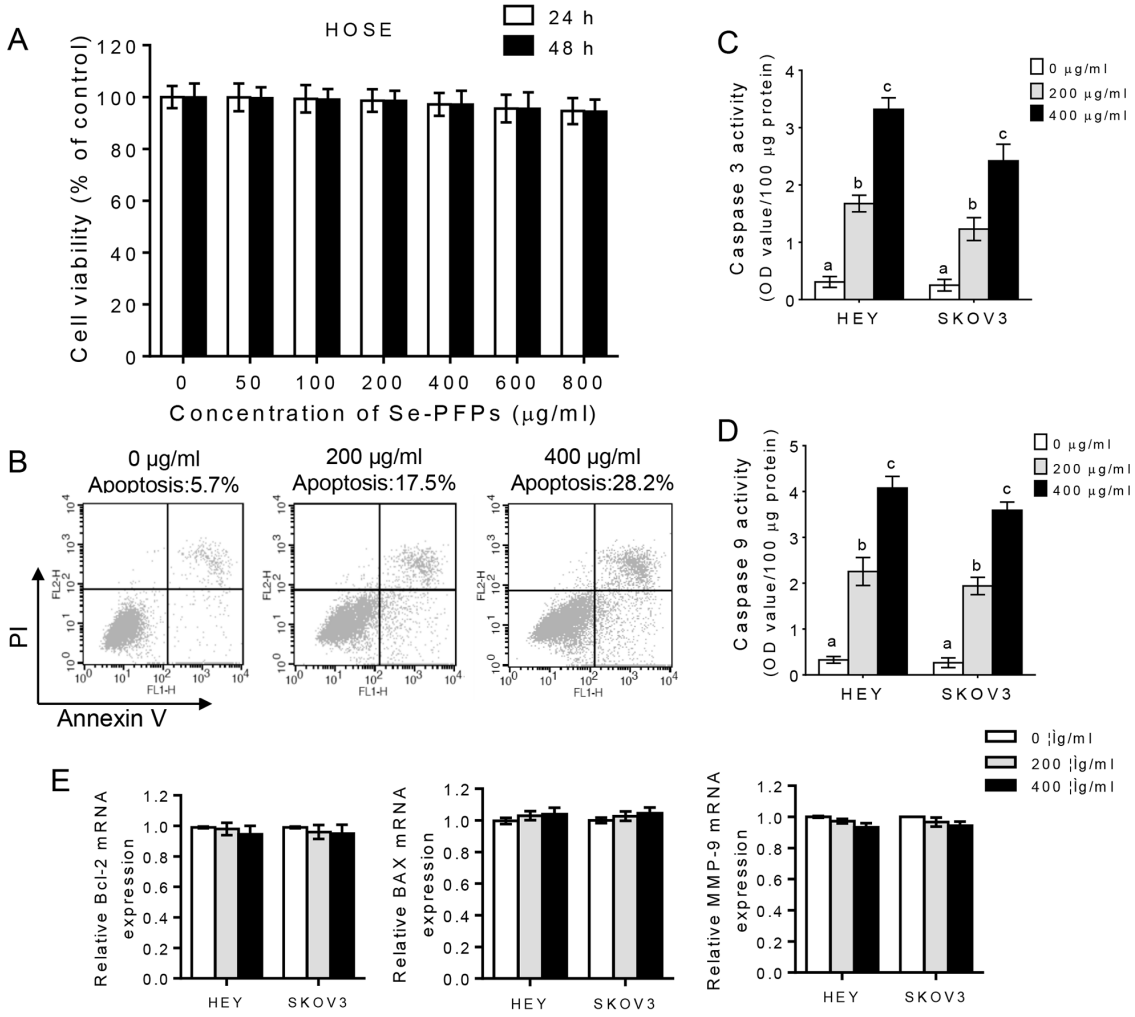
SUPPLEMENTARY MATERIALS

METHODS

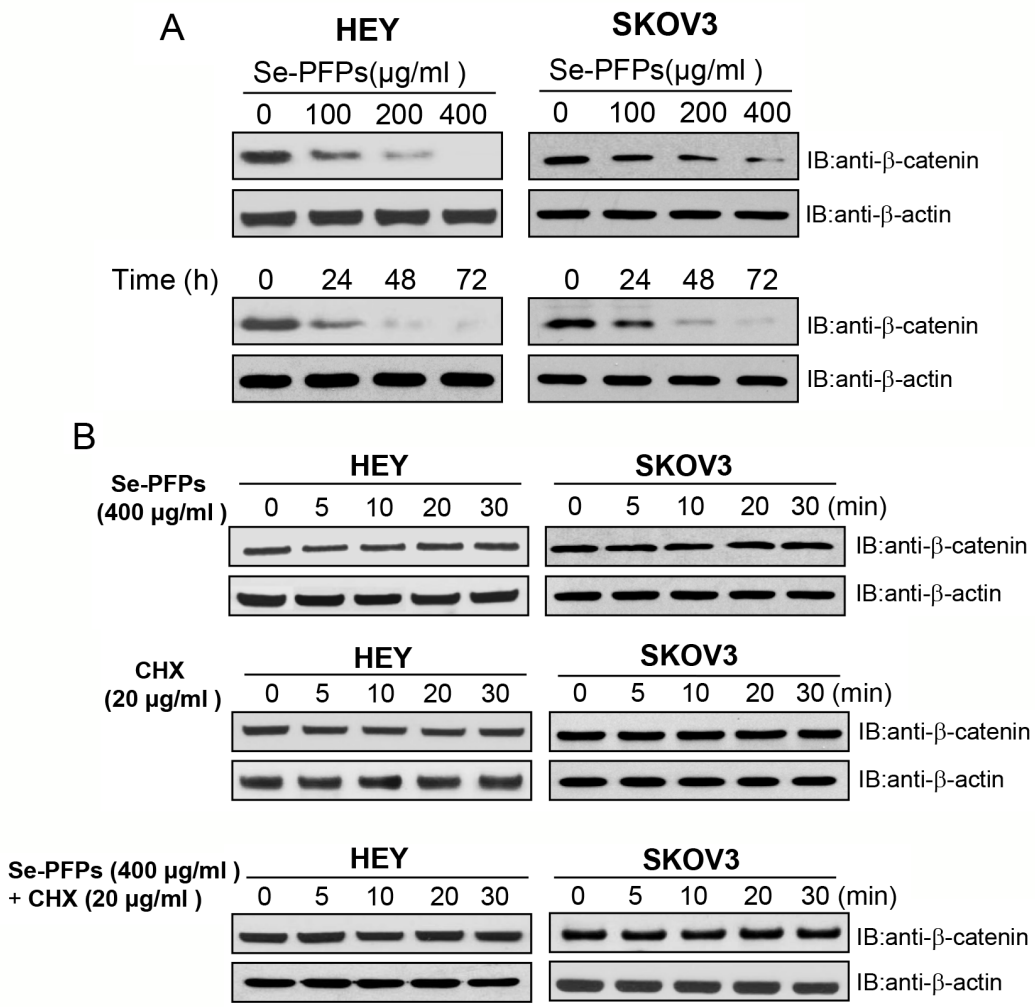
Caspase activity assay

The activities of caspase-3 and -9 were determined by using commercial kit (Beyotime Institute, Nanjing, China) following the manufacturer's instructions. Briefly, HEY and SKOV3 cells were treated with 0, 200 and 400 μg/ml of Se-PFPs for 48 hrs and lysed with lysis buffer. After centrifugation, the supernatants were mixed with the substrate and reaction buffer, then incubated for 2 hrs at 37°C in the darkness. The fluorescent intensity at 405 nm was measured using a microplate reader. The activity of caspase was presented as the observed absorbance/100 μg proteins.

SUPPLEMENTARY FIGURES AND TABLE



Supplementary Figure S1: A. The effect of Se-PFPs on viability of immortalized non-tumorigenic HOSE (human ovarian surface epithelial cell line) cells. HOSE cells were incubated with indicated doses of Se-PFPs for 24 and 48 hrs, respectively. Cell viability was detected using MTT method. The data are presented as the ratio to the untreated cells. **B.** Representative images for Se-PFPs-induced apoptosis in HEY cells assayed by Annexin V and PI stainings. 10,000 cells were analyzed by flow cytometry. **C.** Se-PFPs inhibit the activity of caspase-3 in HEY and SKOV3 cells. **D.** Se-PFPs inhibit the activity of caspase-9 in HEY and SKOV3 cells. **E.** Effects of Se-PFPs on the mRNA expression of Bcl-2, Bax and MMP-9 in HEY and SKOV3 cells after Se-PFPs treatment. The statistical analysis was carried out by using one-way ANOVA following Bonferroni *post hoc* test, and different letters above each column represent statistical difference at a level of $p < 0.05$ (n=3).



Supplementary Figure S2: A. Se-PFPs inhibit β-catenin expression in a concentration- and time-dependent manner. HEY and SKOV3 cells were incubated with different concentrations of Se-PFPs for 48 hrs (top panel) or with 400 μg/ml Se-PFPs for different time points (bottom panel), and β-catenin expression was determined by Western blot. **B.** Effect of Se-PFPs and LiCl (GSK-3β inhibitor) on β-catenin expression in a short period (30 min). HEY and SKOV3 cells were incubated with 400 βg/ml Se-PFPs and/or 20 μg/ml CHX for various time points, then the level of total β-catenin was determined by Western blot. β-actin was used as a loading control.

Supplementary Table S1: The primers used for real time PCR

Gene	Forward primer	Reverse primer
E-cadherin	tgcccagaaaatgaaaaagg	gtgtatgtggcaatgcgttc
N-cadherin	gacaatgcccctcaagtgtt	ccattaagccgagtgatggt
Cytokeratin 19	tttgagacggaacaggctct	aatccacctccacactgacc
Vimentin	gagaactttgccgttgaagc	tccagcagcttcctgtaggt
ZEB1	tgcactgagtgtggaaaagc	tggtgatgctgaaagagacg
ZEB2	gagtggccgaaagagatcag	agttttggccagaaatggtg
Bcl-2	gaggattgtggccttctttg	acagttccacaaaggcatcc
Bax	tttgcttcagggtttcatcc	cagttgaagttgccgtcaga
MMP-9	ttgacagcgacaagaagtgg	gccattcacgtcgtccttat
b-catenin	gccggctattgtagaagctg	gagtcccaaggagaccttcc
GAPDH	acctgacctgccgtctagaa	tccaccaccctgttgctgta