

Figure S1. Viability of (A) MCF-7 and (B) MDA-MB-231 cells after treatment with  $\gamma$ -ray irradiation and bosutinib. The data were expressed as the mean  $\pm$  standard deviation from three independent experiments. \*\*P<0.01.

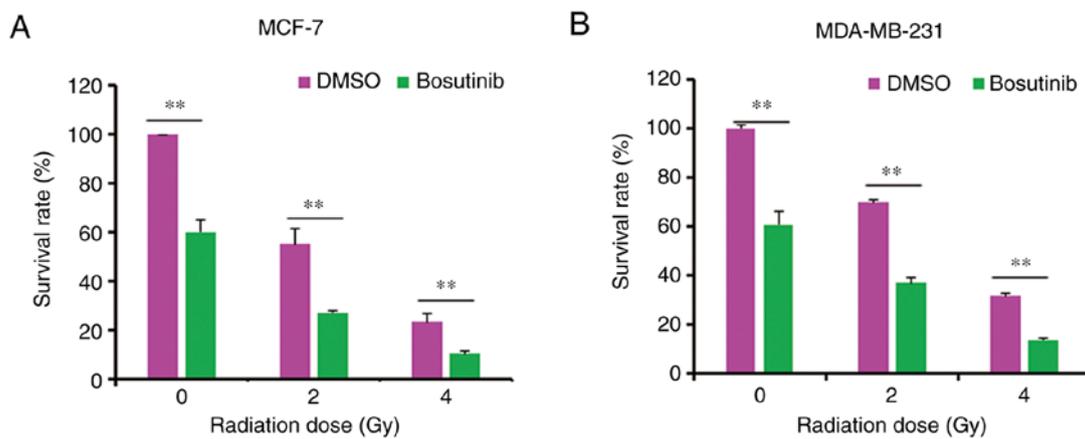


Figure S2. Effects of bosutinib on the expression of DNA damage response (DDR) proteins. (A) Western blotting analyses of eIF4G1 and eIF4G2 expression in the three tested cell lines. (B) Western blotting analyses of some DDR proteins expression in MDA-MB-231 and MCF-7 cells. (C-E) Densitometry analyses of XRCC1, ATRIP and GADD45A expressions in MDA-MB-231 and MCF-7 cells. (F) Densitometry analyses of eIF4G1 and eIF4G2 expressions in the three tested cell lines. The protein expression levels were expressed as the ratio of hybridization signal gray values of the tested proteins and the loading control  $\beta$ -actin, with normalized by the data of mock control samples. The data were expressed as the mean and standard deviation from three independent experiments. \* $P < 0.05$ , \*\* $P < 0.01$ .

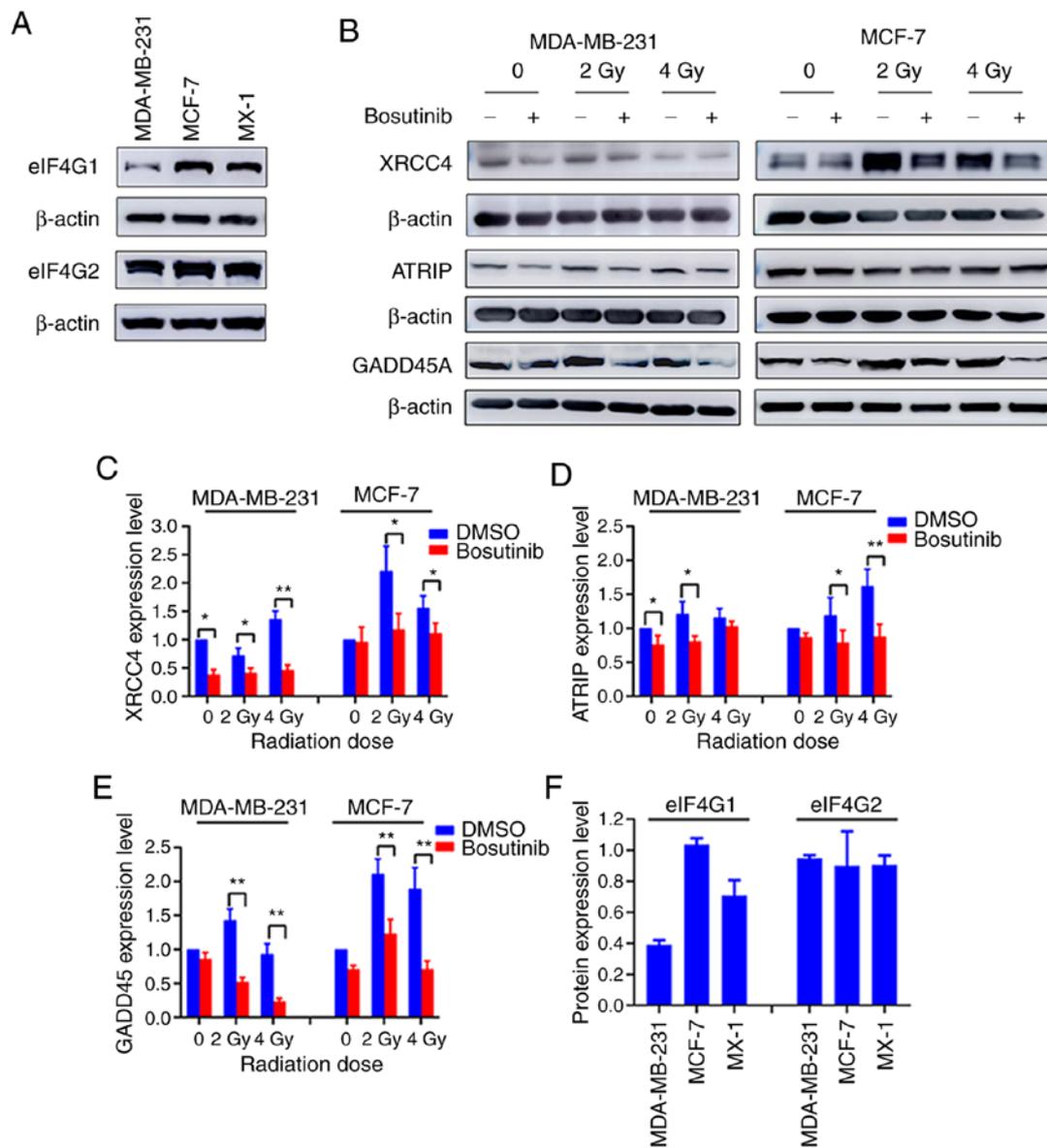


Figure S3. Effects of bosutinib on ATM,  $\gamma$ H2AX, PARP-1, Mre11, phospho-CDK1 and CDK1 expressions. (A) Western blotting analyses of these protein expressions in MDA-MB-231 cells with or without bosutinib treatment. (B) Densitometry analyses of these protein expressions in MDA-MB-231 cells. The cells were treated with 2  $\mu$ M of bosutinib for 24 h, then irradiated with 4 Gy  $\gamma$ -ray. The protein expression levels were expressed as the ratio of hybridization signal gray values of the tested proteins and the loading control  $\beta$ -actin, with normalized by the data of mock control samples. The data were expressed as the mean and standard deviation from three independent experiments. \*P<0.05, \*\*P<0.01.

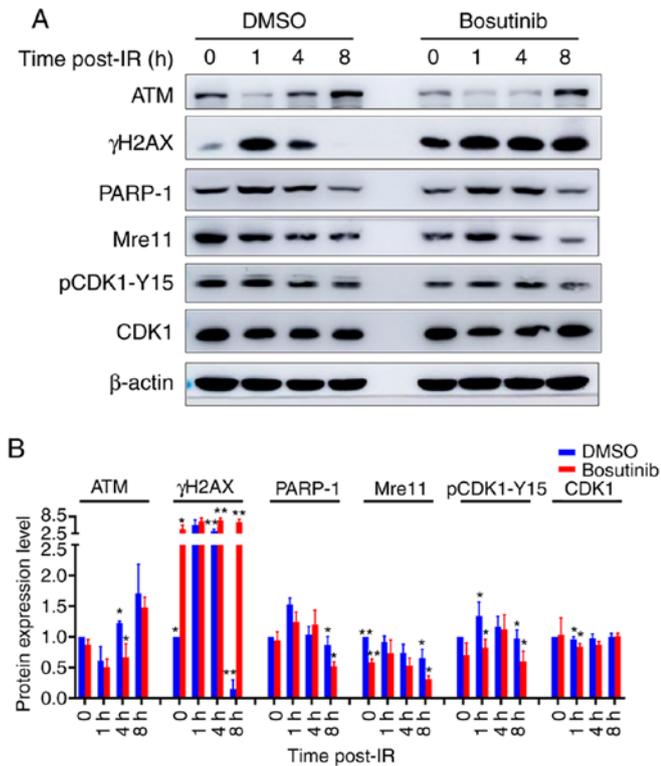


Figure S4. DNA damage visualized as nuclear foci of  $\gamma$ H2AX in MDA-MB-231 cells. The cells were treated with 2  $\mu$ M of bosutinib for 24 h and irradiated with 4 Gy  $\gamma$ -rays.

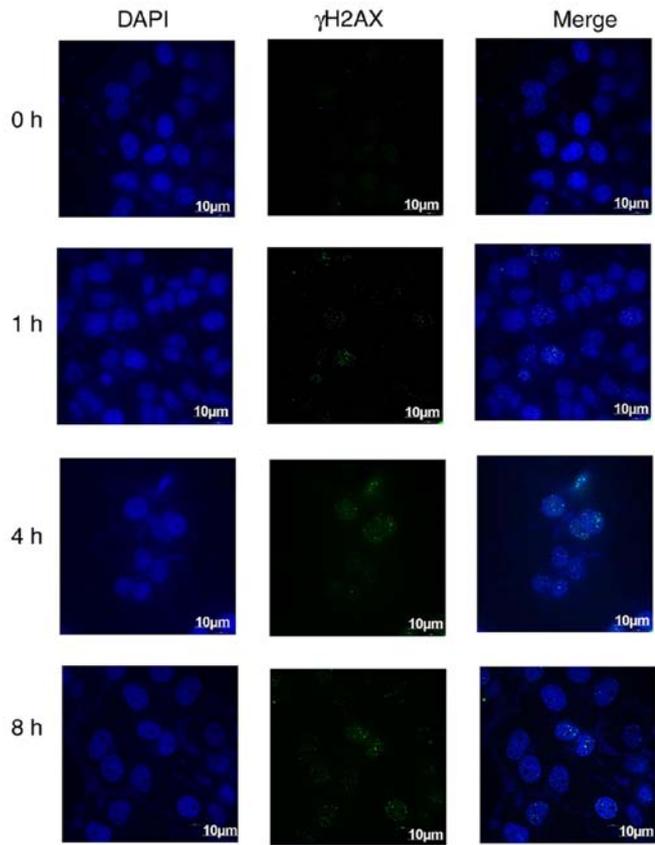


Figure S5. Representative flow cytometry dot plots for apoptosis induced by  $\gamma$ -ray irradiation and bosutinib in MCF-7 cells.

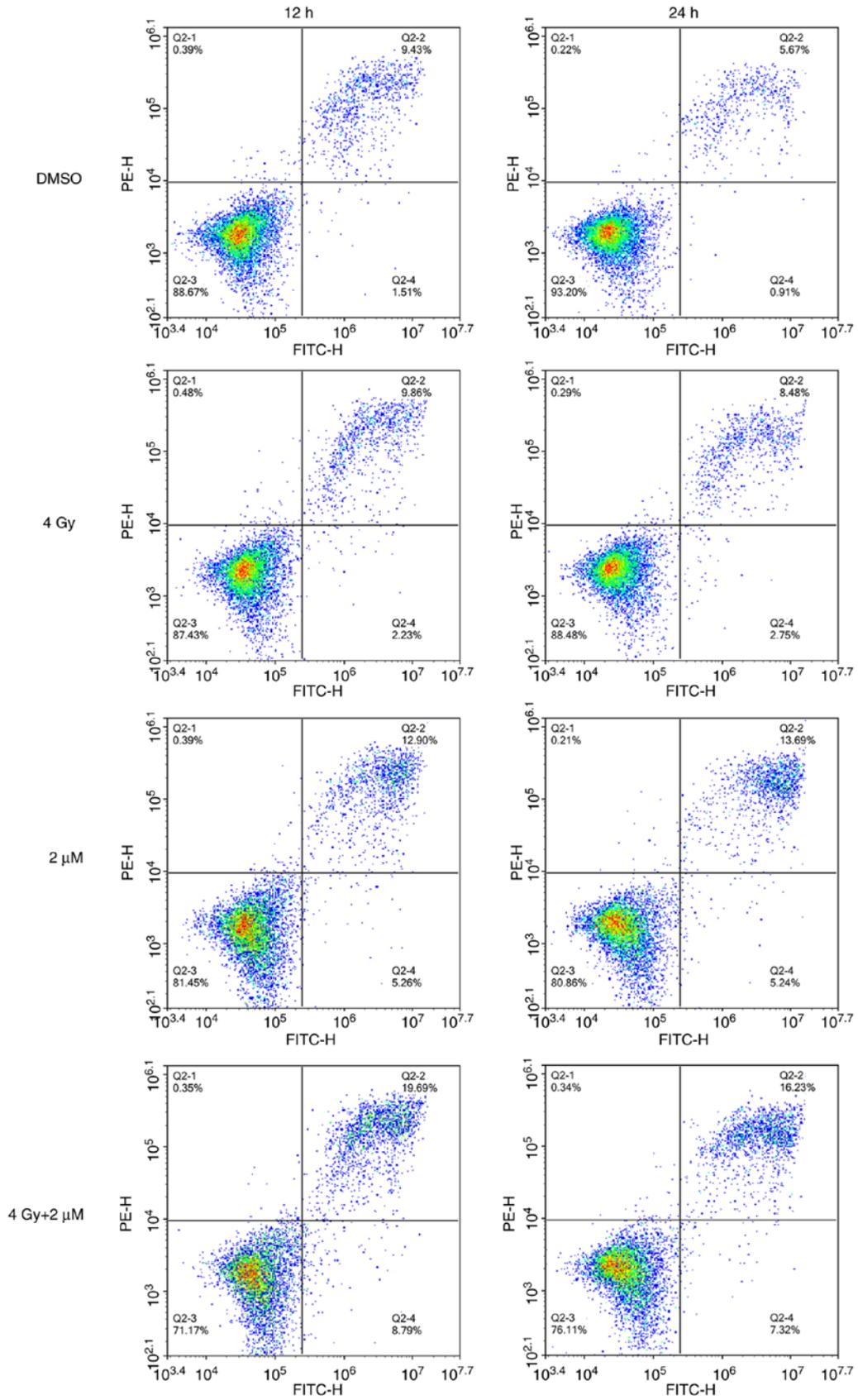


Figure S6. Representative flow cytometry dot plots for apoptosis induced by  $\gamma$ -ray irradiation and bosutinib in MDA-MB-231 cells.

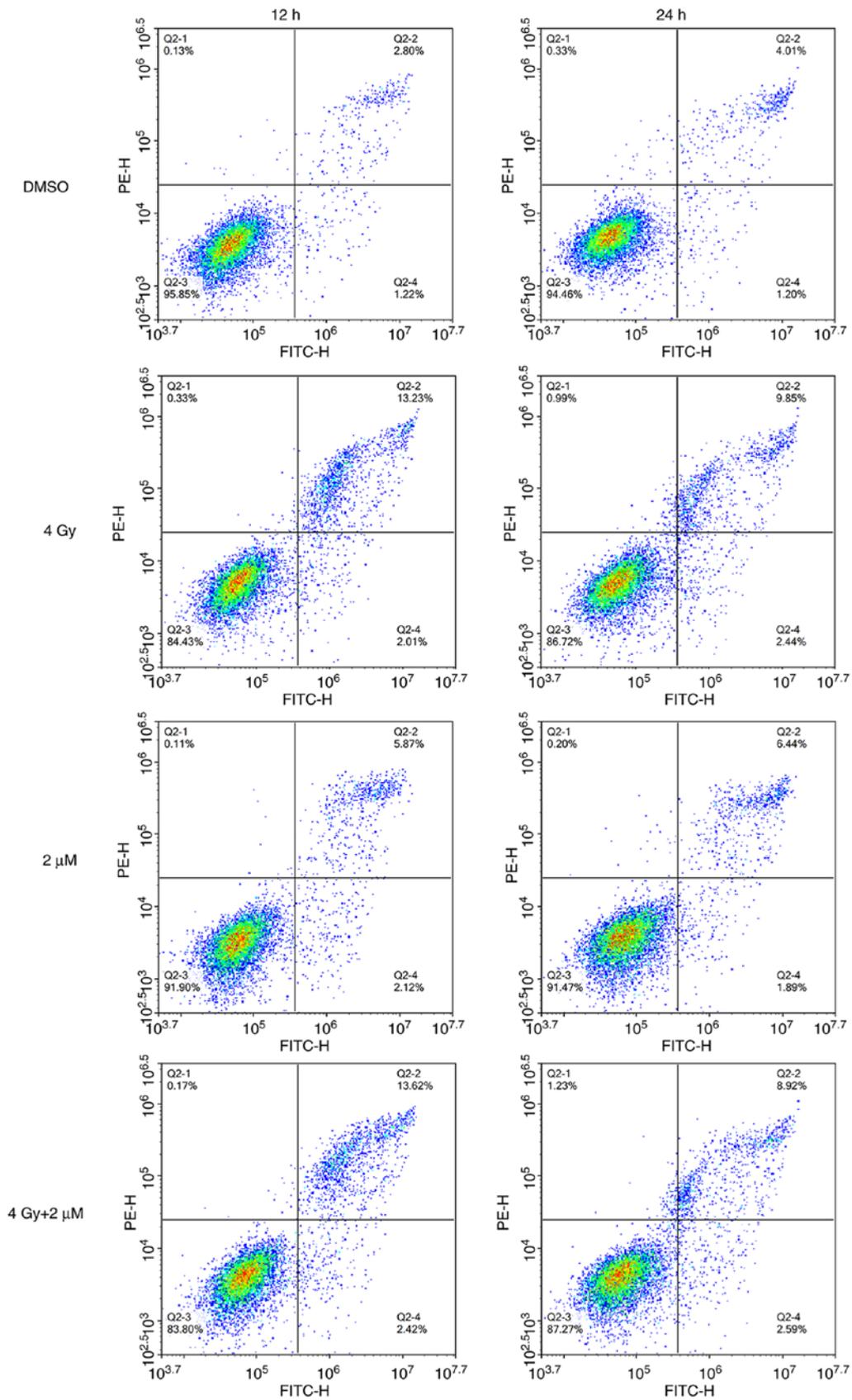


Figure S7. Representative flow cytometry dot plots for apoptosis induced by  $\gamma$ -ray irradiation and bosutinib in MX-1 cells.

