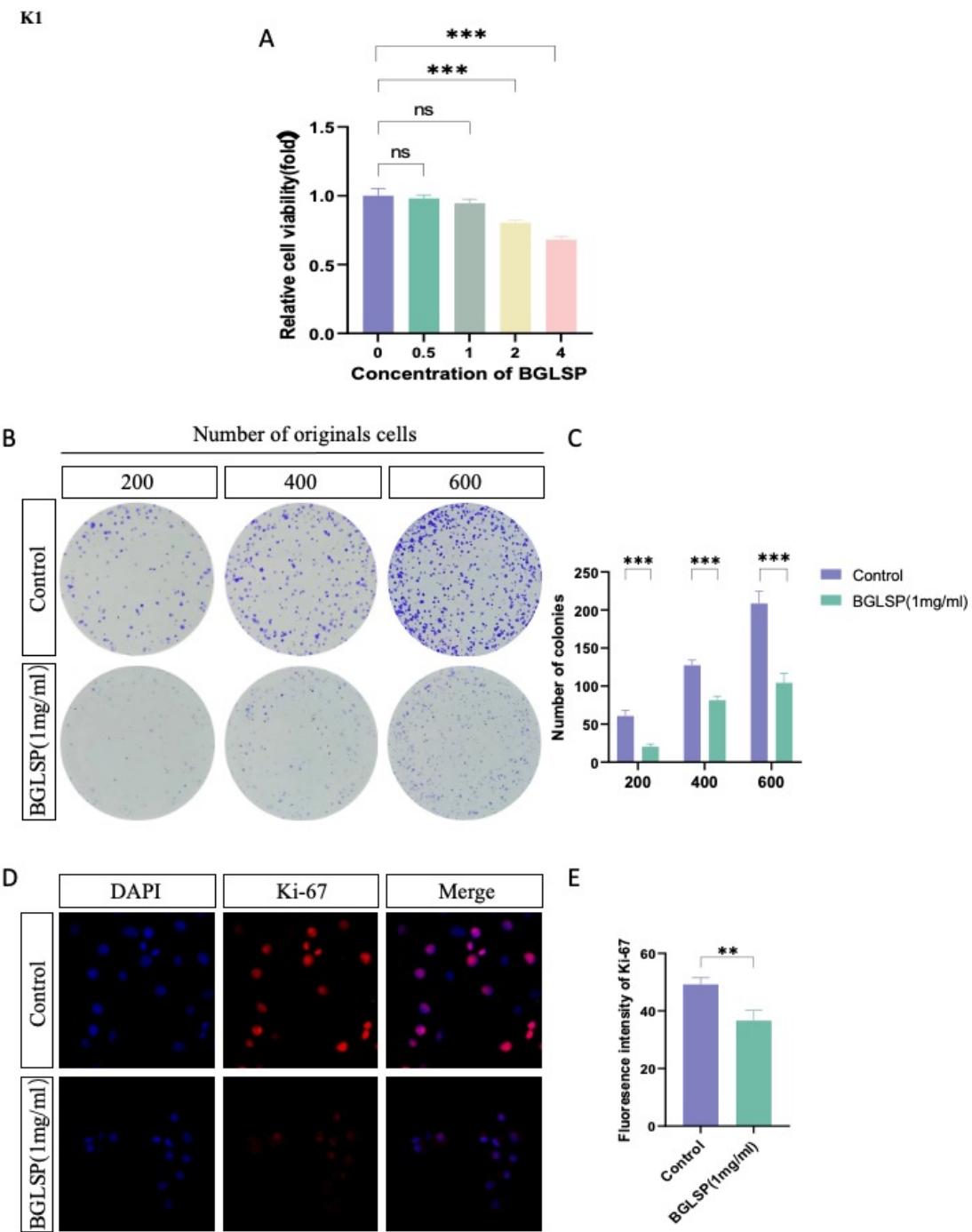
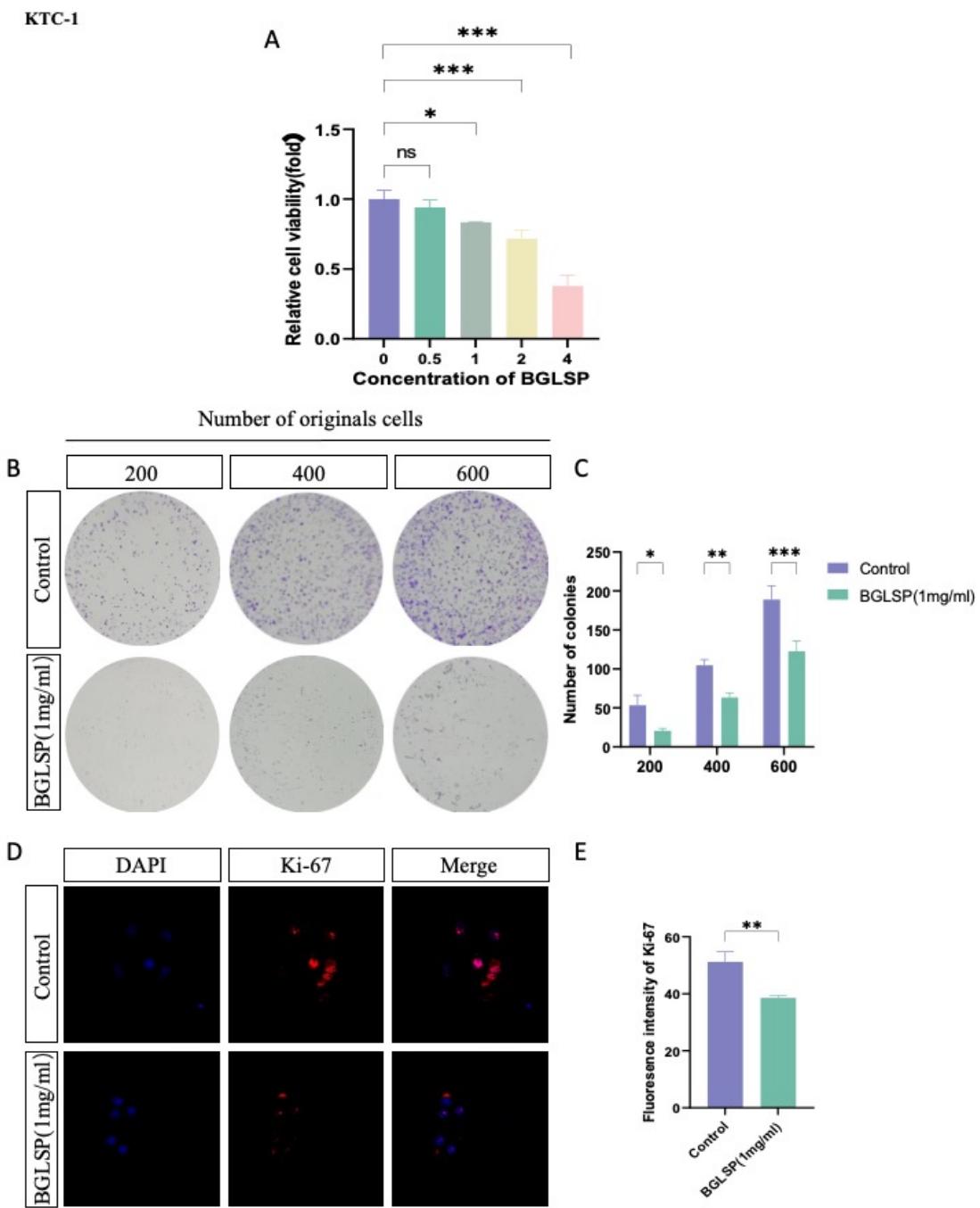


**Supplementary Figure 1**



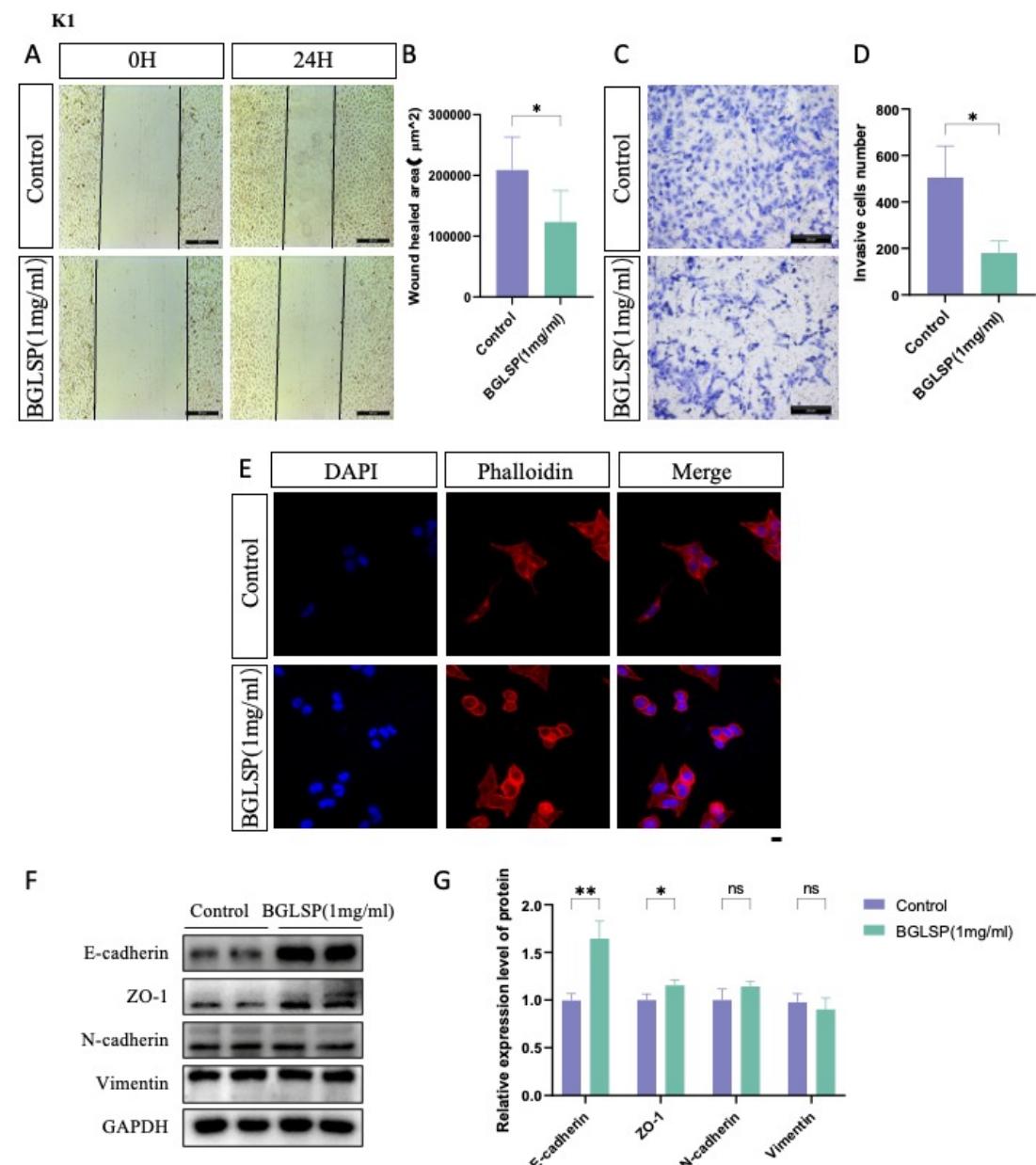
**Figure S1. Anti-proliferative effects of BGLSP on K1 cells in vitro.** (A) Dose-dependent effects of BGLSP (0.5, 1, 2, and 4 mg/ml, 24h) on K1 cell viability assessed by CCK-8 assay. (B, C) Colony formation capacity of K1 cells treated with 1 mg/ml BGLSP at different seeding densities (200, 400, 600 cells/well). (D, E) Immunofluorescence staining of Ki-67 (400x) proliferation marker in K1 cells following 1 mg/ml BGLSP treatment (24h), scale bar: 50 $\mu$ m. Data represent mean  $\pm$  SD. \*\*P<0.01, \*\*\*P<0.001.

**Supplementary Figure 2**



**Figure S2. Anti-proliferative effects of BGLSP on KTC-1 cells in vitro.** (A) Dose-dependent effects of BGLSP (0.5, 1, 2, and 4 mg/ml, 24h) on KTC-1 cell viability assessed by CCK-8 assay. (B, C) Colony formation capacity of KTC-1 cells treated with 1 mg/ml BGLSP at different seeding densities (200, 400, 600 cells/well). (D, E) Immunofluorescence staining of Ki-67 (400x) proliferation marker in KTC-1 cells following 1 mg/ml BGLSP treatment (24h), scale bar: 50 $\mu$ m. Data represent mean  $\pm$  SD. \*P<0.05, \*\*P<0.01, \*\*\*P<0.001.

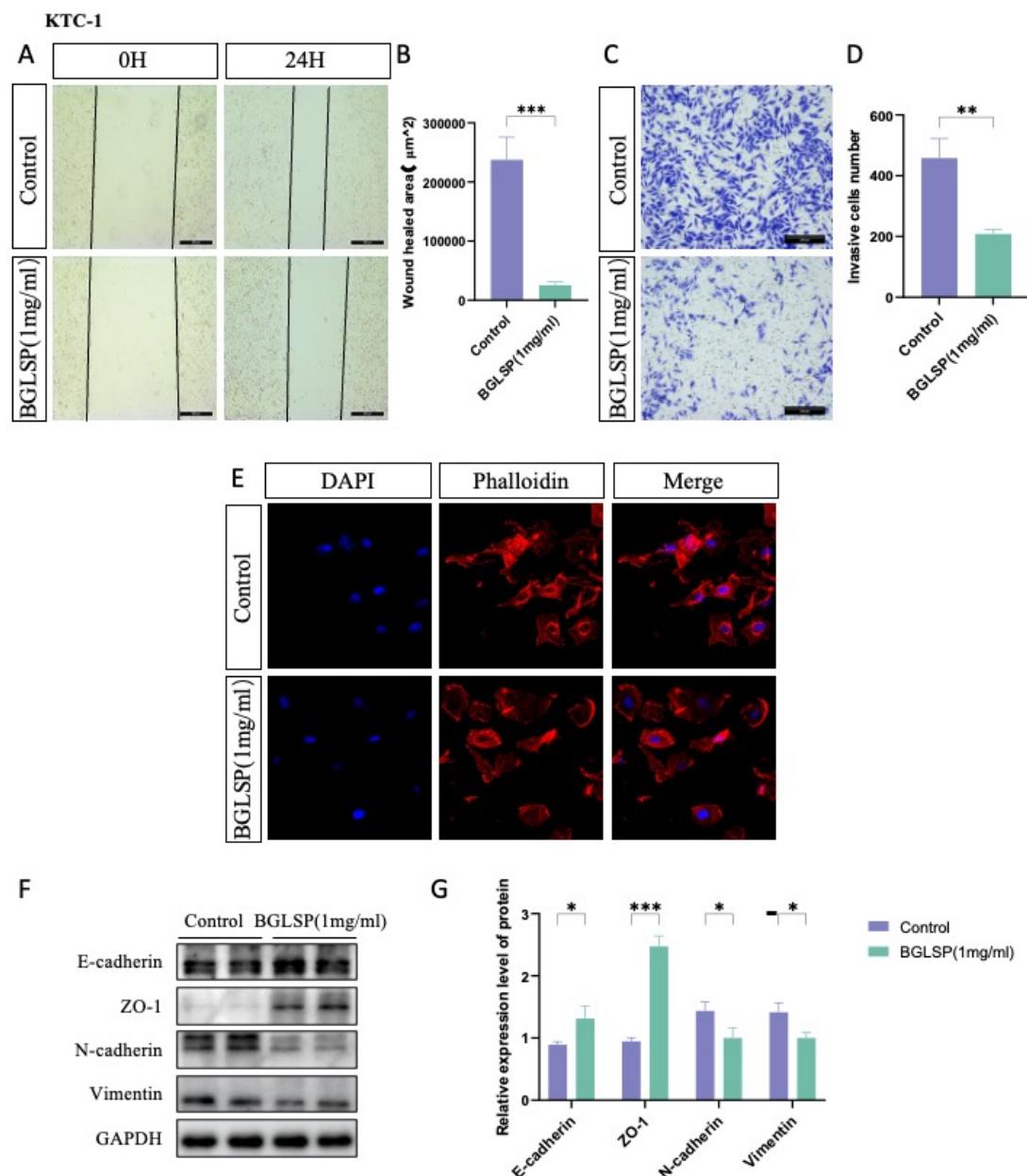
**Supplementary Figure 3**



**Figure S3. Anti-migratory effects of 1 mg/ml BGLSP on K1 cells for 24h.** (A, B) Wound healing assay (100x), scale bar: 500 $\mu\text{m}$ . (C, D) Transwell invasion assay (100x), scale bar: 200 $\mu\text{m}$ . (E) Cytoskeletal fluorescence assay (400x), scale bar: 50 $\mu\text{m}$ . (F, G) Western blot analysis of EMT-related markers. Data represent mean  $\pm$  SD.

\*P<0.05, \*\*P<0.01.

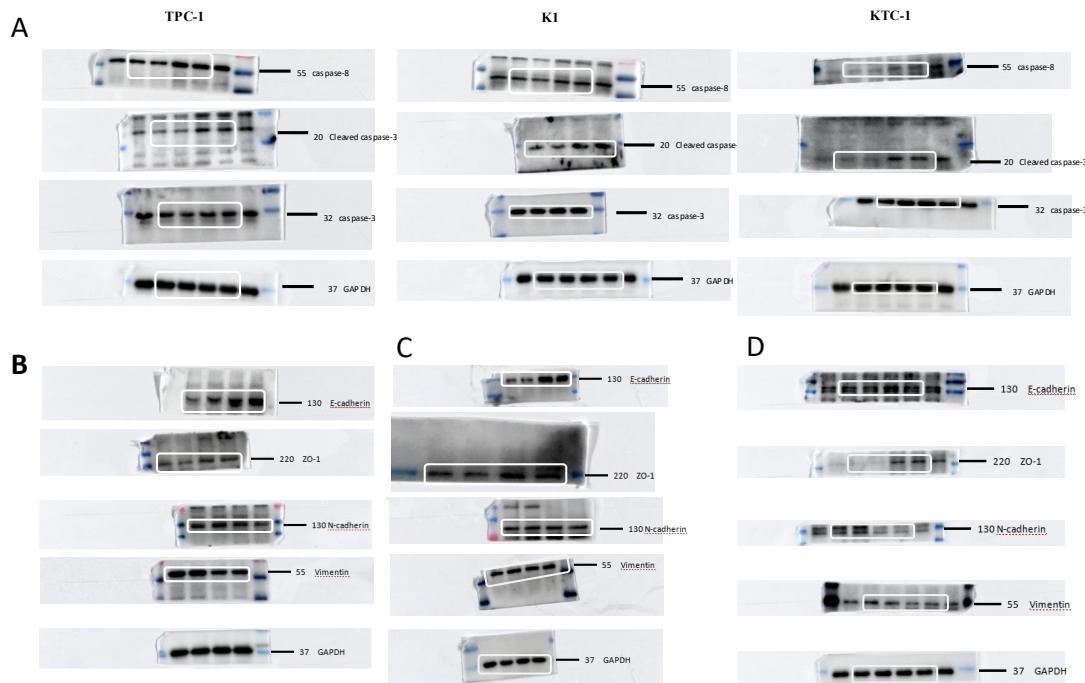
**Supplementary Figure 4**



**Figure S4. Anti-migratory effects of 1 mg/ml BGLSP on KPC-1 cells for 24h.** (A, B) Wound healing assay (100x), scale bar: 500 $\mu\text{m}$ . (C, D) Transwell invasion assay (100x), scale bar: 200 $\mu\text{m}$ . (E) Cytoskeletal fluorescence assay (400x), scale bar: 50 $\mu\text{m}$ . (F, G) Western blot analysis of EMT-related markers. Data represent mean  $\pm$  SD.

\*P<0.05, \*\*P<0.01, \*\*\*P<0.001.

### Supplementary Figure 5



**Figure S5. original blot.** (A) The original blot in Figure 2 B, E, H. (B) The original blot in Figure 2. (C) The original blot in Figure S3. (D) The original blot in Figure S4.