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Cancer cell lines involving cancer stem cell populations respond to oxidative stress

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Highlights

- Incubation of cancer cells with H_2O_2 results in oxidative stress.
- Cancer cell lines involving cancer stem cell populations respond to oxidative stress and are directed towards apoptosis.
- Presence of different CSC populations may involve when cancer cells generate response to oxidative stress.

Abstract

Cancer cells may be more prone to the accumulation of reactive oxygen species (ROS) than normal cells; therefore increased oxidative stress can specifically kill cancer cells including cancer stem cells (CSCs). In order to generate oxidative stress in various cancer cell lines including A549, G361 and MCF-7, cultured cells were exposed to H_2O_2. Incubation of cancer cells with H_2O_2 results in concentration-dependent cell death in A549 and G361-7 cells, whereas MCF-7 cells showed higher sensitivity even at a lower H_2O_2 concentration. H_2O_2 treatment