SUPPLEMENTARY FIGURES AND METHODS

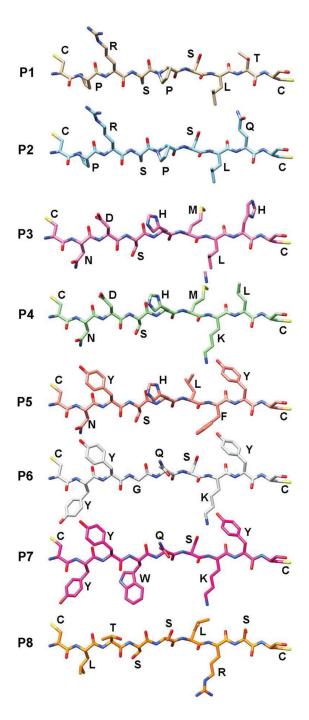


Figure S1: The peptide residues were shown as stick models with carbon atoms in different colors. From upper to lower, we presented structures of P1 to P8 peptides.

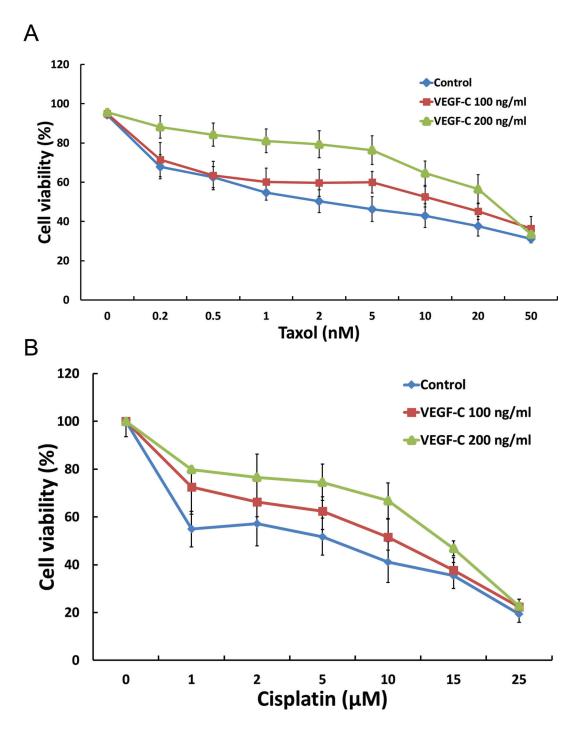


Figure S2: VEGF-C protected lung cancer cell from anti-cancer drug-induced cell death. MTT assay was performed to analysis the cell viability of A549 cells by co-treating with Taxol (**A**) or cisplatin (**B**) in the presence or absence of rhVEGF-C. (**A**) A549 cells were starved for 24 hours in 96 wells before rhVEGF-C treatment (100 ng/ml and 200 ng/ml). After rhVEGF-C treatment, cells were treated with indicated concentration of Taxol. Survived cells were determined by MTT assay. (**B**) A549 cells were serum-starved for 24 hours in 96 wells before rhVEGF-C treatment (100 ng/ml and 200 ng/ml). After rhVEGF-C treatment, cells were treated with indicated concentrations of cisplatin. Survived cells were determined by MTT assay. Each assay was done in three separate experiments; bars, SD.

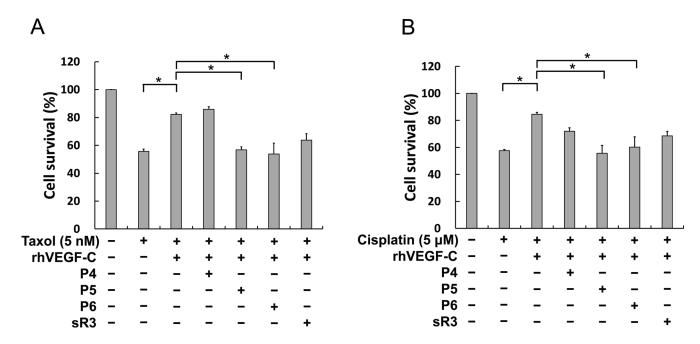


Figure S3: P5 and P6 peptides inhibit VEGF-C-induced drug resistance by MTT assay. Taxol **(A)** and cisplatin **(B)** were treated with the indicated peptides and rhVEGF-C in A549 cells. The cell survival rates were measured by MTT assay. Columns, mean of three independent experiments; bars, SD. *, p < 0.05 statistically significant decrease compared with the corresponding control value.

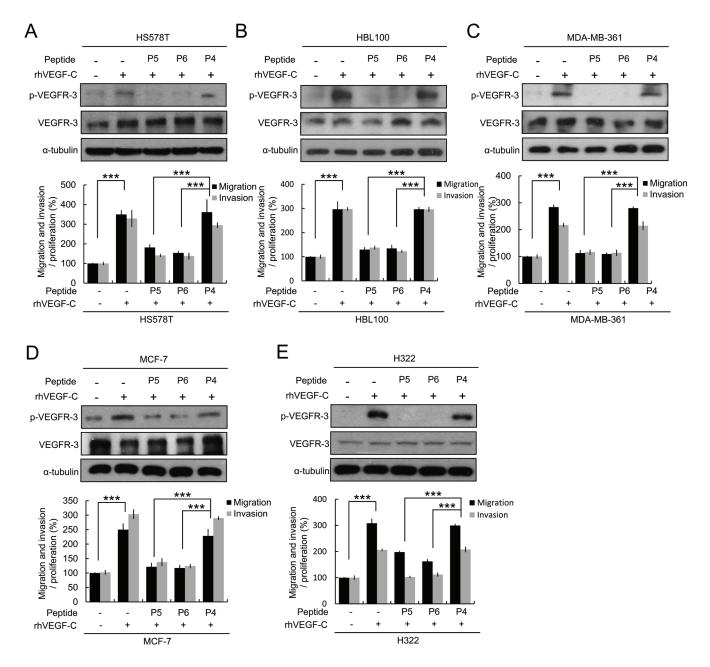


Figure S4: P5 and P6 peptides inhibit VEGF-C/VEGFR-3 signaling and decrease cancer cells migration and invasion. Effects of control (P4), P5 and P6 peptides on VEGF-C-induced VEGFR-3 activation was analyze by western blot analysis (upper) and the ability of migration and invasion (lower) in HS578T (A), HBL100 (B), MDA-MB-361 (C), MCF-7 (D) and H322 (E) cells. Columns, mean of three independent experiments; bars, SD. ***, p < 0.001 statistically significant decrease compared with the corresponding control value.

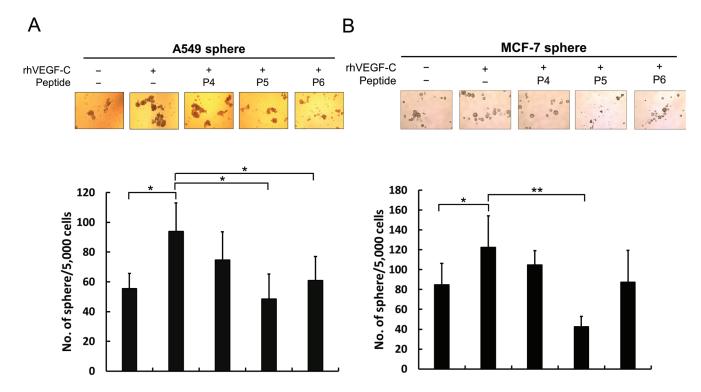


Figure S5: P5 and P6 peptides decrease sphere formation of cancer cells. Effects of control (P4), P5 and P6 peptides on VEGF-C-induced tumor initiating cells (TICs) formation. Sphere-forming assay was perform in A549 (A) and MCF-7 (B) cells treated with indicated peptides and rhVEGF-C. Columns, mean of three independent experiments; bars, SD. *, p < 0.05; **, p < 0.01 statistically significant decrease compared with the corresponding control value.

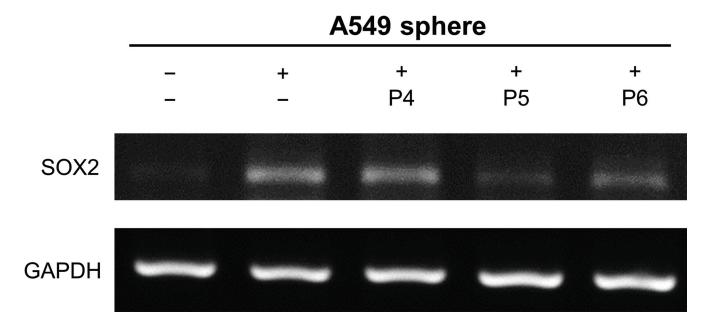


Figure S6: P5 and P6 peptides significantly decrease VEGF-C-induced cancer stem cell marker. Effects of P5 and P6 peptides on mRNA expression of SOX2. Total RNA were harvested for analysis of SOX2 mRNA by RT-PCR.