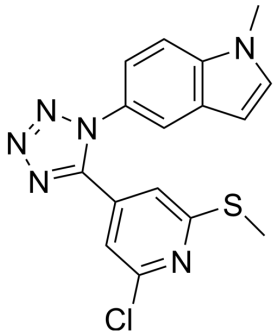
Tubulin inhibitor 36

Cat. No.:	HY-149374
Molecular Formula:	$C_{16}H_{13}ClN_6S$
Molecular Weight:	356.83
Target:	Microtubule/Tubulin
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Tubulin inhibitor 36 (Compound 10) is a novel and potent tubulin inhibitor and inhibits the polymerization of microtubular protein then induces apoptosis with an IC_{50} value of 1.5±0.1 μM. Tubulin inhibitor 36 (Compound 10) has significant anti-mitotic effect and exhibits activities against glioblastoma cells. Tubulin inhibitor 36 (Compound 10) has anti-tumor effects and can be used for glioblastoma multiforme (GBM) research[1].

In Vitro

Tubulin inhibitor 36 (Compound 10) exhibits antiproliferative activities against human tumor cell lines, and the IC_{50} value is 0.039, 0.038, 0.022, 0.025, 0.037, 0.040, 0.059 μM for HeLa, MCF7, U87 MG, T98G, HepG2, HCT8, HT-29 cells, respectively[1]. Tubulin inhibitor 36 (Compound 10) (100 nM, 24 h, 48 h, 72 h) arrests mitotic and apoptosis in HeLa, MCF7, and U87 MG cells [1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Immunofluorescence[1]

Cell Line:	HeLa, MCF7, U87 MG cells
Concentration:	100 nM
Incubation Time:	24 h
Result:	Arrested tubulin polymerization in HeLa, MCF7, and U87 MG cells.

Cell Cycle Analysis[1]

Cell Line:	HeLa, MCF7, U87 MG cells
Concentration:	100 nM
Incubation Time:	24 h, 48 h, 72 h
Result:	Induced remarkable mitotic arrest in 24 h of HeLa cells. Induced mitotic arrest in 24 h of MCF7 cells but lower cell death compared to HeLa cells Induced remarkable mitotic arrest in 24 h of U87 MG cells and severe cell death.

Apoptosis Analysis[1]

Cell Line:	HeLa, MCF7, U87 MG cells

Concentration:	100 nM
Incubation Time:	72 h
Result:	Induced nearly 73% of apoptosis in 72 h of HeLa cells and lower levels of MCF7 cells Induced lower cell death levels of MCF7 cells Displayed the highest cell death levels of d U87 MG cells

REFERENCES

[1]. Gallego-Yerga L, et al. Novel Tetrazole Derivatives Targeting Tubulin Endowed with Antiproliferative Activity against Glioblastoma Cells. Int J Mol Sci. 2023 Jul 4;24(13):11093.

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