Electronic Supplementary Material (ESI) for Nanoscale.

Supplementary Data

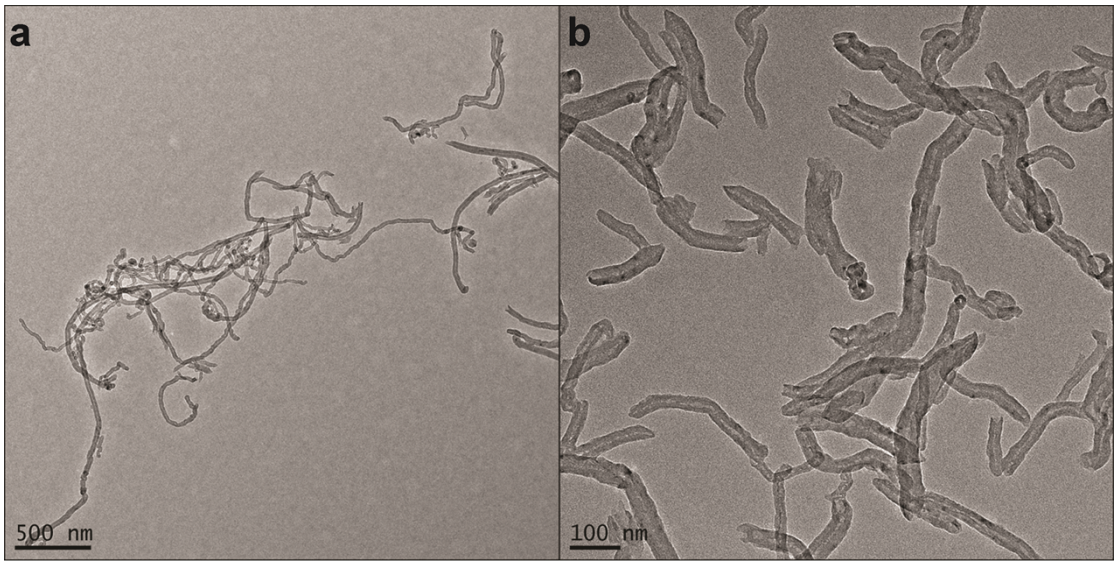

Fig. S1. TEM characterization of 10 µg/mL short-length MWCNTs. a) pristine MWCNTs; b) oxidized-MWCNTs (10 h).

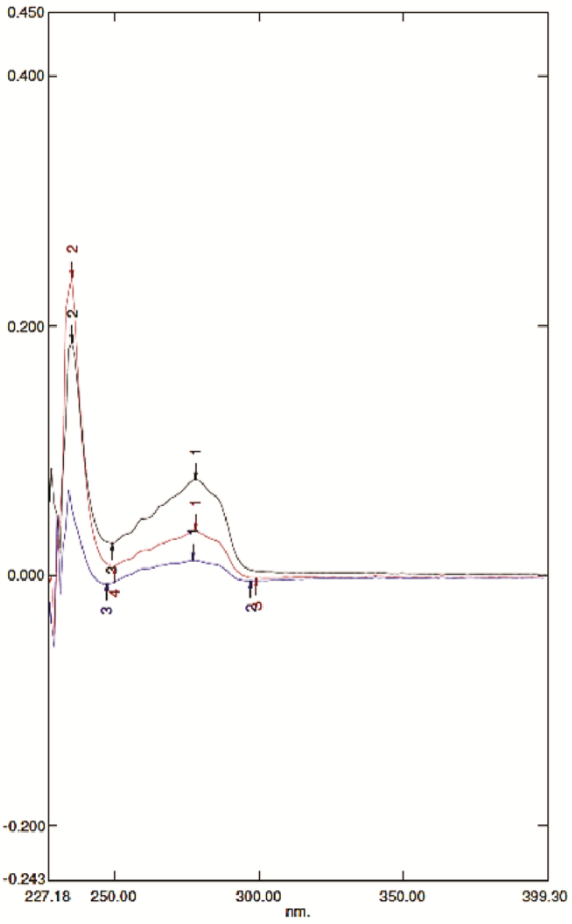

Fig. S2: UV/vis scanning of HKII(pep) dissolved in MeOH with 1% DMSO from 220 nm to 400 nm. 2 significant peaks are identified at 280 nm and 230 nm. Different concentrations of HKII(pep) solution were prepared (0.6 mM, 0.3 mM, and 0.15 mM) and their UV/vis spectrums were obtained accordingly (black, red blue).

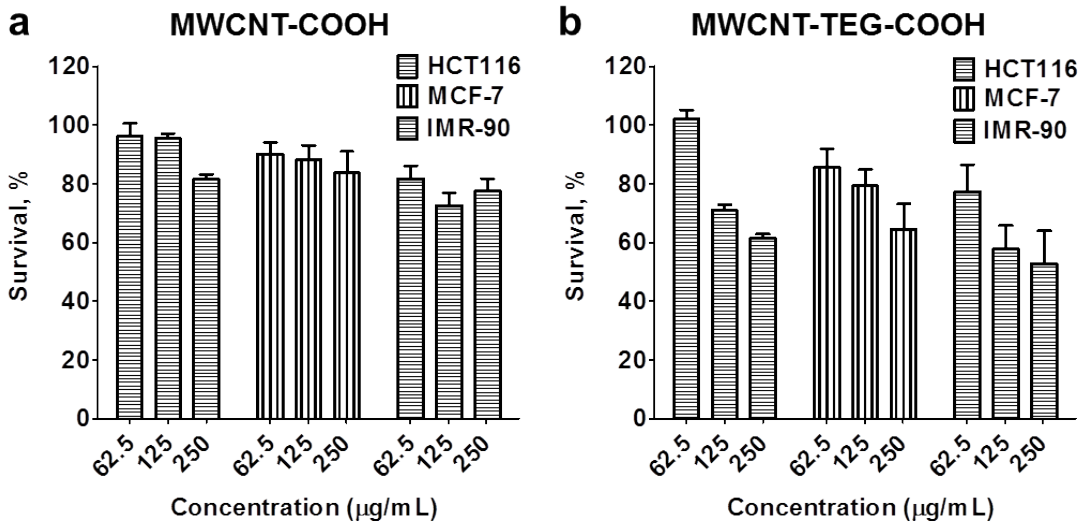

Fig. S3. Investigation of cell viability *via* WST-1 assay. HCT116 and MCF-7 were treated with 3 concentrations (62.5, 125, 250 μg/mL) of (a) MWCNT-COOH and (b) MWCNT-TEG-COOH for 48 h. WST-1 readings from the control lane (i.e. cells without any treatment) were used as reference values for 100% survival.

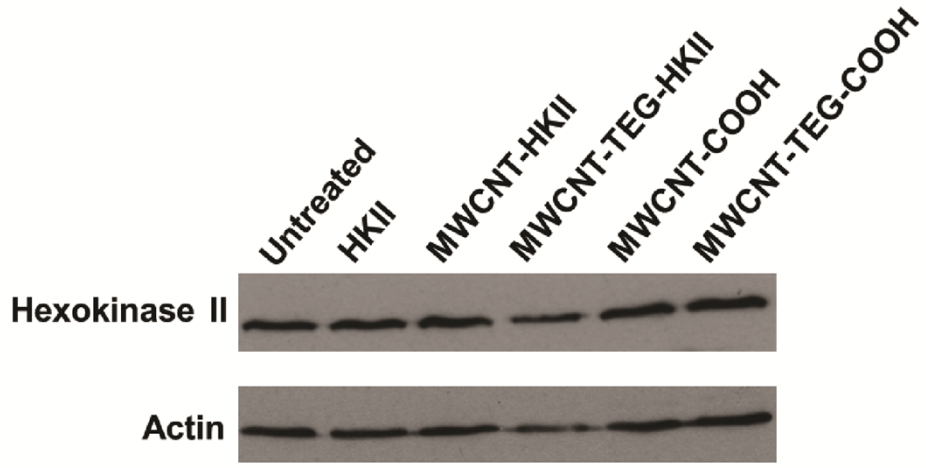

Fig. S4. Immunoblotting of hexokinase II in total cell lysate. HCT116 cells were treated with HKII (25 μM); MWCNT-HKII (25 μM); MWCNT-TEG-HKII (25 μM); MWCNT-COOH (125 μg/mL); MWCNT-TEG-COOH (125 μg/mL) for 4 h. A total of 3.2×10^6 cells were harvested and resuspended in 150 ml Total Lysis Buffer (10 mM HEPES [pH 7.9], 150 mM NaCl, 1 mM EGTA, 1% Triton X-100) supplemented with protease inhibitors and disrupted by 10 strokes through pipetting at 4˚C. After centrifugation at 800 x g for 5 min, protein content in supernatants designated as lysates was determined using standard Bradford assay. Thereafter, the cells were harvested and lysed to obtain total cell lysate. Western blot of hexokinase II was performed and actin was served as loading control.