Supplementary Figure Legends

Supplementary Fig. S1. Growth response to MEK inhibitor and ERK inhibitor in cell lines with different BRAF mutational status. Four cell lines were also treated with increasing concentrations of either MEK inhibitor trametinib (A) or ERK inhibitor SCH772984 (B) for 72 h. Cell growth was evaluated using a WST-1 assay. The relative viability of cells treated with the vehicle alone was regarded as 100 %. Values represent the mean ± SD of quadruplicate determinants from one of three representative experiments.

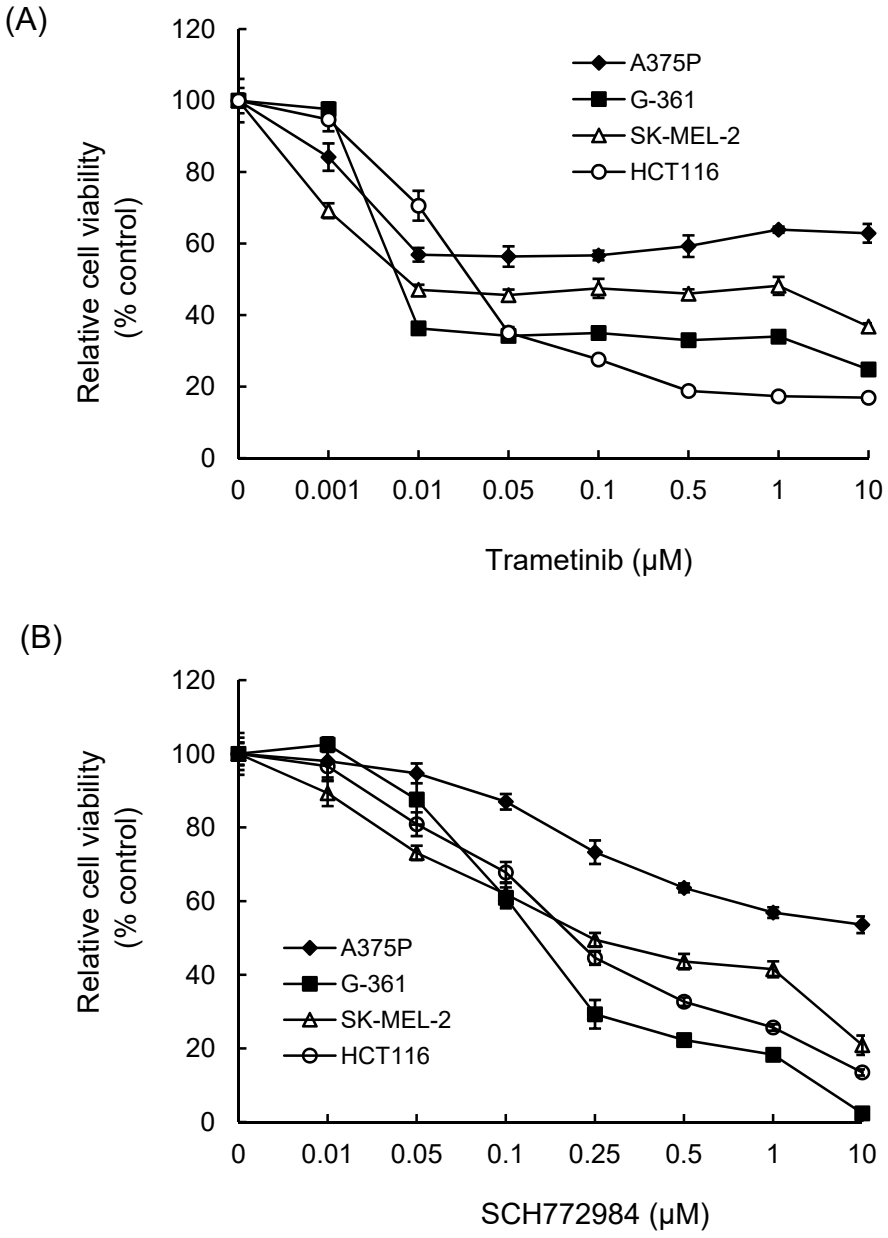
Supplementary Fig. S2. Combined effect of PLX4720 and autophagy inhibitors on the survival of cells with different BRAF mutational status. Four cell lines were treated with increasing concentrations of PLX4720 for 72 h alone or in combination with 10 μM of either SBI-0206965 (A) or HCQ (B). Cell growth was evaluated using a WST-1 assay. The relative viability of cells treated with the vehicle alone was regarded as 100 %. Values represent the mean ± SD of quadruplicate determinants from one of three representative experiments.

Supplementary Fig. S3. Combined effect of PLX4720 and MEK inhibitor on the survival of cells with different BRAF mutational status. Four cell lines were treated with increasing concentrations of PLX4720 for 72 h alone or in combination with trametinib (0.1 μM). Cell growth was evaluated using a WST-1 assay. The relative viability of cells treated with the vehicle alone was regarded as 100 %. Values represent the mean ± SD of quadruplicate determinants from one of three representative experiments.

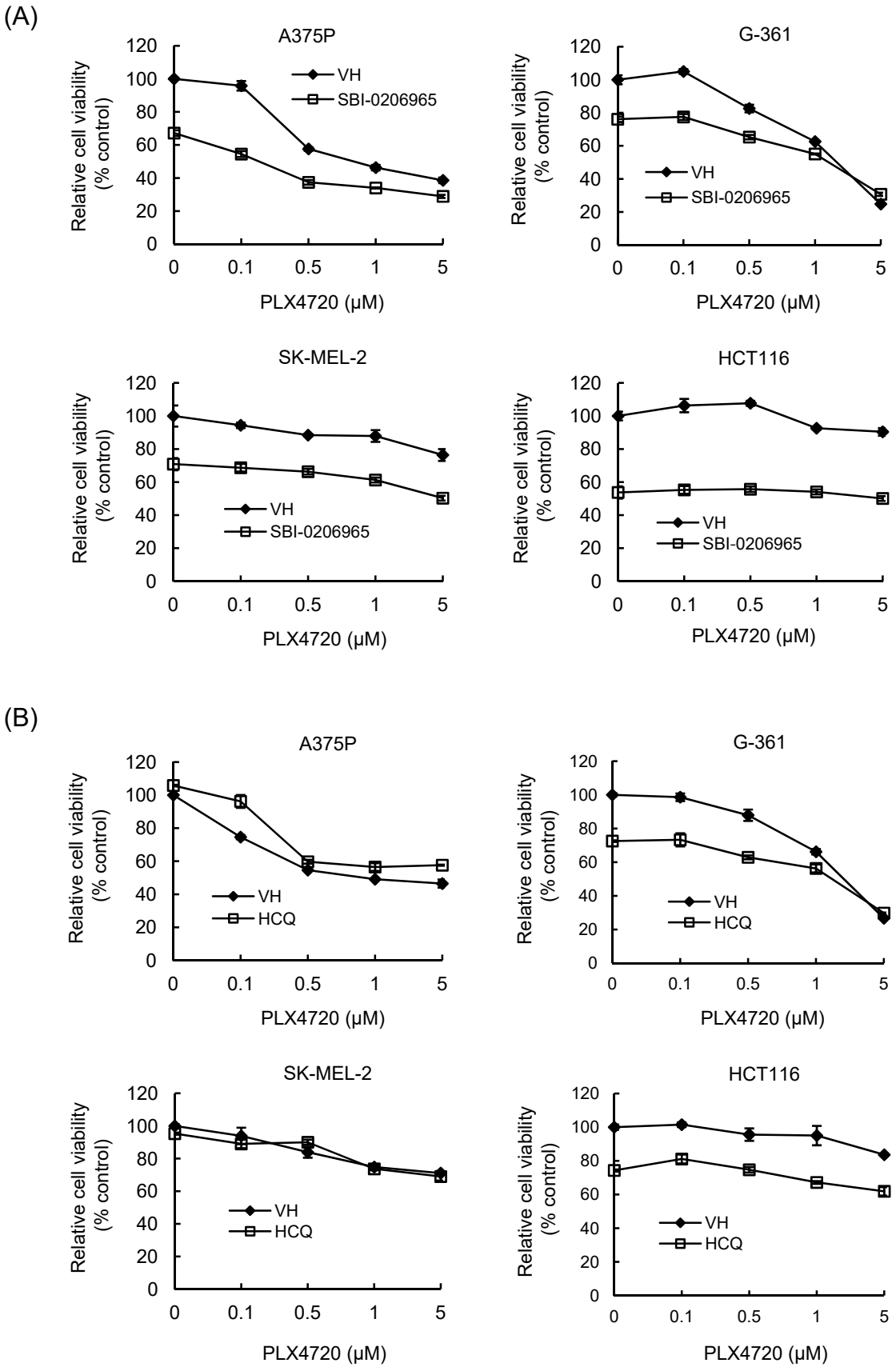
Supplementary Fig. S4. **Immunoblot showing complete knockout of ATG5 compared to their parental cells.** Cell lysates were prepared from SK-MEL-2 cells and their ATG5 KO counterparts. The β-actin was used as loading control.

Supplementary Fig. S5. **Combined effect of PLX4720 and early or late-stage autophagy or MEK inhibitors on the survival of ATG5 KO cells.** ATG5 KO A375P and SK-MEL-2 cells were treated with increasing concentrations of PLX4720 for 72 h alone or in combination with either 10 μM of SBI-0206965 (A), 10 μM of HCQ (B) or 0.1 μM of trametinib (C). Cell growth was evaluated using a WST-1 assay. The relative viability of cells treated with the vehicle alone was regarded as 100 %. Values represent the mean ± SD of quadruplicate determinants from one of three representative experiments.

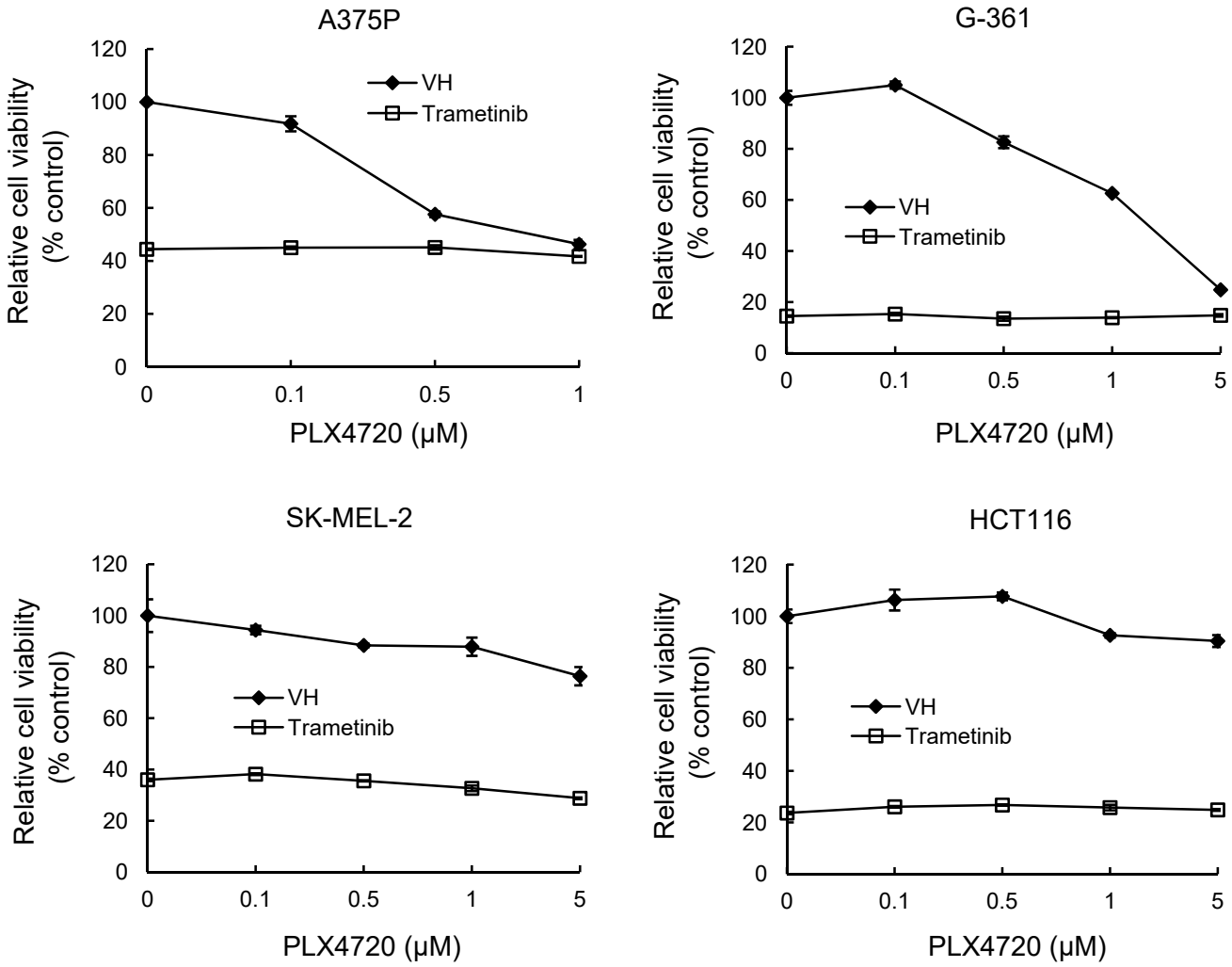
Supplementary Fig. S1 (Yeom *et al*.)



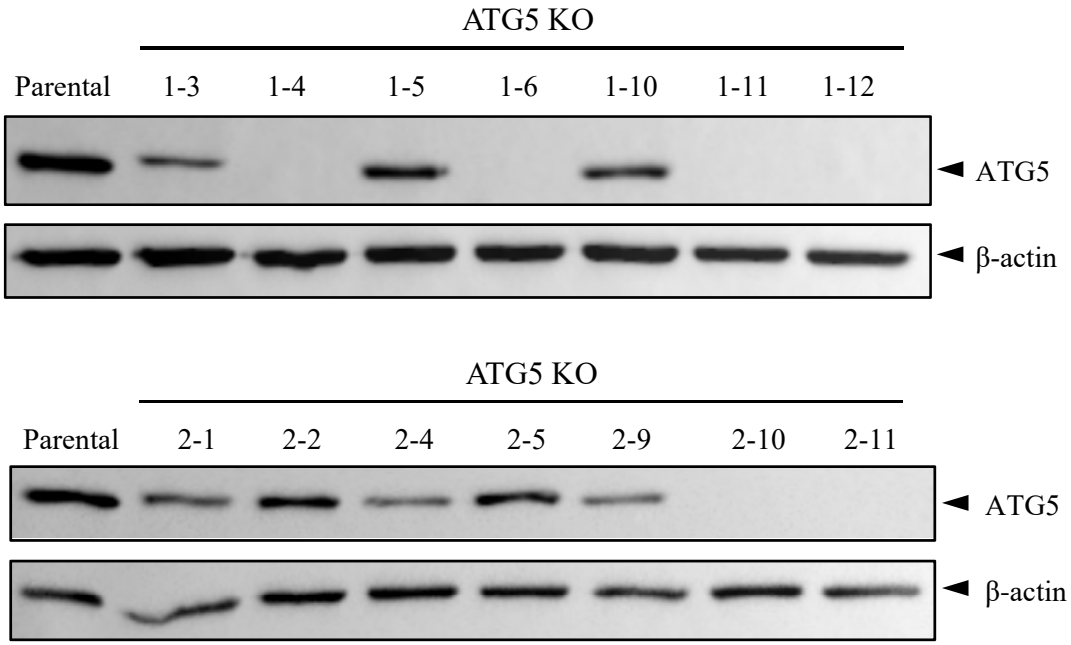
Supplementary Fig. S2 (Yeom *et al*.)



Supplementary Fig. S3 (Yeom *et al.*)



Supplementary Fig. S4 (Yeom *et al.*)



Supplementary Fig. S5 (Yeom *et al*.)