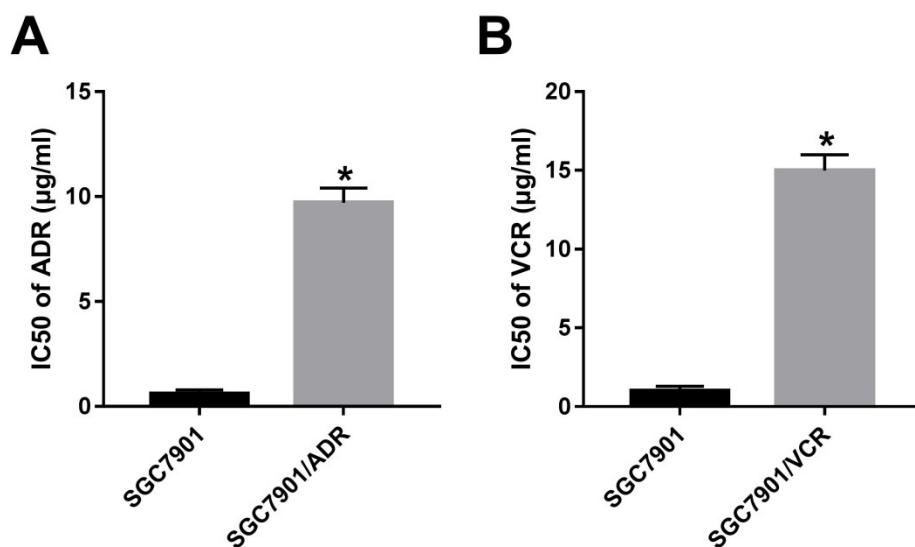
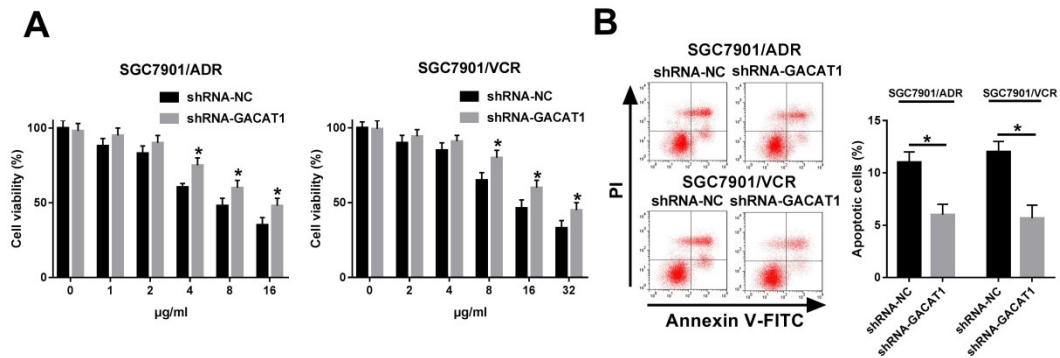


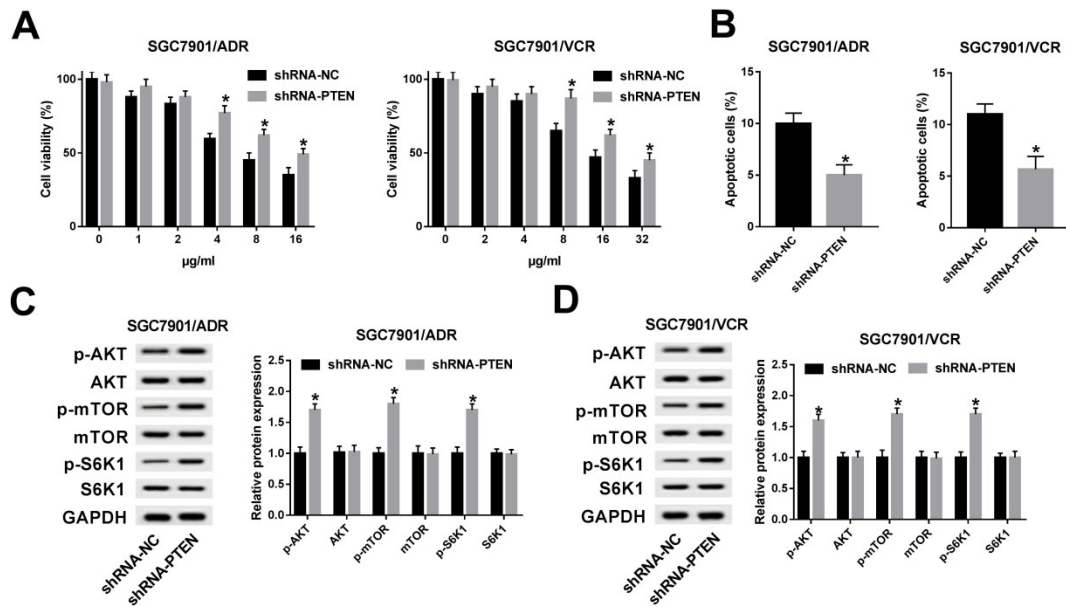
Supplementary Figure



Supplementary Fig. 1 ADR- or VCR-resistant SGC7901 cell lines were truly resistant to ADR or VCR. (A) SGC7901 cells were treated with different concentrations of ADR (0, 0.2, 0.4, 0.8, 1.6, 3.2, 6.4 µg/ml) for 48 h and SGC7901/ADR cells were stimulated with different concentrations of ADR (0, 1, 2, 4, 8, 16 µg/ml) for 48 h. Then, the IC₅₀ value of ADR was determined by CCK-8 assay. (B) SGC7901 cells were stimulated with different doses of VCR (0, 0.4, 0.8, 1.6, 3.2, 6.4, 12.8 µg/ml) for 48 h and SGC7901/VCR cells were treated with various doses of VCR (0, 2, 4, 8, 16, 32 µg/ml) for 48 h. Then, the IC₅₀ value of VCR was determined by CCK-8 assay. **P* < 0.05.



Supplementary Fig. 2 GACAT1 knockdown enhanced the resistance of GC cells to ADR and VCR. (A) SGC7901/ADR or SGC7901/VCR cells were infected with shRNA-NC or shRNA-GACAT1 for 24 h. Then, SGC7901/ADR cells were stimulated with different concentrations of ADR (0, 1, 2, 4, 8, 16 µg/ml) and SGC7901/VCR cells were treated with various doses of VCR (0, 2, 4, 8, 16, 32 µg/ml) for additional 48 h. Subsequently, cell viability was determined by CCK-8 assay. (B) SGC7901/ADR or SGC7901/VCR cells were infected with shRNA-NC or shRNA-GACAT1 for 24 h and then treated with ADR (2 µg/ml) or VCR (4 µg/ml) for another 48 h. Then, cell apoptotic percentage was determined through flow cytometry. * $P < 0.05$.



Supplementary Fig. 3 PTEN loss enhanced ADR and VCR resistance by regulating PTEN/AKT/mTOR/S6K1 signaling pathway in GC cells. (A) SGC7901/ADR or SGC7901/VCR cells were infected with shRNA-NC or shRNA-PTEN for 24 h and then treated with different concentrations of ADR or VCR for additional 48 h. Then, cell viability was measured by CCK-8 assay. (B-D) SGC7901/ADR or SGC7901/VCR cells were infected with shRNA-NC or shRNA-PTEN for 24 h and then treated with ADR (2 μg/ml) or VCR (4 μg/ml) for another 48 h. (B) Cell apoptotic percentage was examined through flow cytometry. (C and D) Protein levels of AKT, p-AKT, mTOR, p-mTOR, p-S6K1 and S6K1 were determined by western blot assay. * $P < 0.05$.