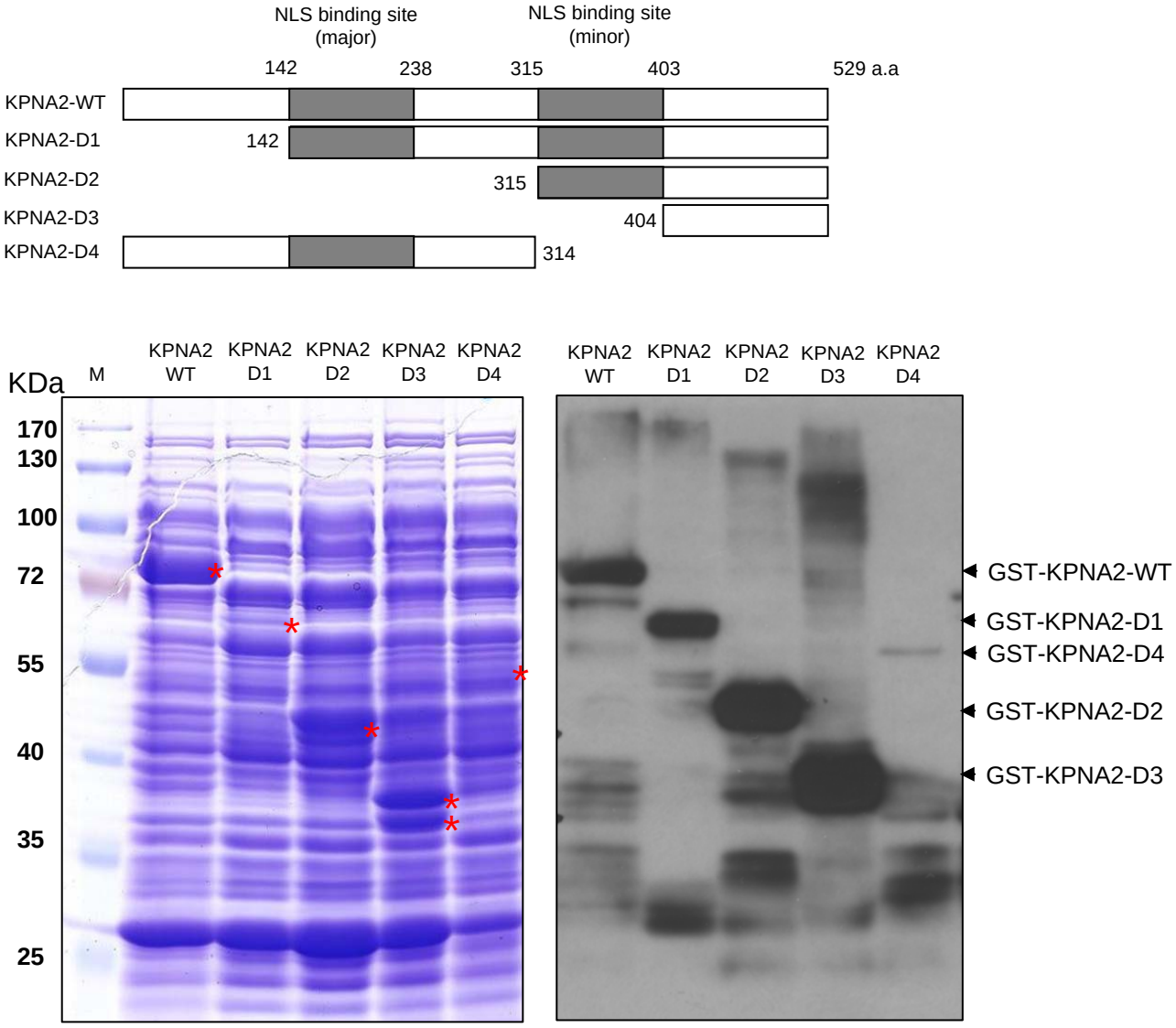

Fig. S2. The production yield and stability of recombinant KPNA2 proteins. Four serial truncated genes of GST-KPNA2 (KPNA2 D1~D4) were constructed and expressed in *E. coli cells.* Soluble fractions of *E. coli* lysates were prepared and subjected to SDS-PAGE followed by Coomassie blue staining (left panel). Simultaneously, the soluble proteins were prepared for Western blotting analysis by using anti-GST antibody (right panel). Asterisks and arrows indicate the truncated GST fusion proteins with estimated molecular weight. M, protein maker. This result indicated that the producing yield and stability of recombinant KPNA2-D4 protein (1-314 a.a.) was low.

Supplementary Figure S2

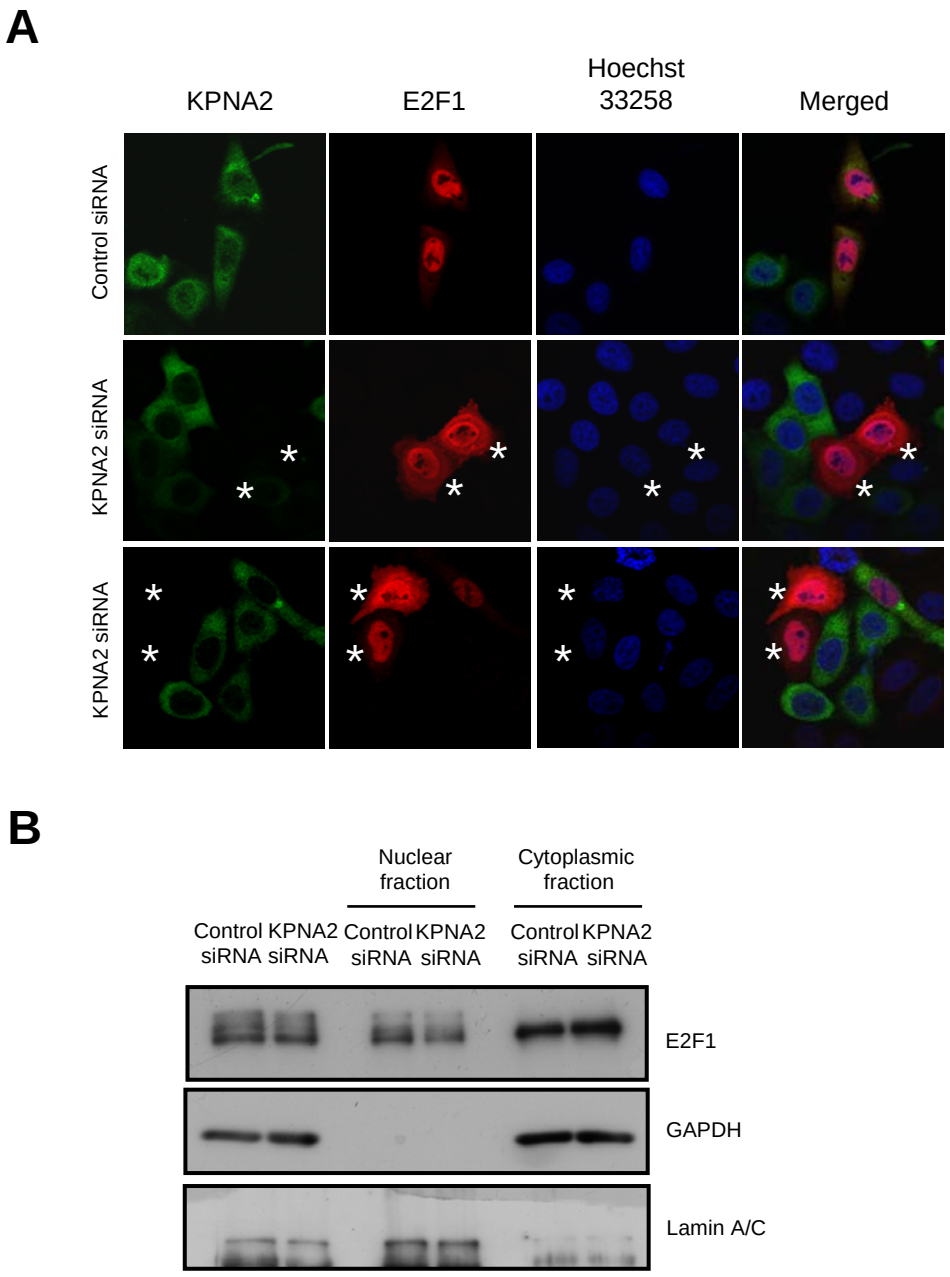

Fig. S3. Knockdown of KPNA2 causes subcellular redistribution of E2F1 in HeLa cells. (A) HeLa cells were transfected with control siRNA and KPNA2 siRNA, respectively, followed by transfection with E2F1/myc plasmid. At 24 h after transfection, cells transfected with KPNA2 siRNA were mixed 1:1 with control siRNA-transfected cells and re-seeding on coverslips for additional 24 h. At 48 h after transfection, cells were prepared for immunofluorescence staining using anti-KPNA2 and anti-myc antibodies to detect endogenous expression of KPNA2 and exogenous expression of E2F1, respectively. Asterisks indicate KPNA2-knockdown cells. (B) Simultaneously, cells were lysed and fractionated as nuclear and cytoplasmic fractions, followed by Western blotting GAPDH was used as the cytosolic control and lamin A/C as the nuclear control.

Supplementary Figure S3

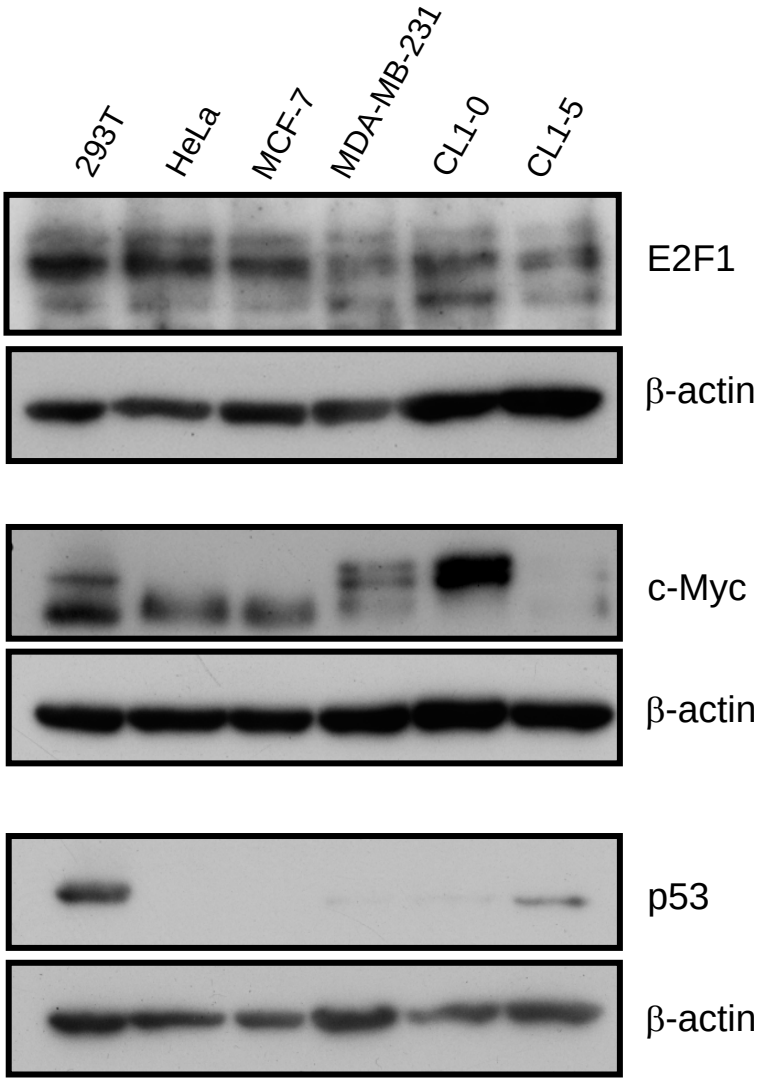

Fig. S4. Endogenous protein expressions of E2F1, c-Myc and p53 in human cancer cell lines. Total cell lysates prepared form HEK 293, HeLa, MCF-7, MDA-MB-231, CL1-0 and CL1-5 cells were subjected to Western blotting analysis (30 μg per lane) by using anti-E2F1(KH95), anti-c-Myc (9E10) and anti-p53 (FL393) antibodies to detect the endogenous expressions of targeted proteins as indicated. β-actin was used as the internal loading control.

Supplementary Figure S4

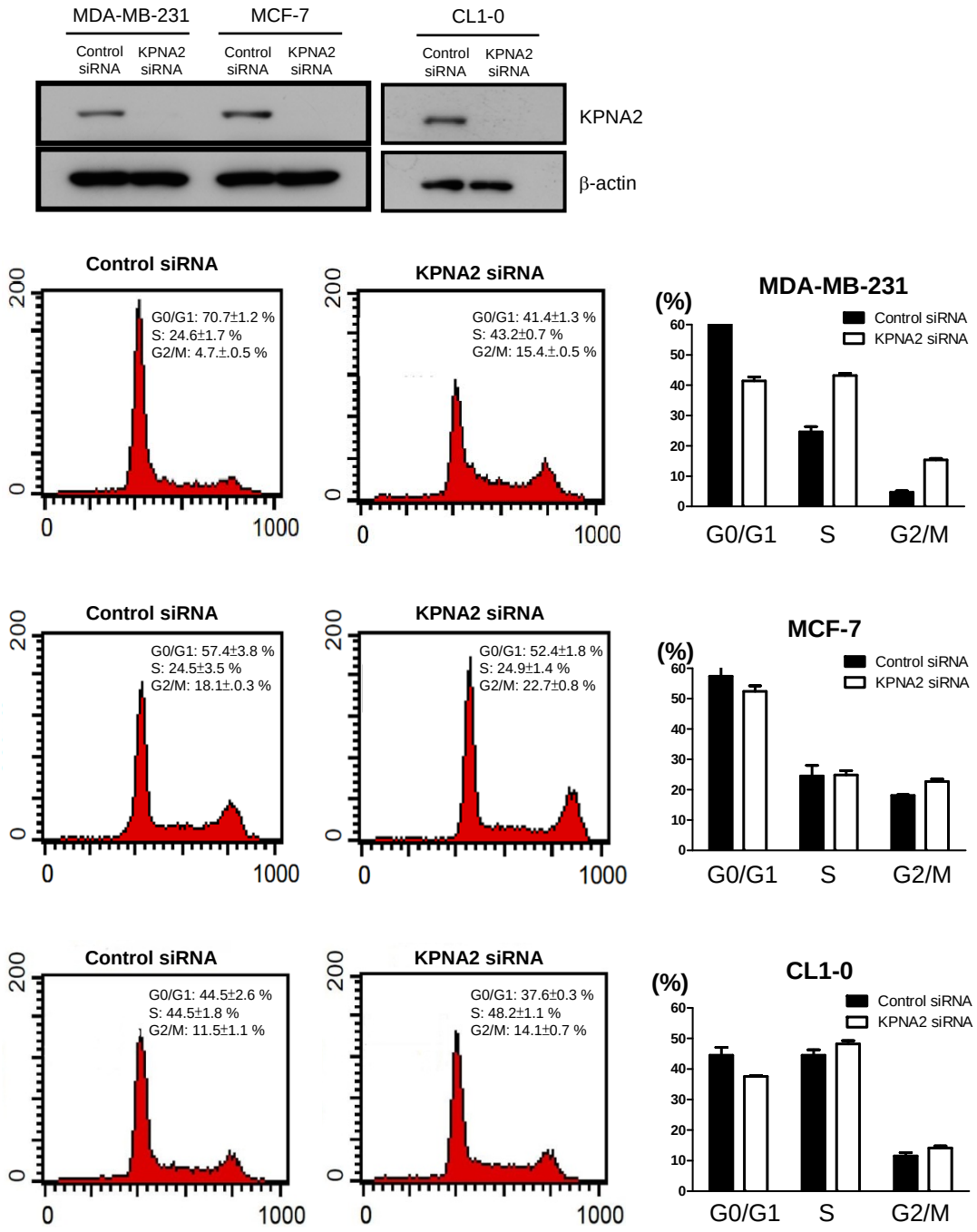

Fig. S5. Cell cycle arrested at the G2/M phase in KPNA2-knockdown MDA-MB-231, but not MCF7 or CL1-0 cells. Cells were transfected with control siRNA and KPNA2 siRNA as indicated. After transfection for 48 h, DNA content was determined by PI staining followed by flow cytometric analysis. Results were expressed as mean values ± S.D. from three independent experiments.

Supplementary Figure S5