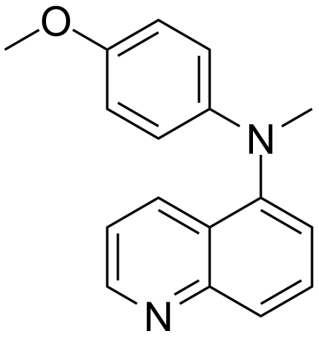
Tubulin inhibitor 17

Cat. No.:	HY-144748
CAS No.:	2839151-13-0
Molecular Formula:	$C_{17}H_{16}N_2O$
Molecular Weight:	264.32
Target:	Microtubule/Tubulin; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Tubulin inhibitor 17 (Compound 3b) is a tubulin polymerization inhibitor with an IC_{50} of 12.38 μM. Tubulin inhibitor 17 has anticancer activities and induces cell apoptosis[1].
IC_{50} & Target	IC_{50}: 12.38 μM (tubulin polymerization)[1]

In Vitro

Tubulin inhibitor 17 (Compound 3b) (0-10 μM, 0-72 h) displays antiproliferative activities against cancer cells and inhibits colony formation of HepG-2 cells[1].
Tubulin inhibitor 17 (0-2.5 μM) inhibits tubulin polymerization in a concentration-dependent manner[1].
Tubulin inhibitor 17 (0-1 μM, 12 h) induces the collapse of the microtubule networks in a dose-dependent manner[1].
Tubulin inhibitor 17 (0-5 μM, 24 h) induces cell cycle arrest at G2/M phase and inhibits cell migration in HepG-2 cells[1].
Tubulin inhibitor 17 (0-5 μM, 48 h) induces HepG-2 cell apoptosis[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	B16-F10, HepG-2, Hela and MCF-7
Concentration:	0, 0.5, 2.5, 5.0, 7.5 and 10 μM
Incubation Time:	48 h for IC_{50} measurement, 0-72 h for cell viability
Result:	Displayed antiproliferative activities with IC_{50} values of 0.563 ± 0.099, 0.261 ± 0.025, 2.047 ± 0.168 and 0.609 ± 0.062 μM against B16-F10, HepG-2, Hela and MCF-7 cells, respectively. Inhibited the cell viability in a time- and concentration- dependent manner.

Cell Cycle Analysis[1]

Cell Line:	HepG-2
Concentration:	0.5, 1.0 and 5.0 μM
Incubation Time:	24 h
Result:	Dose-dependently induced cell cycle arrest at G2/M phase.

Apoptosis Analysis[1]

Cell Line:	HepG-2
Concentration:	0.5, 1.0 and 5.0 μM
Incubation Time:	48 h
Result:	The total proportion of apoptotic cells were increased significantly compared with the control.

REFERENCES

[1]. Ren Y, et al. Design, synthesis and biological evaluation of novel acridine and quinoline derivatives as tubulin polymerization inhibitors with anticancer activities. Bioorg Med Chem. 2021 Sep 15;46:116376.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA