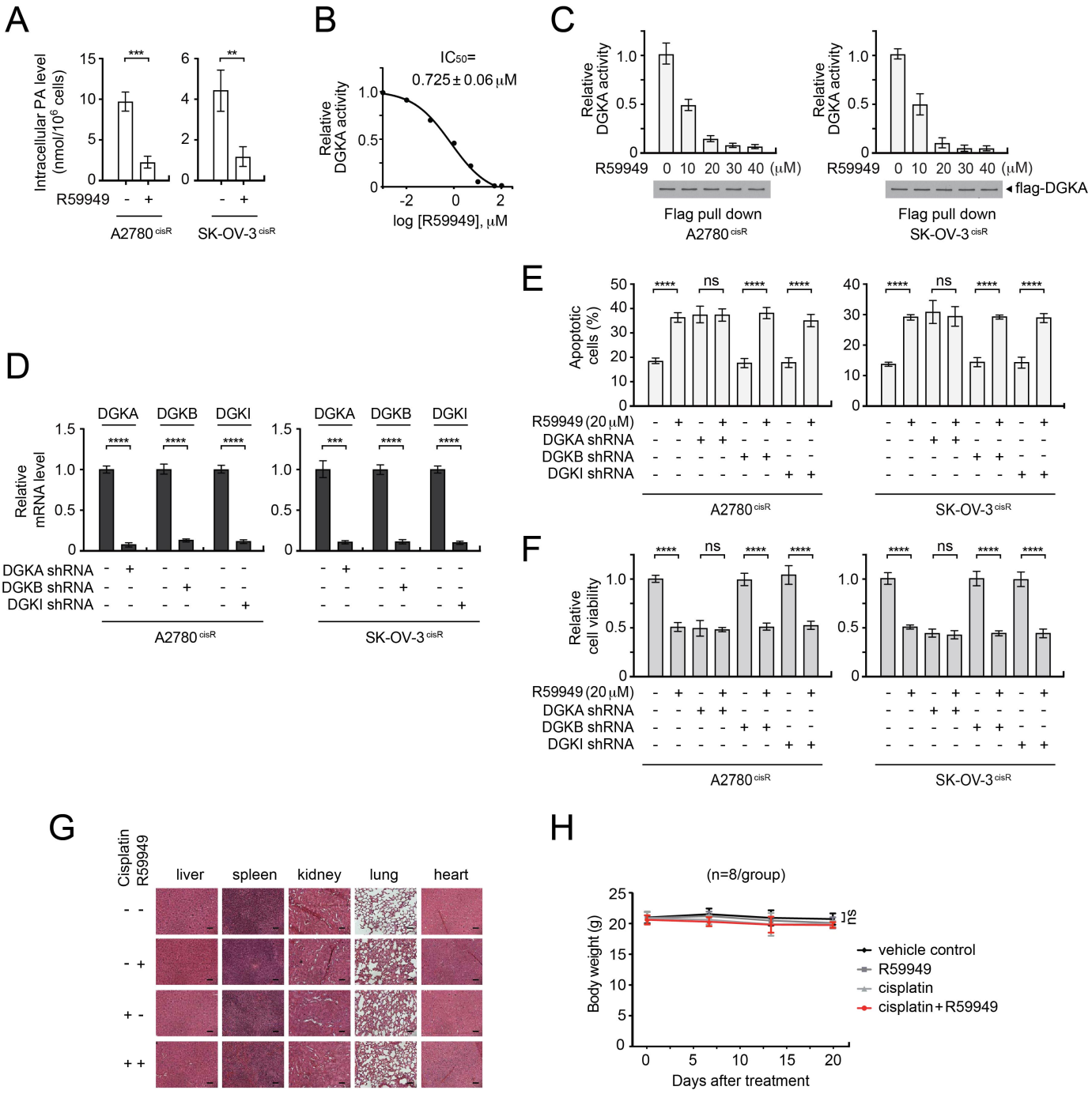

Supplementary Fig. S7. R59949 sensitizes ovarian cancer cells by targeting DGKA not DGKB or DGKI. A, Intracellular PA level was assessed in cells treated with R59949. **B,** Effect of R59949 on DGKA activity *in vitro*. Purified GST-DGKA variants were treated with increasing concentrations of R59949 and DGKA kinase activity was measured by ADP-Glo kinase assay. **C,** Effect of R59949 on DGKA activity in cells. Flag-DGKA was enriched from A2780^{cisR} and SK-OV-3^{cisR} cells and DGKA kinase activity was assessed as in (B). **D,** Knockdown efficiency of DGKA, DGKB and DGKI in ovarian cancer cells. mRNA levels were measured by qRT-PCR

using GAPDH as a control. **E and F,** Apoptotic cell death (E) and cell viability (F) in ovarian cancer cells with DGKA, DGKB or DGKI knockdown and 20 μM R59949 treatment. n=3 technical replicates. **G and H,** Combinatorial treatment with cisplatin and DGK inhibitor does not have significant toxicity in PDX mice. Histological analyses of hematoxylin-eosin stained tissues of representative mice from each treatment group is shown in (G). Body weights of the experimental mice were measured during the treatment are shown in (H). Ovarian PDX mice were treated with cisplatin (5 mg/kg/intraperitoneal injection twice a week) and R59949 (10 mg/kg/subcutaneous injection once every two days). Scale bars represent 50 μm for (G). Results of one representative experiment from two (A, B, D-F) and one (C) independent experiment are shown. N=8 for (G) and (H). Error bars represent SD. P values were determined by Student's t test for A and D, one-way ANOVA for E and F, and two-way ANOVA for H (ns: not significant; $**P < 0.01$; $***P < 0.001$; $****P < 0.0001$).