Electronic Supplementary Material (ESI) for Toxicology Research.
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Supplementary material

Cadmium telluride quantum dot-exposed human bronchial epithelial cells: a further study of the cellular response by proteomics

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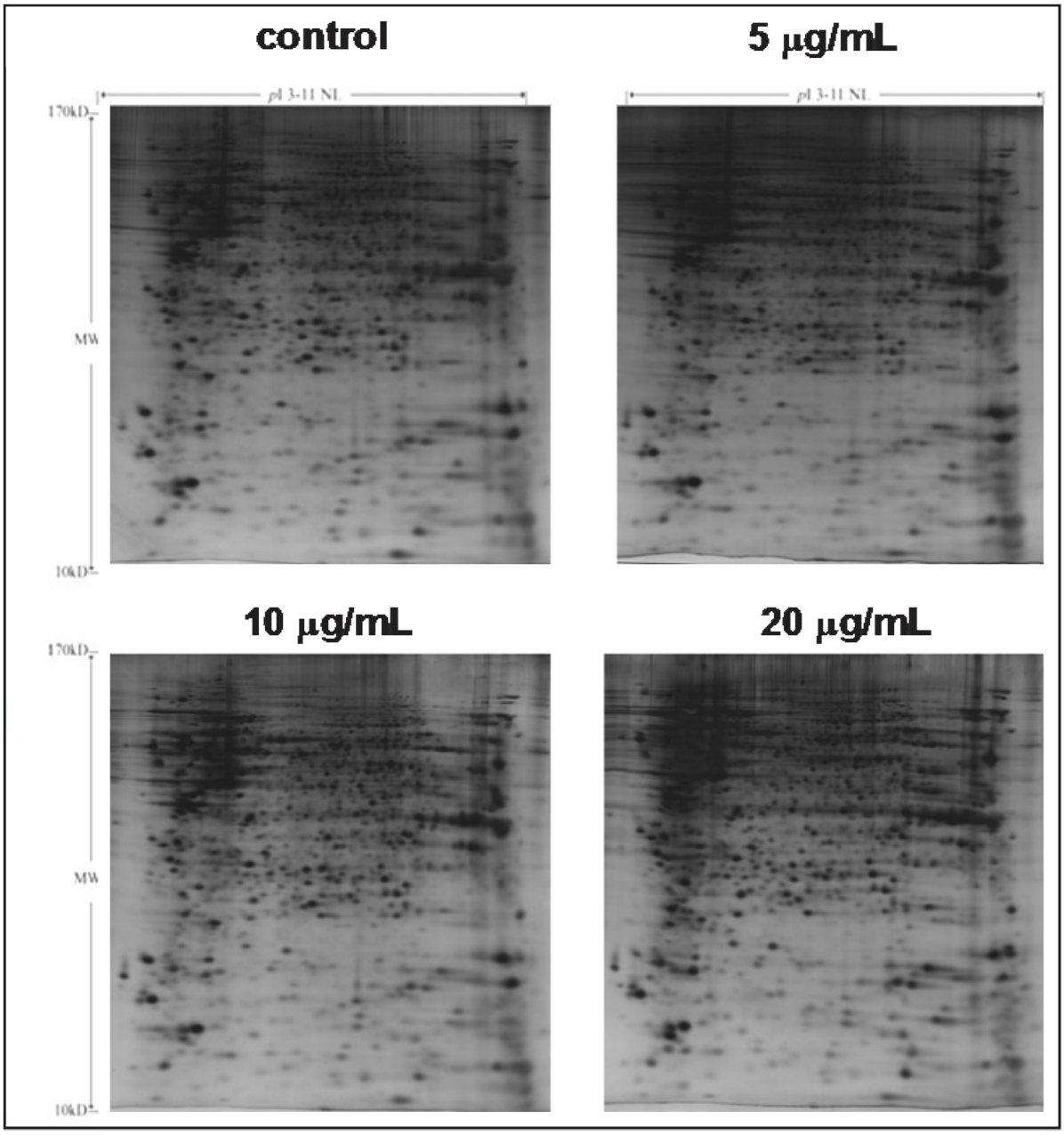
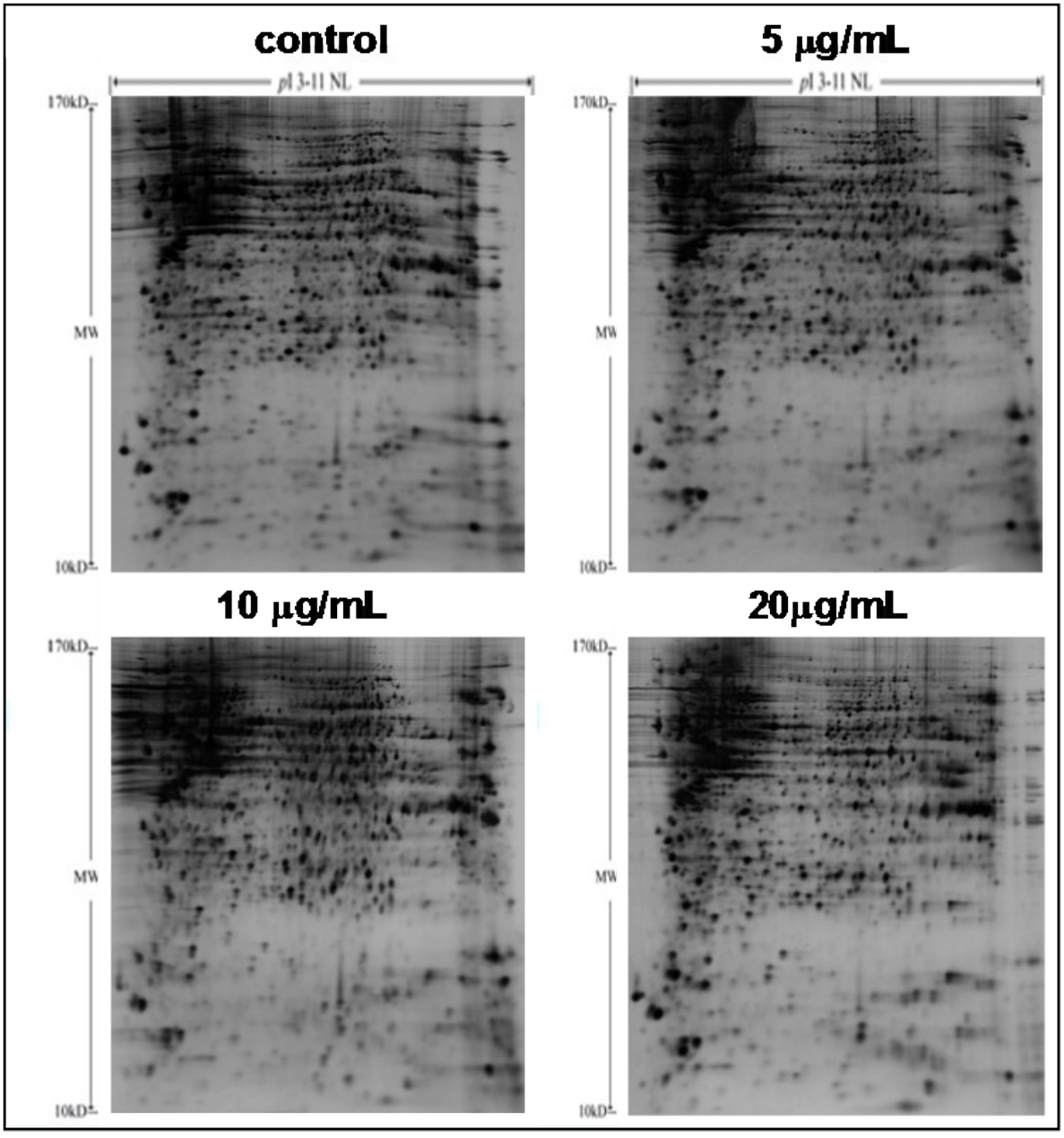
Including:

A



B

580Q



C

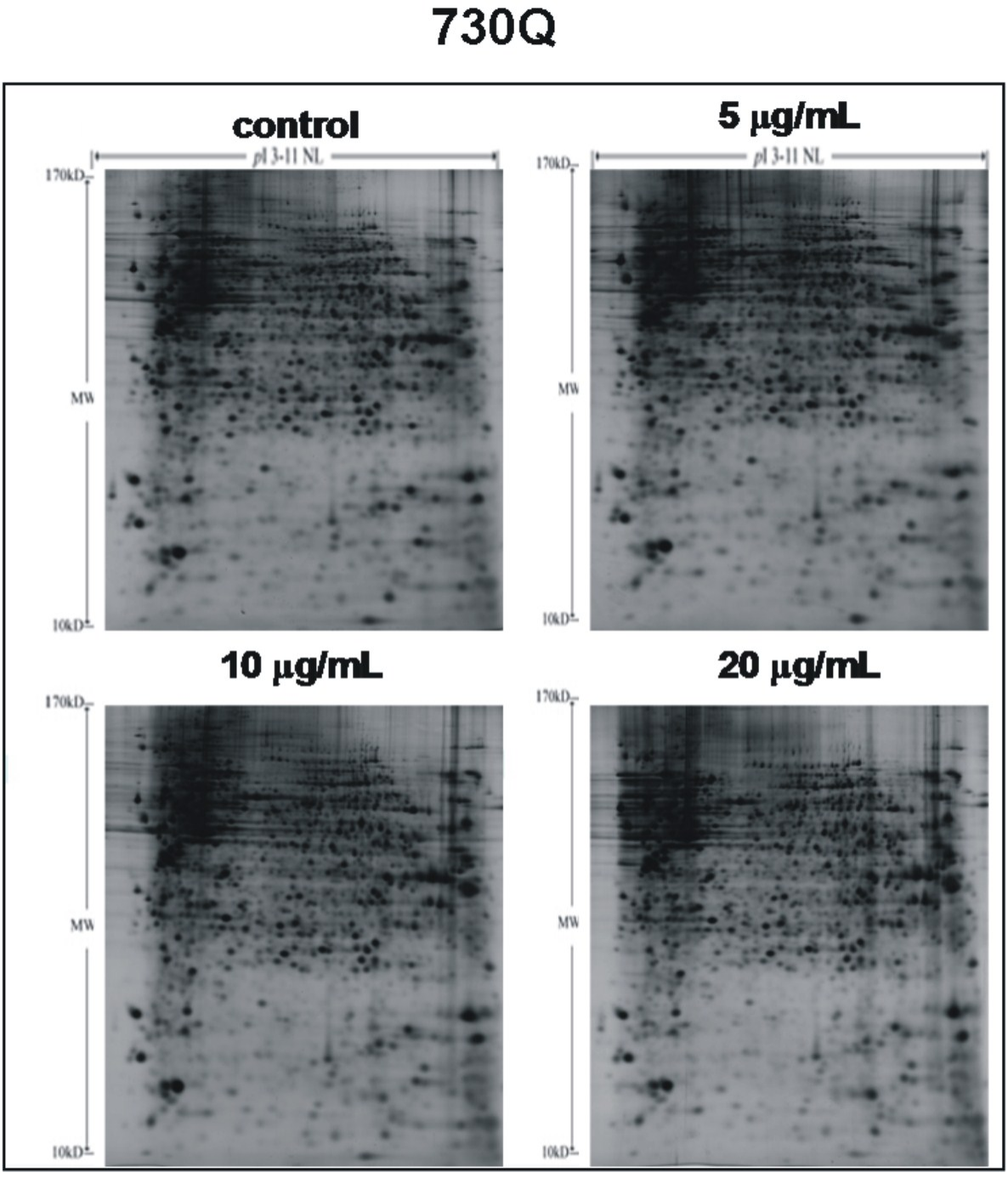


Fig. S1 Analyses of cellular proteins from BEAS-2B cells dosed with CdTe QDs. Representative gel images of BEAS-2B cells treated with 5, 10, or 20 μg/ml (A) 520Q, (B) 580Q, or (C) 730Q for 24 h visualized by two-dimensional gel (12.5%) and silver staining. The results are representative of three independent experiments.

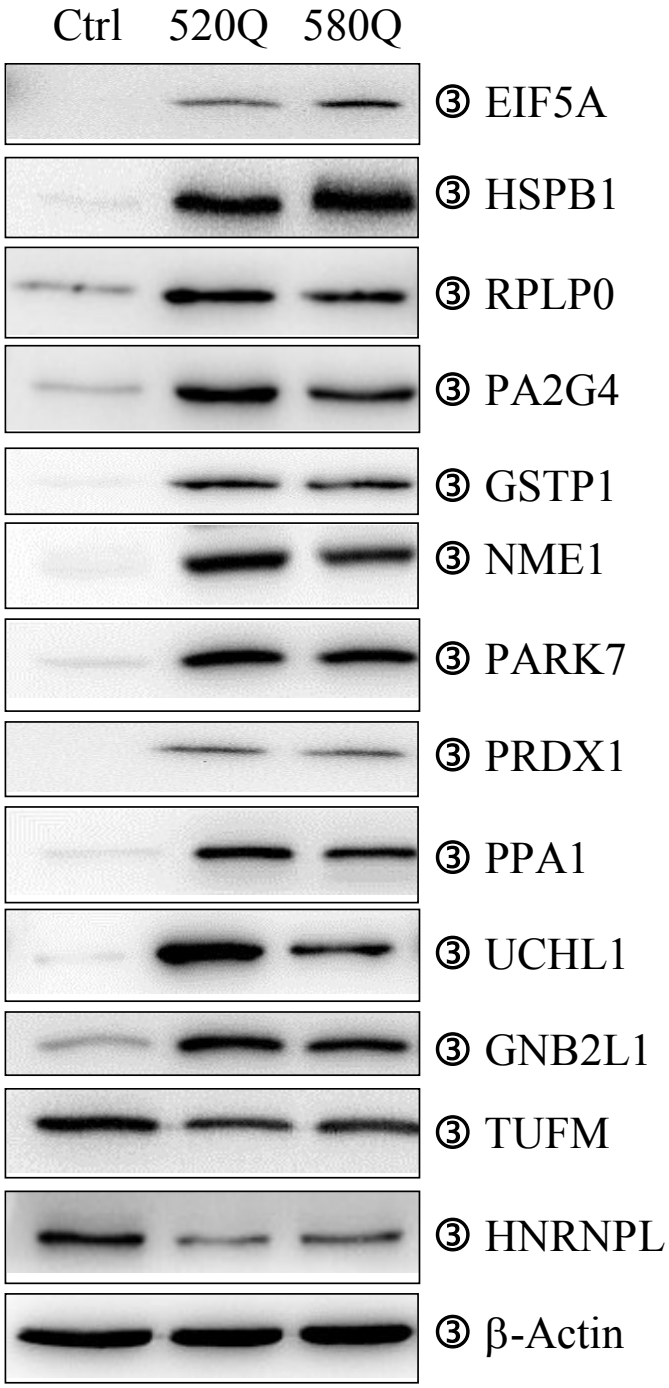


Fig. S2 Confirmation of MS data by western blot analyses. BEAS-2B cells were sham-exposed or treated with 20 μg/mL 520Q or 580Q for 24 h; cells were lysed; and protein extracts were subjected to western blot analysis using various antibodies. The same blot was stripped and reprobed with a monoclonal β-actin antibody to monitor the loading difference. Data are representative of three independent experiments.

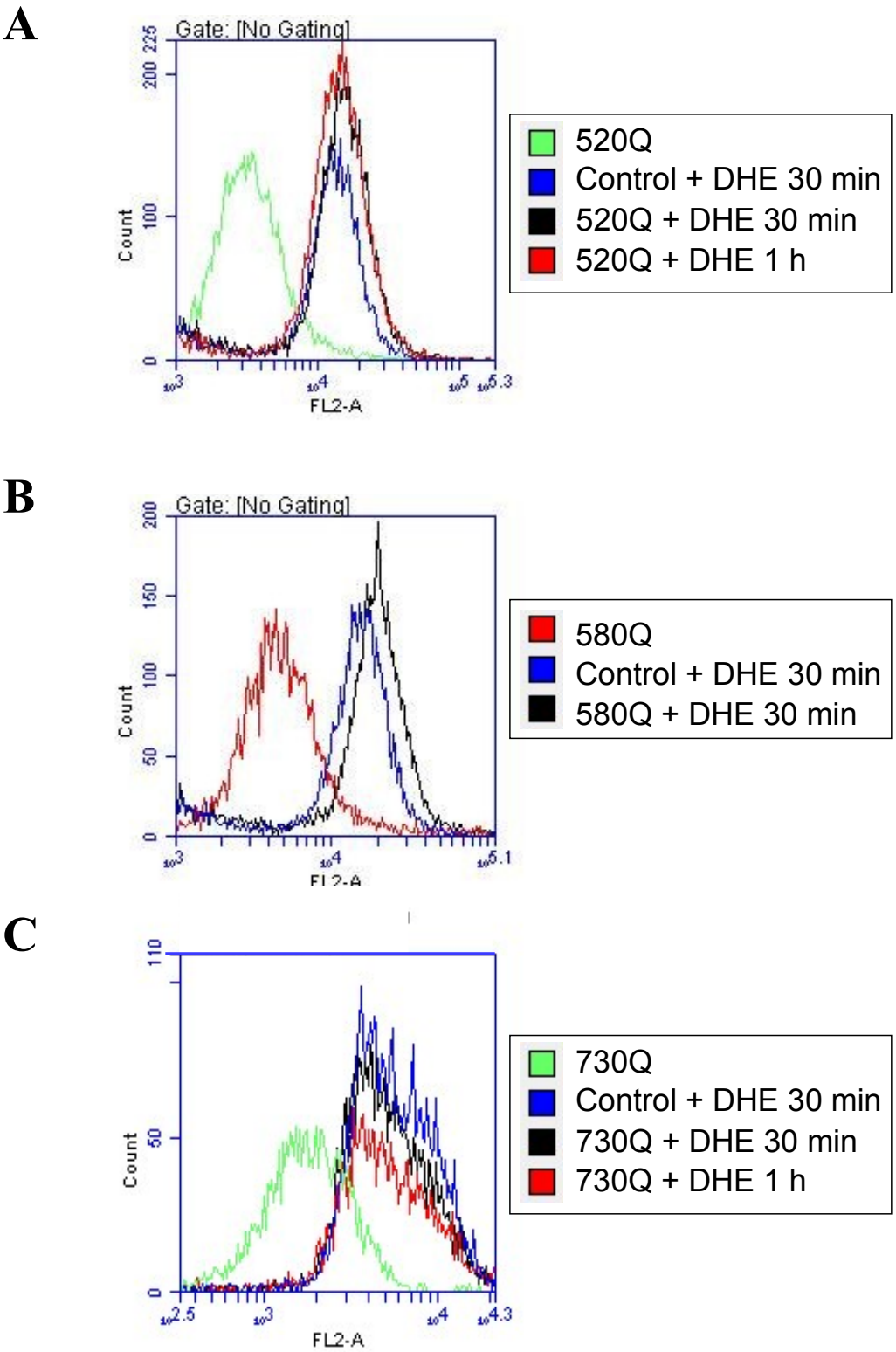


Fig. S3 Measurement of ROS generation. ROS level of 10 μg/mL CdTe QD-treated BEAS-2B cells (A) 520Q, (B) 580Q, or (C) 730Q determined by DHE staining. Data are representative of three independent experiments.

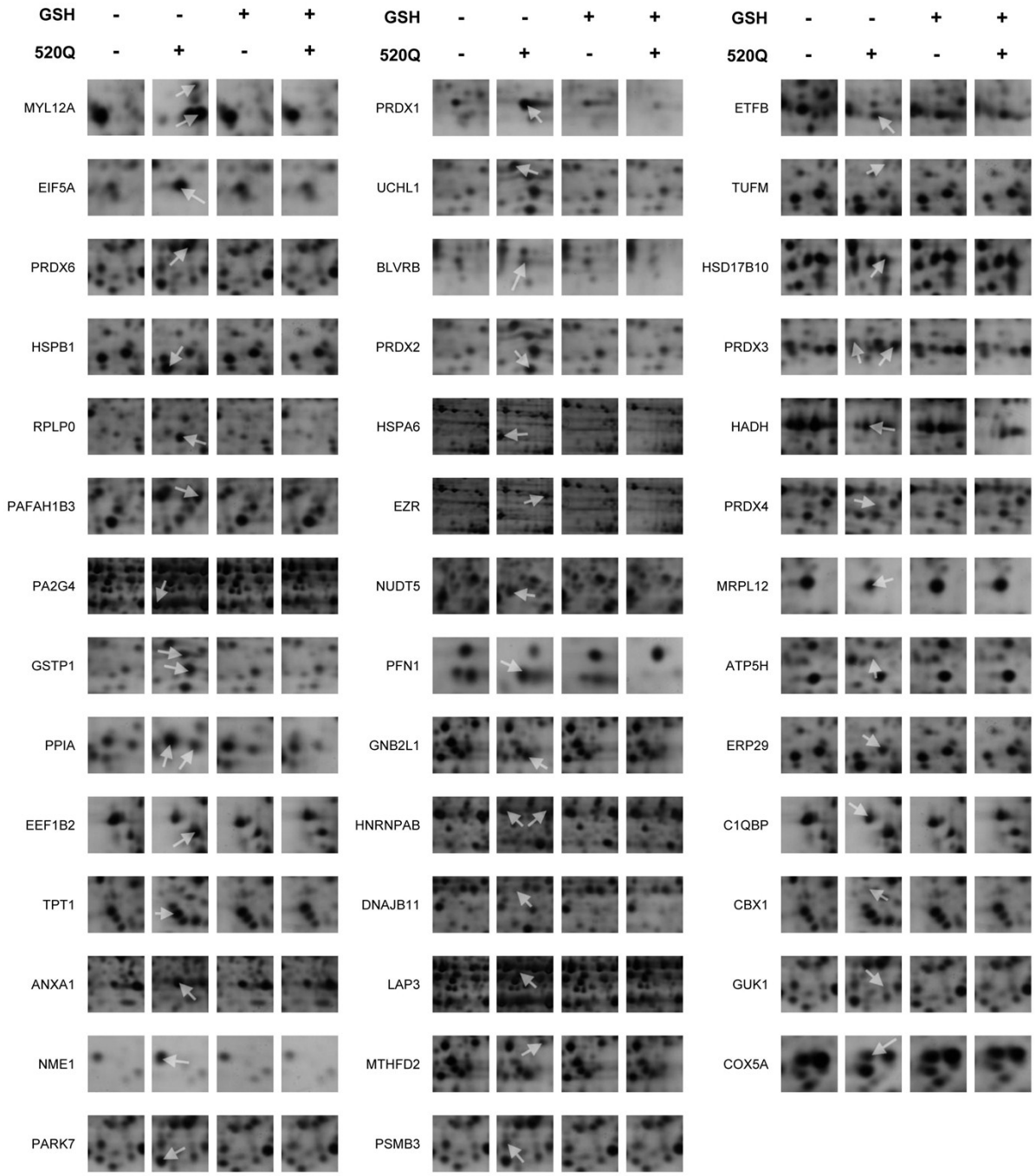


Fig. S4 Induction of differentially-expressed proteins by CdTe QD is inhibited by antioxidant GSH. BEAS-2B cells were exposed to 520Q (20 μg/mL) in the absence or presence of 20 mM GSH (pH adjusted to 7.6). GSH was added 1 h before the addition of 520Q. BEAS-2B cells were also treated with GSH alone. After treatment for 24 h, cells were collected. The effects of GSH on the protein expression profiles in basal and 520Q-treated cells were assessed by 2DE analyses and shown in montage view. The results are representative of three independent experiments.

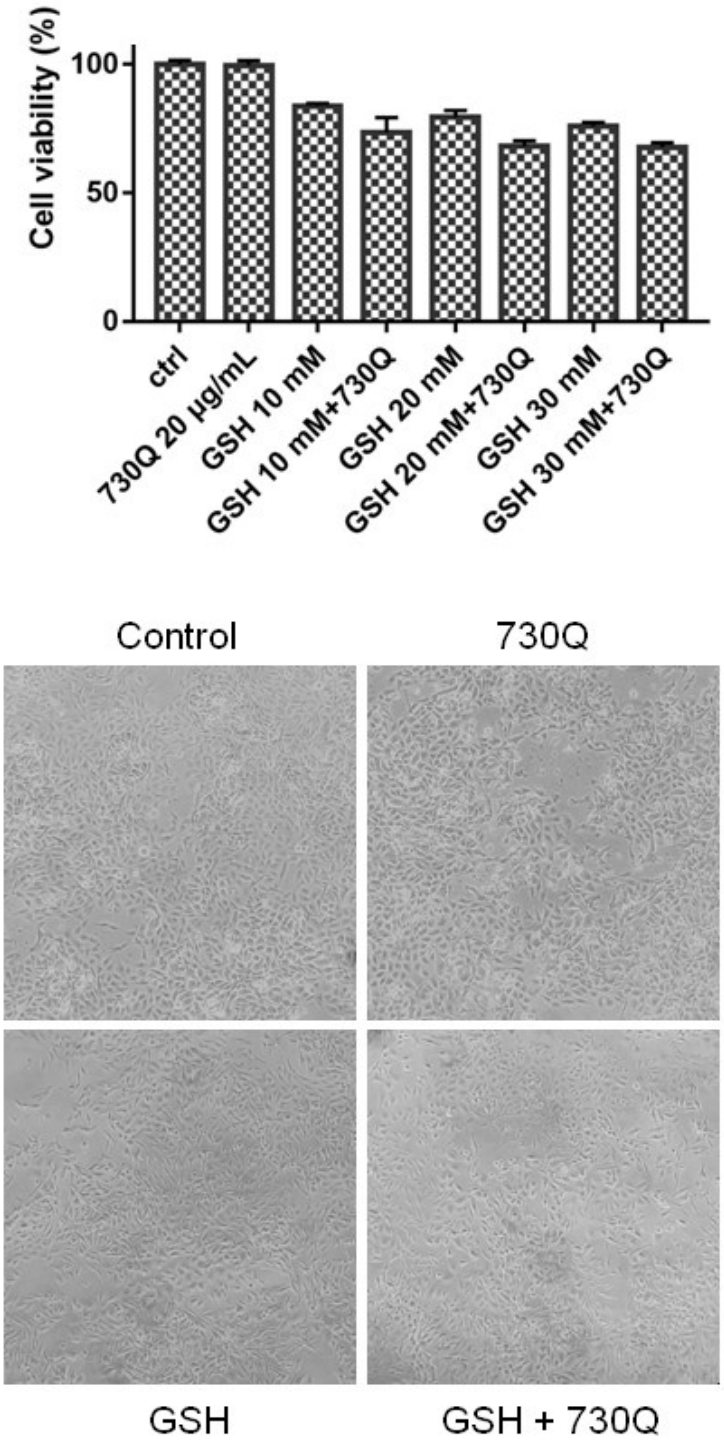


Fig. S5 Cell viability of BEAS-2B upon 24 h treatment of 730Q with/without antioxidant GSH pretreatment. BEAS-2B cells were untreated or pretreated with GSH (10–30 mM) for 1 h and then exposed to 20 μg/mL 730Q for 24 h. Cell viability was measured by naphthol blue black (NBB) staining assay as shown on the top. The percentage of viability was expressed as 100% for sham-exposed cells. The corresponding BEAS-2B cell morphology was captured and shown below. The results are representative of three independent experiments.