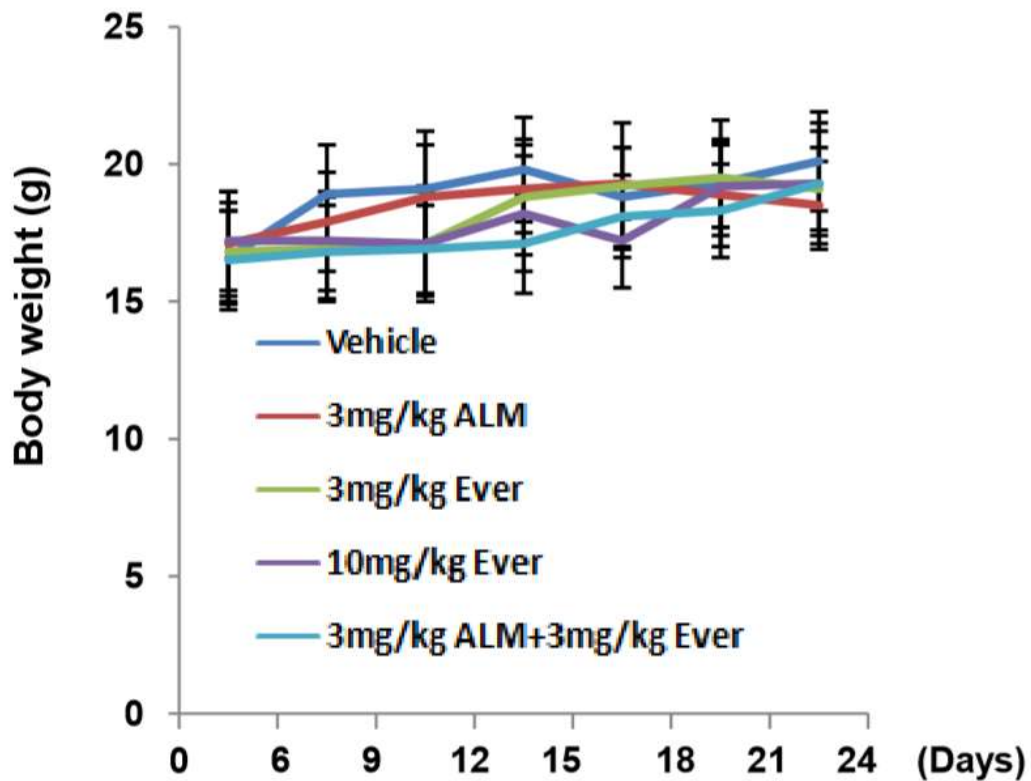
**Supplementary Figure 4. Effects of ALM on mouse body weight.** (A, B) Body weight were weighted after sacrificing mice (mean ± s.e.m., P value is determined by Student's t-test).

**A**



**Supplementary Figure 5. Low dose of ALM enhances the inhibitory effect of mTOR inhibitor rapamycin on cell growth**

(A) Cell growth curves of PC3 and Hep3B cells treated with indicated dose of vehicle, ALM, rapamycin, or combination of ALM with rapamycin. \*P < 0.05 compared between the indicated groups.



**Supplementary Figure 6. Effects of ALM and mTOR inhibitor on mouse body weight.**

Body weight was determined from day 6 to day 24.

**Supplementary Table 1. Nucleotide sequences of primers used for qRT-PCR**

| <b>primer</b>  | <b>Forward Sequence (5' - 3')</b> | <b>Reverse Sequence (5' - 3')</b> |
|----------------|-----------------------------------|-----------------------------------|
| HIF-1 $\alpha$ | CCACAGGACAGTACAGGATG              | TCAAGTCGTGCTGAATAATACC            |
| Bnip3          | AACTCAGATTGGATATGGGATTGG          | AGAGCAGCAGAGATGGAAGG              |
| HK1            | TGGAGTCCGAGGTTTATG                | TTTGGATTGTTGGCAAGG                |
| 18S            | CGGCGACGACCCATTCGAAC              | GAATCGAACCCTGATTCCCCGTC           |