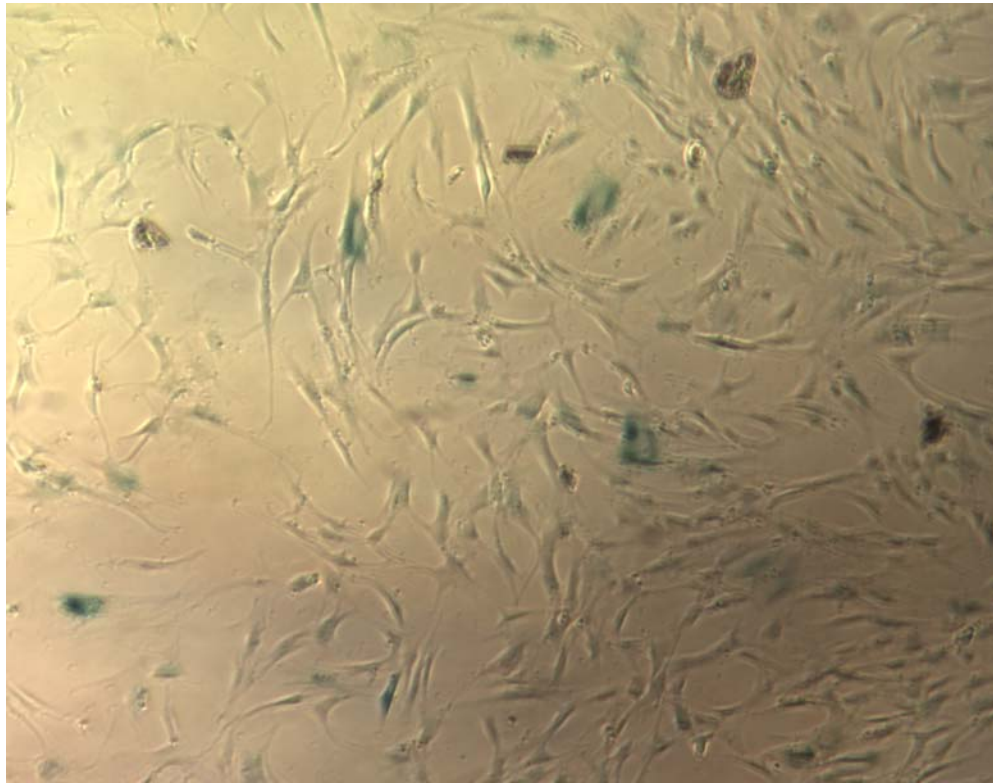
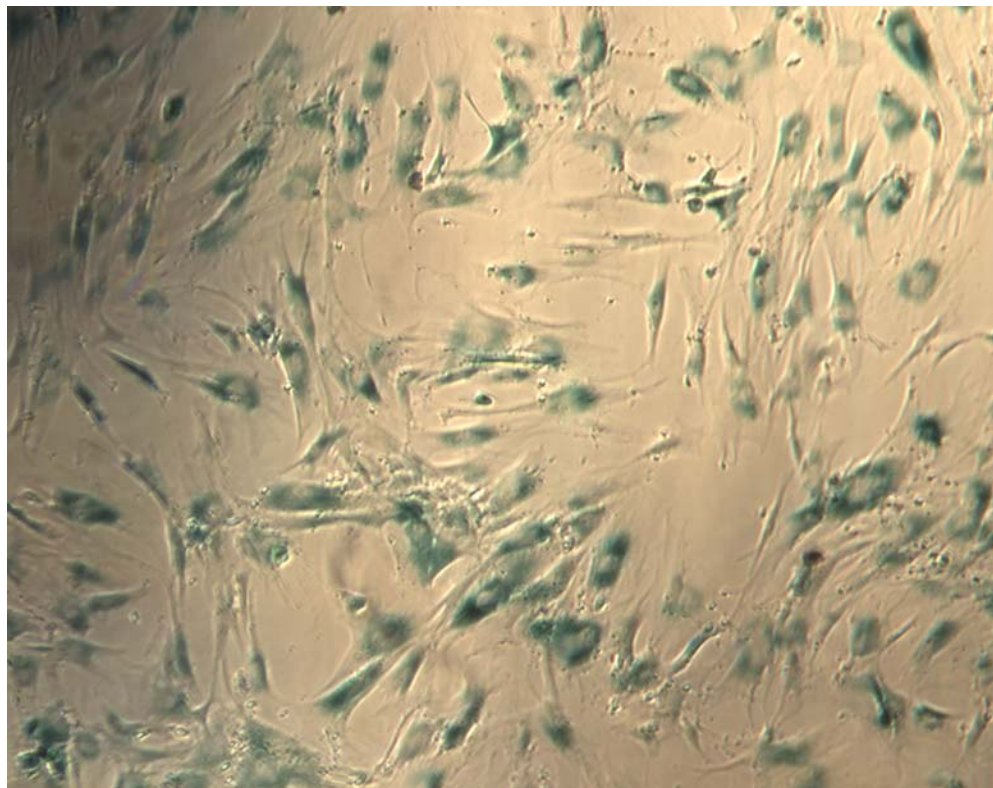


0 Gy

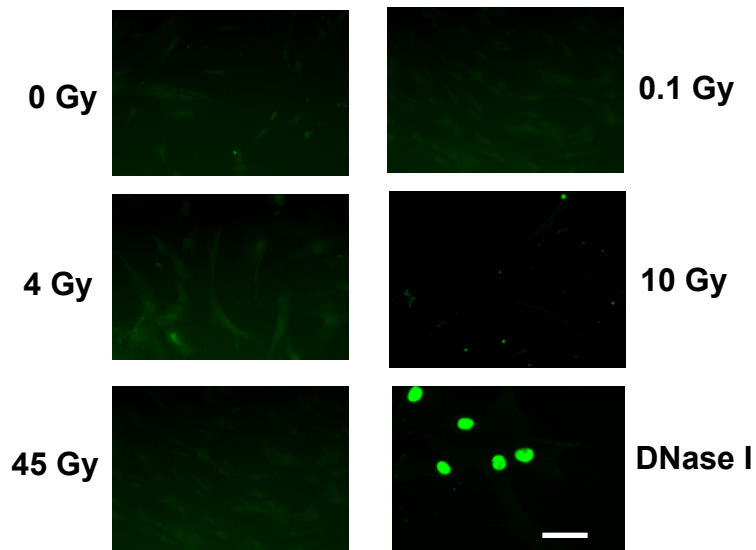


4 Gy

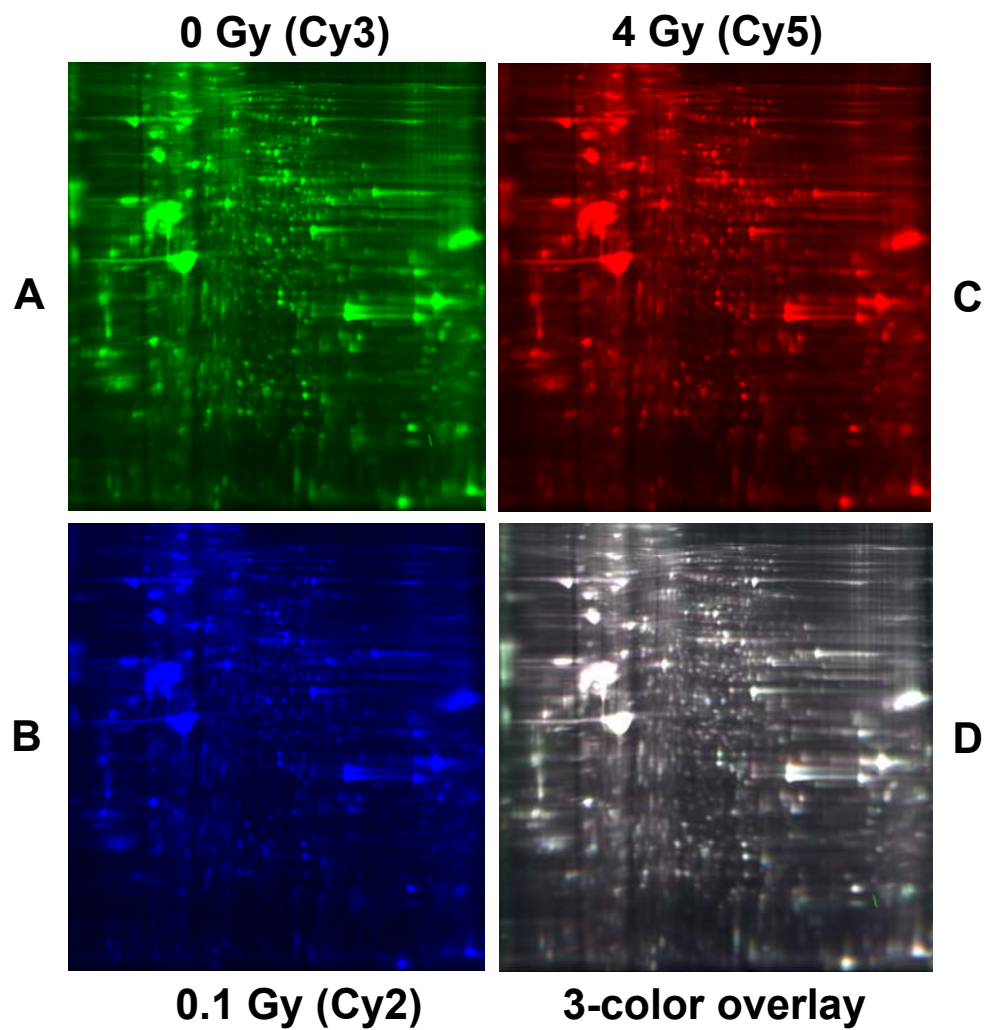


Supplementary Figure 1: Representative images of senescence-associated β -gal staining (positive: blue) of hMSC 10 days after irradiation with 4 Gy or 0 Gy X-rays.

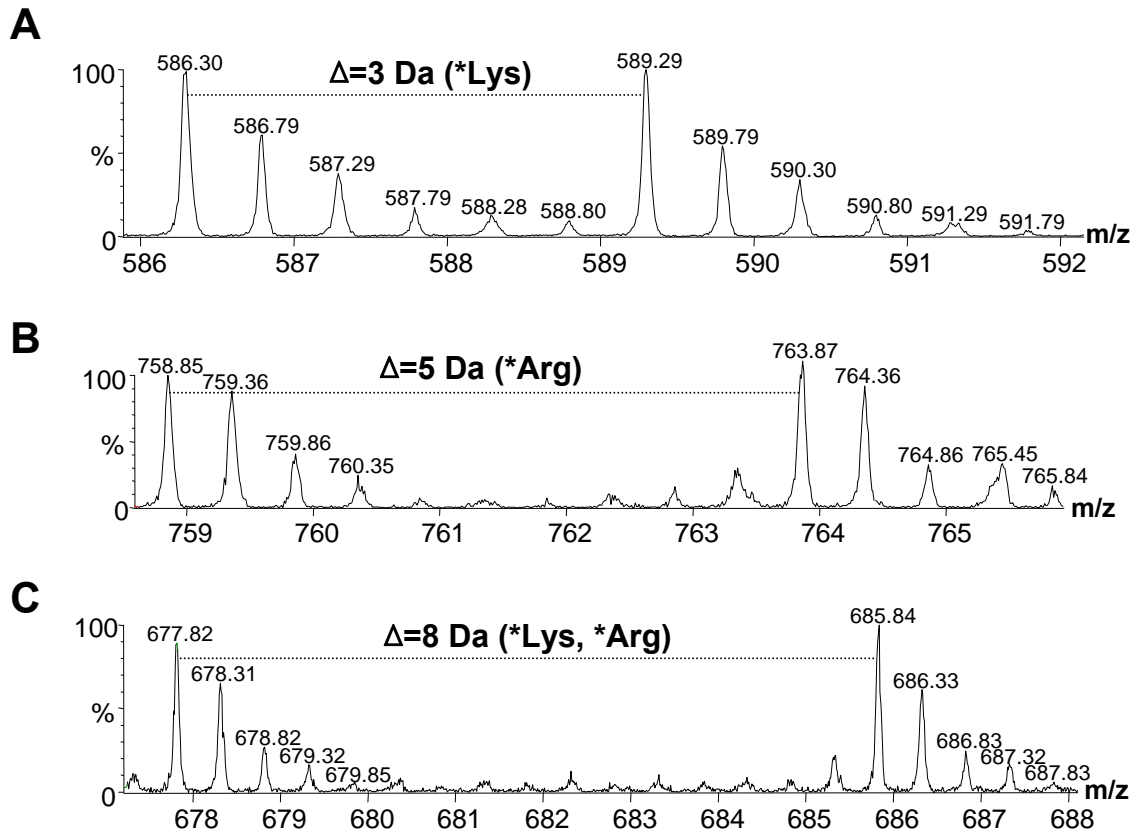
hMSC, 24 hrs



Supplementary Figure 2: TUNEL staining of hMSC 24 hrs after irradiation with different doses of X-rays. No TUNEL positive cells were detected even for a dose as high as 45 Gy. DNase I-treated hMSC were used as the positive control. Bar: 100 μ m.



Supplementary Figure 3: 2D-DIGE images of hMSC 24 hrs after exposure to different doses of X-rays. (A) 0 Gy (Cy3 label). (B) 0.1 Gy (Cy2 label). (C) 4 Gy (Cy5 label). (D) 3-color overlay.



Supplementary Figure 4: Mass spectra of 1:1 mix of non-labeled and singly-labeled (A, B) as well as doubly-labeled (C) actin tryptic peptides from hMSC. A: R.HQGVMVGMGQK.D + Label:13C(6) (K). B: K.QEYDESGPSIVHR.K+Label:13C(6)15N(4) (R). C: K.DSYVGDEAQSKR.G + Label:13C(6) (K); Label:13C(6)15N(4) (R).