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Novel quinazoline compound-induced apoptotic cell death in 5FU-resistant HT29 cells

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In this study, Novel Quinazoline Compound (NQC) suppressed viability in 5FU-resistant HT29 cells through inhibiting cell proliferation, causing cell cycle arrest and triggering apoptosis. Flow cytometry analysis revealed that NQC caused 5FU-resistant HT29 cell cycle arrest at G2/M phase and increased the proportion of polyploidy cells. Western blotting indicated that the expression of cyclin B1, p-Cdk1 and Cdk1 increased after treatment with NQC. Colorimetric assay analyses also showed that activities of caspase-3, caspase-8 and caspase-9 occurred in NQC-treated 5FU-resistant HT29 cells. Together, these results suggest that NQC inhibited 5FU-resistant HT29 cells growth through inducing mitotic catastrophe by interference with G2/M cell cycle checkpoint which may open a new avenue for the treatment of 5FU-resistant colon cells.

Biography

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