Figure S1. Morphological changes of HL-7702 cells induced by SNs. (A) Cells exposed to basal medium without SNs (control group). (B) Cells exposed to 25  $\mu$ g/ml SNs; nuclear condensation was observed. Cells were exposed to (C) 50  $\mu$ g/ml and (D) 100  $\mu$ g/ml SNs; nuclear condensation and irregular shapes were observed. (E) Cells were exposed to 200  $\mu$ g/ml SNs; cell bodies were shrunken and exhibited apoptosis. Magnification, x200. SNs, silica nanoparticles.

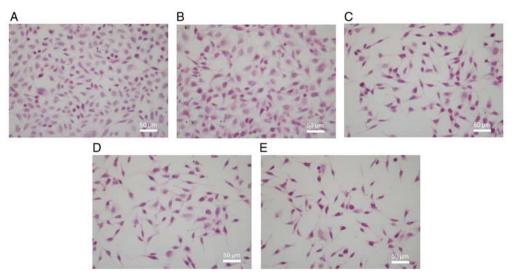


Figure S2. Apoptosis in HL-7702 cells induced by SNs detected by Giemsa staining. (A) Cells exposed to basal medium without SNs (control group). Cells were exposed to (B) 25, (C) 50, (D) 100 and (E) 200  $\mu$ g/ml SNs. Magnification, x400. SNs, silica nanoparticles.

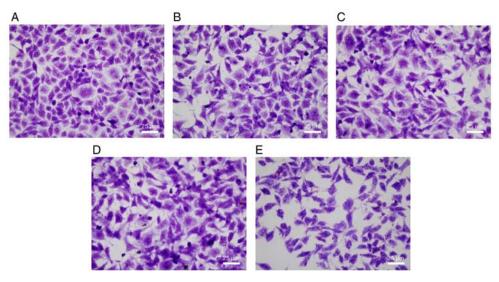


Figure S3. Diaminobenzidine staining of Bax protein expression in HL-7702 cells induced by SNs for 24 h. (A) Cells exposed to basal medium without SNs (control group). Cells were exposed to (B) 25, (C) 50, (D) 100 and (E) 200  $\mu$ g/ml of 60 nm SNs. Magnification, x400. SNs, silica nanoparticles.

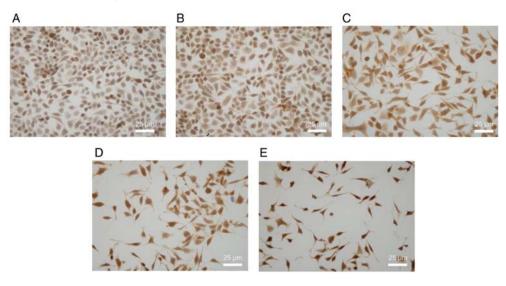


Figure S4. Diaminobenzidine staining of effect of SNs on Bcl-2 expression in HL-7702 cells. (A) Cells exposed to basal medium without SNs (control group). Cells were exposed to (B) 25, (C) 50, (D) 100 and (E)  $200 \mu g/ml$  of 60 nm SNs for 24 h. Magnification, x400. SNs, silica nanoparticles.

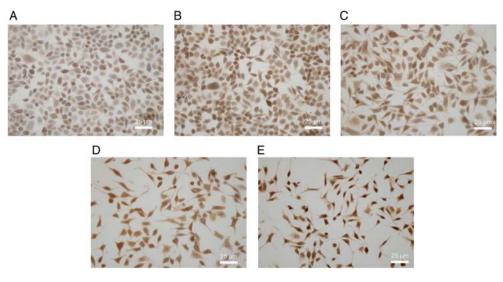


Figure S5. Diaminobenzidine staining of effect of SNs on caspase-3 expression in HL-7702 cells. (A) Cells exposed to basal medium without SNs (control group). Cells were exposed to (B) 25, (C) 50, (D) 100 and (E) 200  $\mu$ g/ml of 60 nm SNs for 24 h. Magnification, x400. SNs, silica nanoparticles.

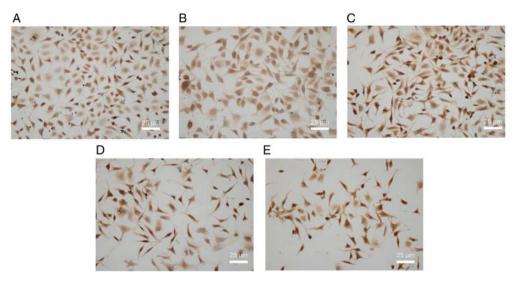


Figure S6. Diaminobenzidine staining of cytochrome C protein expression in HL-7702 cells induced by SNs for 24 h. (A) Cells exposed to basal medium without SNs (control group). Cells were exposed to (B) 25, (C) 50, (D) 100 and (E) 200  $\mu$ g/ml of 60 nm SNs. Magnification, x400. SNs, silica nanoparticles.

