Noscapine sensitizes chemoresistant ovarian cancer cells to cisplatin through inhibition of HIF-1α.


Source

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Abstract

Hypoxia-inducible factor 1 alpha (HIF-1α) is closely related with chemoresistance of solid tumors. The purpose of this study was to investigate the ability of noscapine to inhibit HIF-1α and sensitize ovarian cancer cells to cisplatin (DDP) under hypoxic conditions. Herein, we report that noscapine sensitized cobalt-induced chemoresistant ovarian cancer cells to DDP-induced apoptosis and inhibition of cell proliferation. Noscapine also promoted proteasome-mediated degradation of cobalt-stabilized HIF-1α protein, with subsequent inhibition of HIF-1 transcriptional activity. These data establish noscapine as a small molecule inhibitor of HIF-1α and provide an evidence for its combination with DDP in combating ovarian cancer chemoresistance.

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