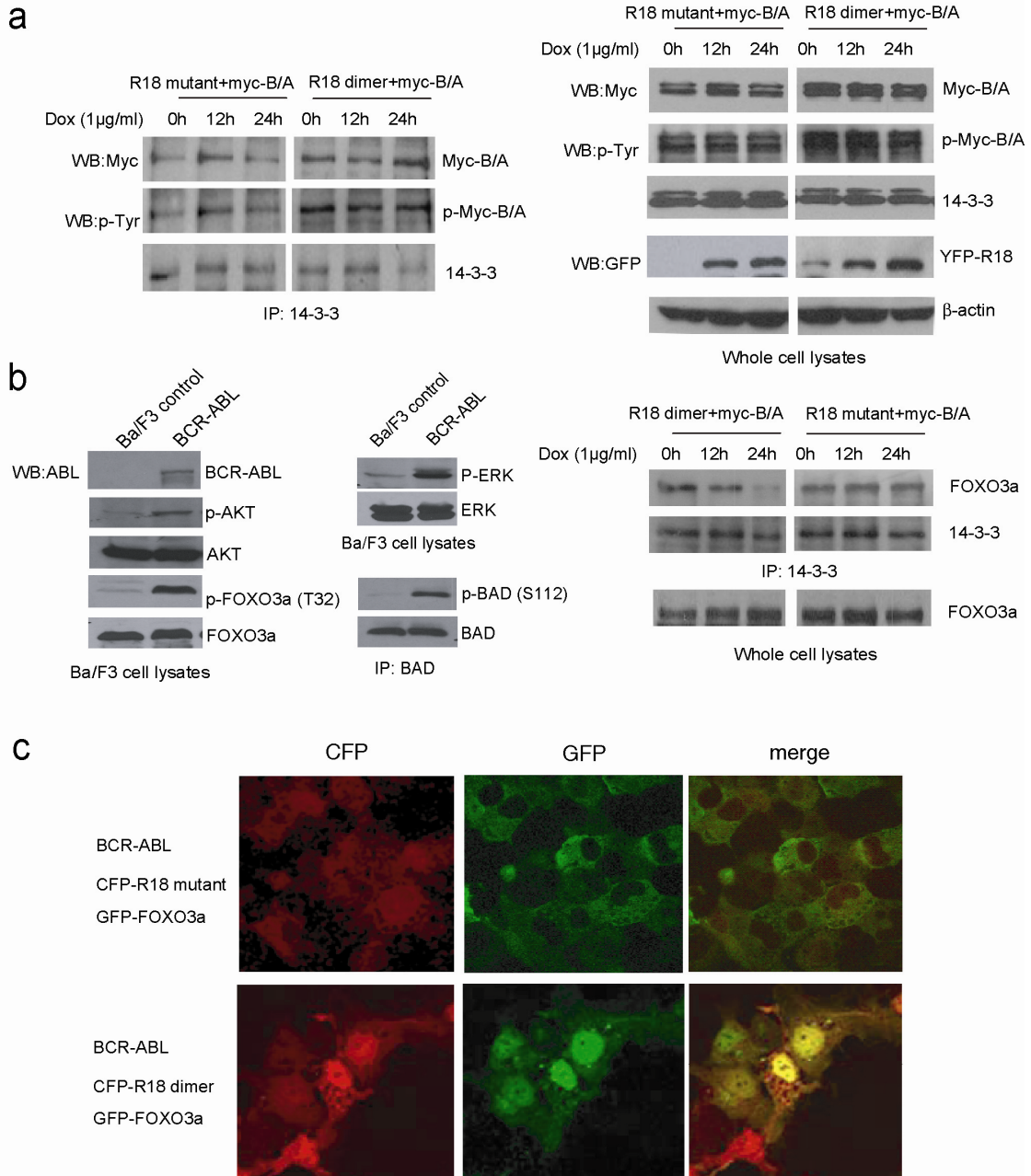


Supplemental Figure 1. R18 interferes with interaction between 14-3-3 and FOXO3a, but not 14-3-3/BCR-ABL association or BCR-ABL kinase activation in Ba/F3 cells. **(a)** Myc-tagged BCR-ABL transformed TonBaF cells inducibly expressing YFP-tagged R18 dimer or mutant were cultured with Dox in the absence of IL-3. *Left:* Co-immunoprecipitated Myc-BCR-ABL in 14-3-3 immunoprecipitates was detected by Western blotting. *Right:* Phosphorylation levels of Myc-BCR-ABL and expression levels of BCR-ABL, 14-3-3 and YFP-R18 in the cell lysates were probed by Western blotting as controls. **(b)** R18 dimer dissociates 14-3-3/FOXO3a association. *Left:* Expression of BCR-ABL activates both AKT and ERK pathways that results in phosphorylation of FOXO3a and BAD, respectively, which are consequently sequestered by 14-3-3 binding. *Right:* BCR-ABL transformed TonBaF cells inducibly expressing YFP-tagged R18 dimer or mutant were cultured with Dox in the absence of IL-3. Co-immunoprecipitated FOXO3a in 14-3-3 immunoprecipitates were detected. **(c)** Expression of R18 dimer inhibits cytoplasmic sequestration of FOXO3a by BCR-ABL, and rescues nuclear localization of FOXO3a. COS7 cells were co-transfected with BCR-ABL, CFP-tagged R18 dimer or mutant, and EGFP-FOXO3a. The molar ratio of DNA amount in the co-transfection experiment was BCR-ABL:R18:FOXO3a = 2:1:1 to ensure successful BCR-ABL transfection in cells that are both CFP and EGFP positive.

Supplemental Figure 2. **(a)** Induction of R18 expression by Dox was detected by Western blotting. **(b)** Inhibition of ERK phosphorylation by U0126 treatment in TonBaF-R18 cells expressing BCR-ABL. **(c)** Combination of U0126 treatment and R18 expression enhanced cleavage of PARP in BCR-ABL-transformed TonBaF-R18 cells. **(d)**

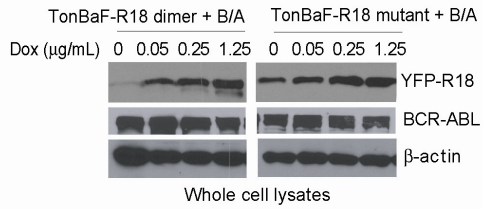
Inhibition of mTOR activity as assessed by phosphorylation level of p70 S6 kinase by rapamycin. (e) Combination of rapamycin treatment and R18 expression enhanced cleavage of PARP in TonBaF-R18 BCR-ABL cells. (f) Treatment with U0126 along with R18 expression enhanced cleavage of PARP in BCR-ABL T315I mutant-transformed TonBaF-R18 cells.

Supplemental Figure 1

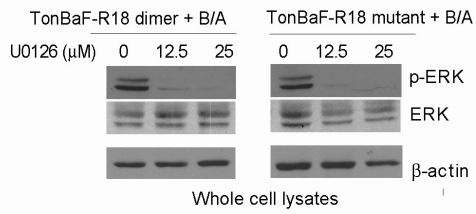


Supplemental Figure 2

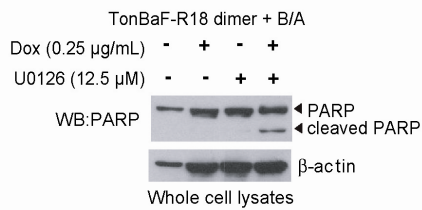
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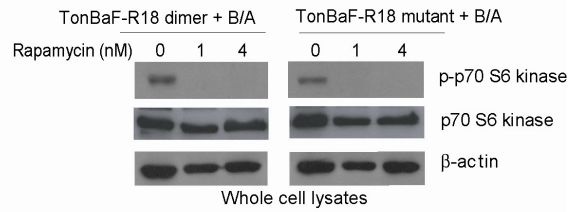
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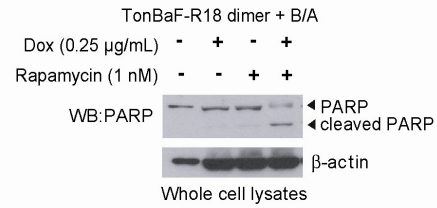
c



d



e



f

