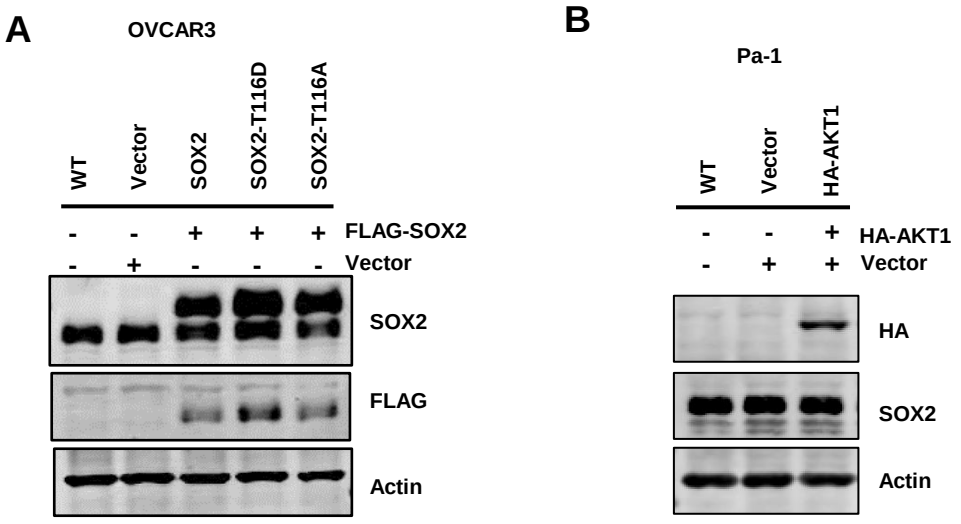
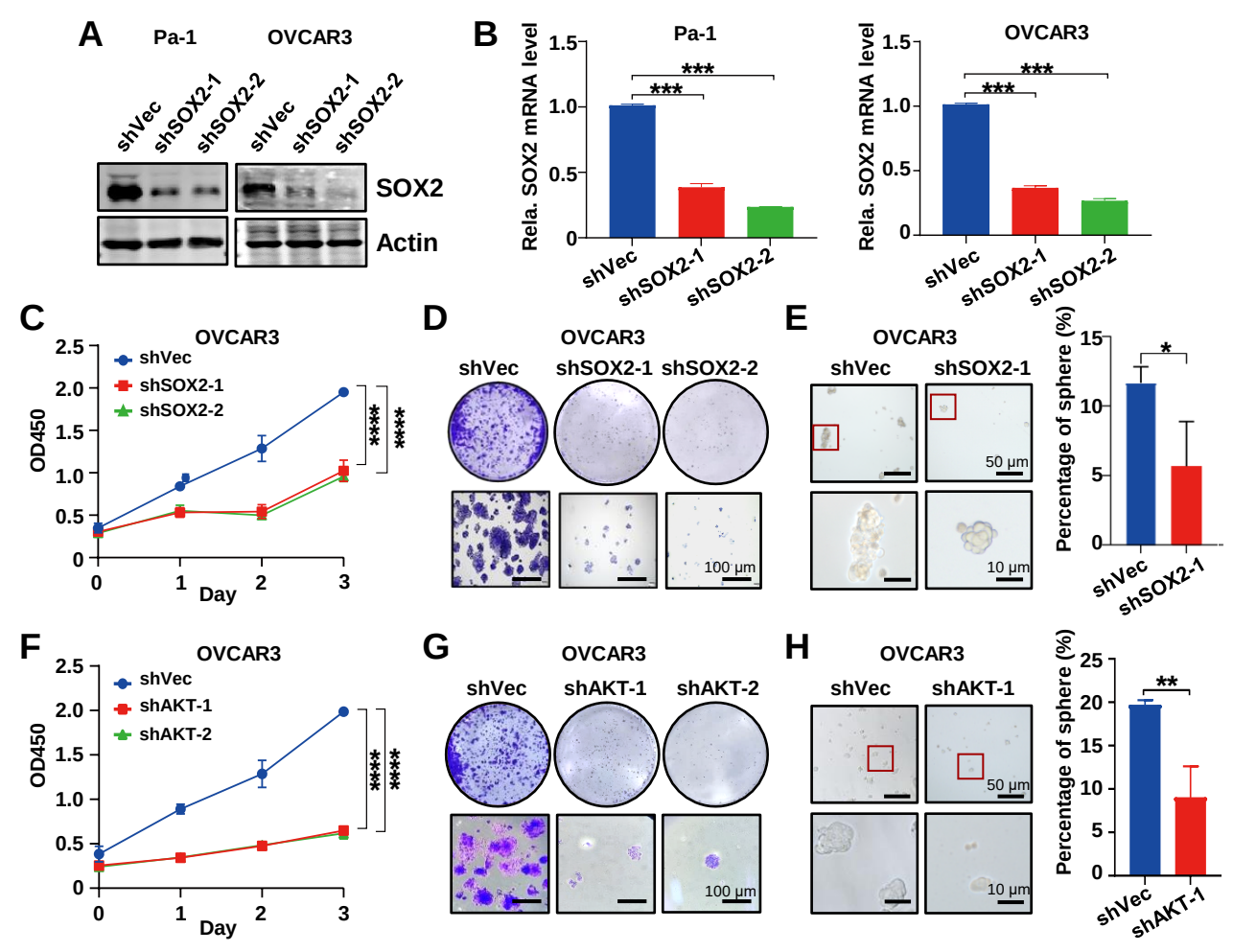


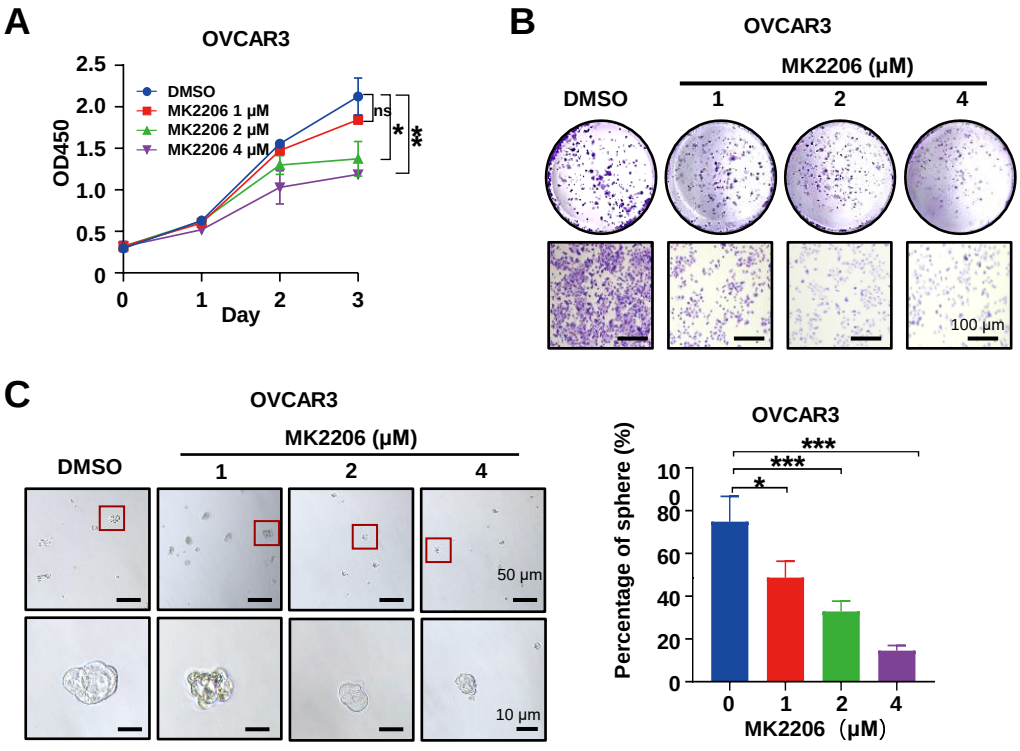
Supplementary Figure S1. Ectopic expression of FLAG-SOX2 in OVCAR3 and HA-AKT1 in Pa-1 cells.

(A). Expression of FLAG-SOX2 was detected only in the samples transfected with pCDH-FLAG-SOX2 but not the control pCDH vector in OVCAR3 cells. (B . Expression of HA-AKT1 was detected only in the samples transfected with pCDH-FLAG-SOX2 but not the control pCDH vector in Pa-1 cells



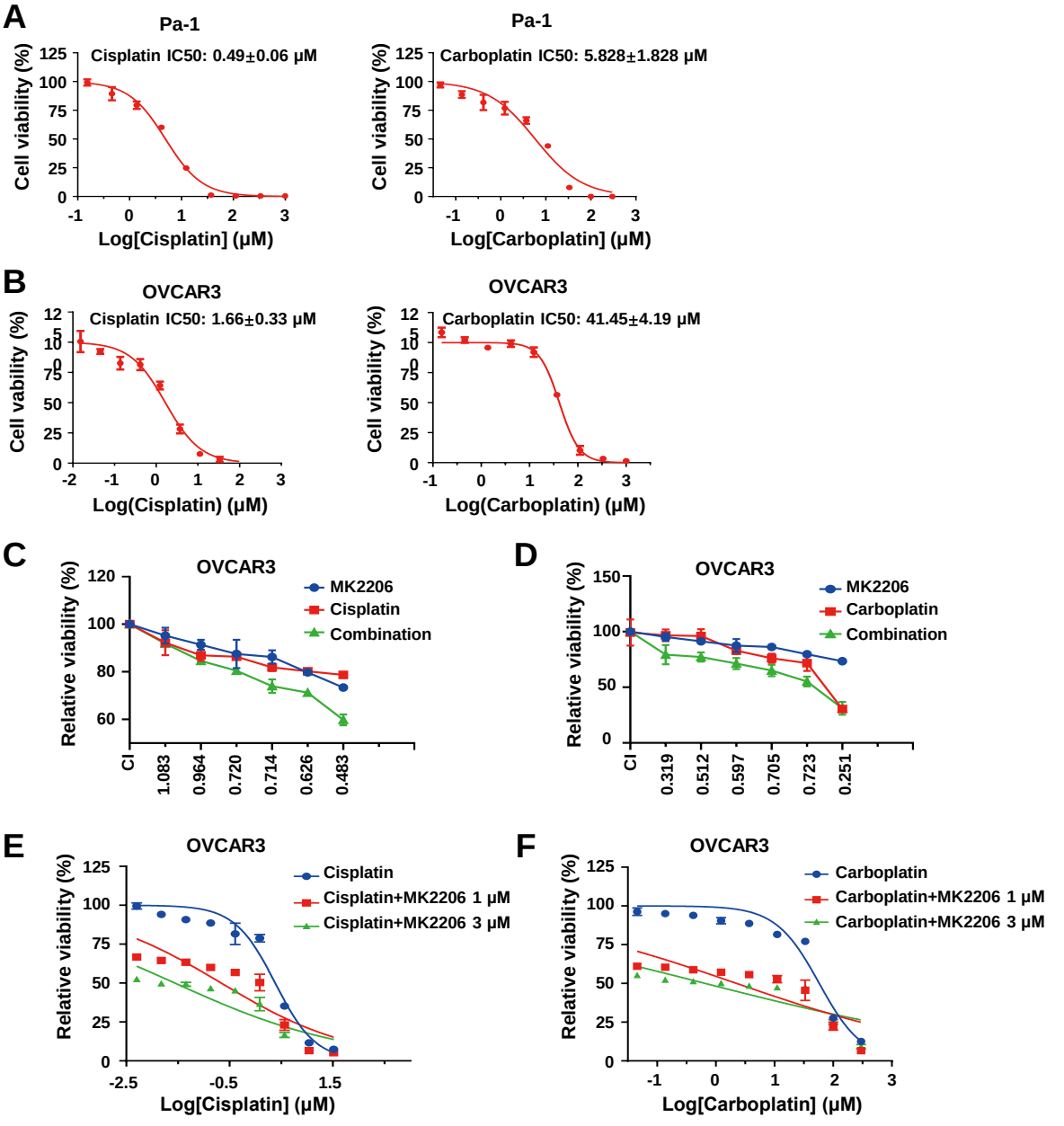
Supplementary Figure S2. Knockdown of either SOX2 or AKT1 suppressed OVCAR3 cell proliferation, colony formation, and tumor sphere formation.

(A-B). Pa-1 and OVCAR3 cells were infected with lentiviral shRNAs against SOX2 and three days after infection cell were harvested for WB analysis (A) and quantitative RT-PCR analysis (B). (C-E). Knocking down SOX2 impaired cell proliferation and tumor sphere formation of OVCAR3 cells. The knockdown of SOX2 by small hairpin RNA (shRNA) resulted in reduced cell proliferation by CCK8 assay (C), colony formation (D), and tumor sphere formation (E) of OVCAR3 cells.(F-H). Knocking down AKT1 impaired cell proliferation and tumor sphere formation of OVCAR3 cells. The knockdown of AKT1 by small hairpin RNA (shRNA) resulted in reduced cell proliferation by CCK8 assay (F), colony formation (G), and tumor sphere formation (H) of OVCAR3 cells.



Supplementary Figure S3. MK2206 potently inhibited OVCAR3 cell proliferation, colony formation, and tumor sphere formation.

(A-C). MK2206 inhibited OVCAR cell proliferation by CCK8 assay (A), colony formation (B), and and oncosphere formation (C) in a dose-dependent manner.



Supplementary Figure S4. Inhibition of Pa-1 and OVCAR3 cell proliferation by cisplatin, carboplatin, and MK2206.

(A). Measurement of drug sensitivity of Pa-1 cells to cisplatin and carboplatin. (B). Measurement of drug sensitivity of OVCAR3 cells to cisplatin and carboplatin. (C&D). Drug interaction assay showing a synergestic effect on inhibition of OVCAR3 cell proliferation by MK2206 and cisplatin (C) or carboplatin (D). (E&F). MK2206 enhanced the efficacy of cisplatin and carboplatin on OVCAR3 cells. OVCAR3 cells were treated with concentration gradients of cisplatin (D) or carboplatin (E) with or without MK2206 for 48 hours. Shown are cell viability curves.