

Ginsenoside Rk1 regulates glutamine metabolism in hepatocellular carcinoma through inhibition of the ERK/c-Myc pathway

Haoping Lu^{1,2,3}, Huayu Yin^{1,2,3}, Linlin Qu^{1,2,3}, Xiaoxuan Ma^{1,2,3}, Rongzhan Fu^{1,2,3,*},
Daidi Fan^{1,2,3,*}

¹Shaanxi Key Laboratory of Degradable Biomedical Materials, School of Chemical Engineering, Northwest University, Taibai North Road 229, Xi'an, Shaanxi 710069, China.

²Shaanxi R&D Center of Biomaterials and Fermentation Engineering, School of Chemical Engineering, Northwest University, Taibai North Road 229, Xi'an, Shaanxi 710069, China.

³Biotech. & Biomed. Research Institute, Northwest University, Taibai North Road 229, Xi'an, Shaanxi 710069, China.

* Address correspondence to: Daidi Fan, E-mail: fandaidi@nwu.edu.cn, Tel./fax: +86-29-88305118; Rongzhan Fu, E-mail: rongzhanfu@nwu.edu.cn, Tel./fax: +86-29-88305118

These authors contributed equally to this work.

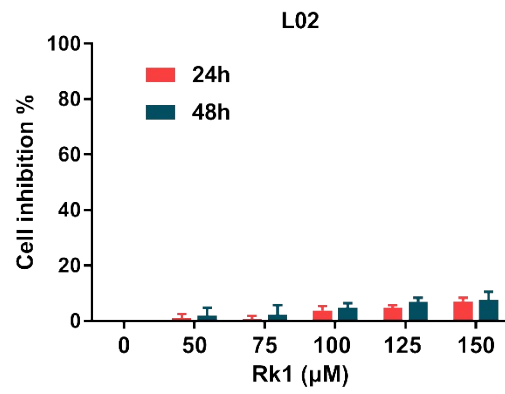


Figure S1. Cell viability was determined using MTT assay in L02 cells.

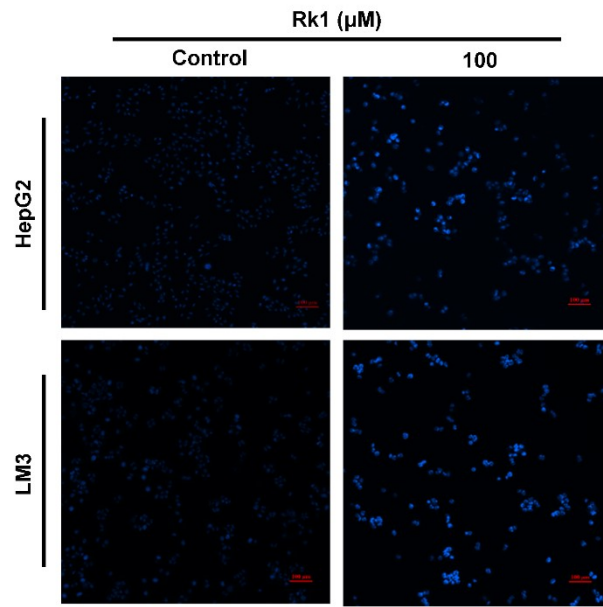


Figure S2. Hoechst 33,342 staining was used to detect apoptosis in HepG2 and LM3 cells.

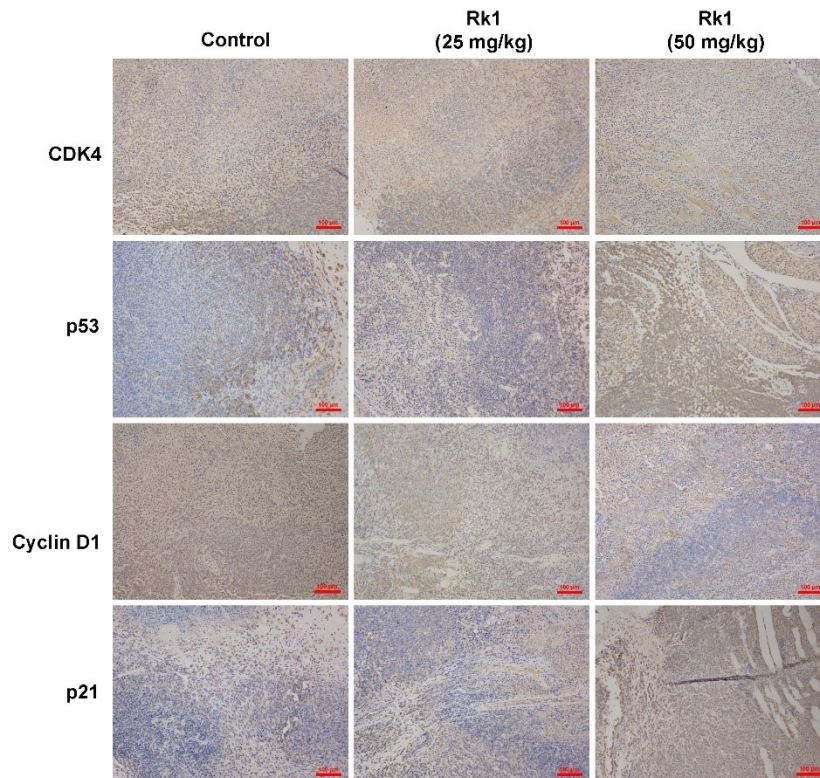


Figure S3. Immunohistochemical staining analyzed the expression levels of cycle-related proteins in tumor tissue.

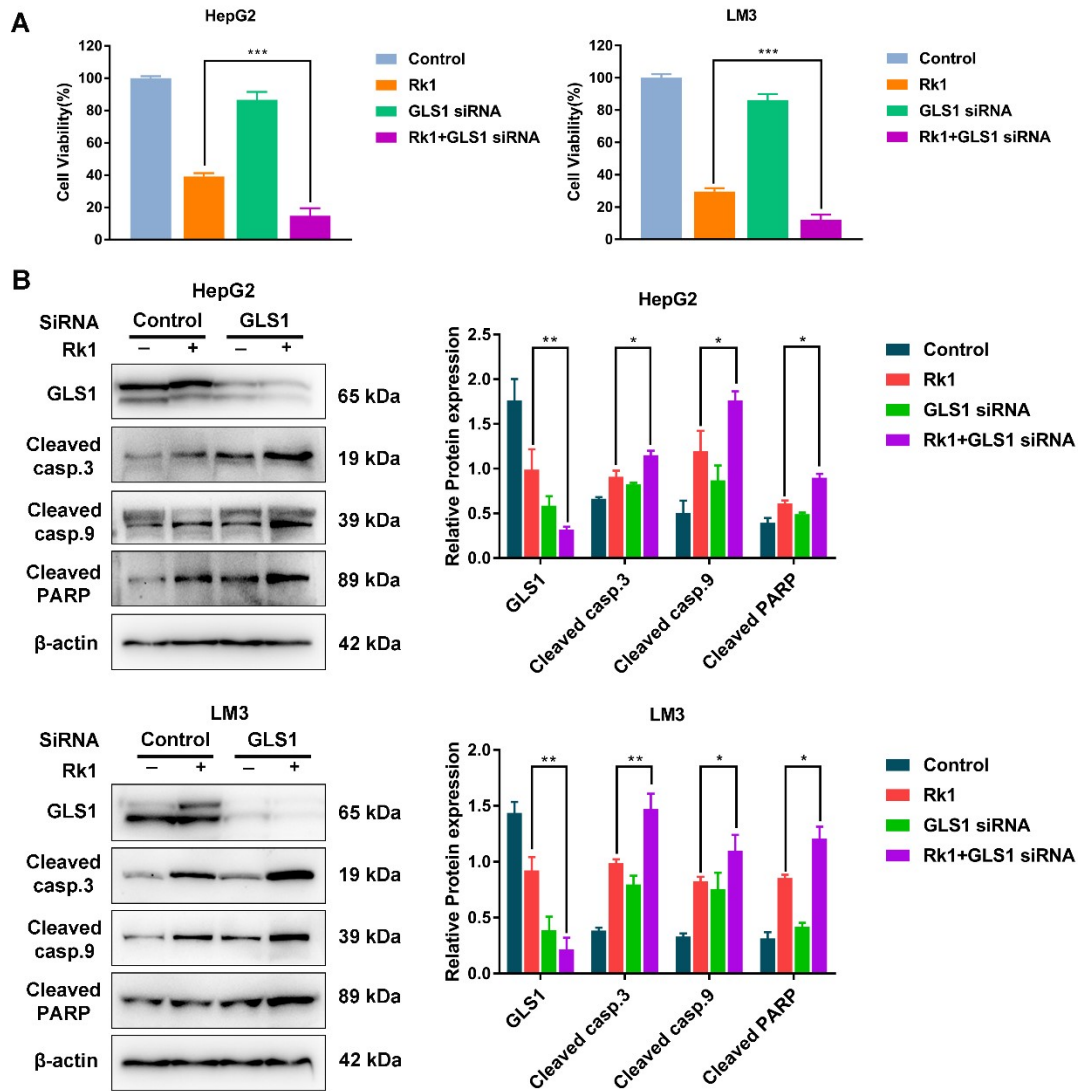


Figure S4. HepG2 and LM3 cells were transfected with siRNA against GLS1 and then treated with Rk1 (100 μ M) for 24 h. **A.** Cell viability was determined by MTT. **B.** The levels of GLS1, cleaved caspase-3, cleaved caspase-9 and cleaved PARP proteins were determined by Western blot analysis. β -actin was used as an endogenous reference. Histograms of the relative expression levels of the corresponding proteins were statistically analyzed. All data are presented as means \pm SD from at least three independent experiments. * p < 0.05, ** p < 0.01, *** p < 0.001 compared with control.