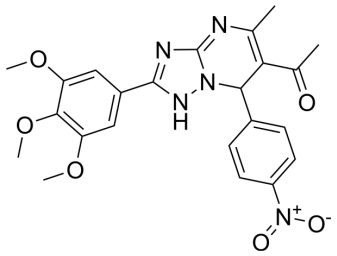
Tubulin polymerization-IN-12

Cat. No.:	HY-146818
CAS No.:	2377301-45-4
Molecular Formula:	$C_{23}H_{23}N_5O_6$
Molecular Weight:	465.46
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 polymerization-IN-12 is a tubulin polymerization inhibitor (IC_{50}=0.75 μM). Tubulin polymerization-IN-12 arrests cell cycle at G2/M phase, and exhibits cytotoxicity against cancer cells[1].

In Vitro

Tubulin polymerization-IN-12 (compound 6) shows cytotoxicity against normal human embryonic kidney cells, HEK-293, with an IC_{50} value of 29.94 μM[1].

Tubulin polymerization-IN-12 (compound 26) inhibits cancer cells with IC_{50}s of 1.02 μM (A549), 0.75 μM (HeLa), 10.91 μM (HCT116), and 29.94 μM (HEK293), respectively[2].

Tubulin polymerization-IN-12 (1 μM, 2 μM, 10 μM; 6 h) inhibits tubulin expression in HeLa cell, and shows 42% inhibition at 10 μM[2].

Tubulin polymerization-IN-12 (0.75 μM-3 μM; 24 h) arrests cell cycle at G2/M phase in HeLa cells[2].

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

Immunofluorescence[2]

Cell Line:	HeLa cells
Concentration:	1 μM, 2 μM
Incubation Time:	6 hours
Result:	Dose-dependently decreased the level of α and β tubulin.

Cell Cycle Analysis[2]

Cell Line:	HeLa cells
Concentration:	0.75 μM, 1.5 μM, 3 μM
Incubation Time:	24 hours
Result:	Demonstrated 15.03% (0.75 μM), 20.04% (1.50 μM), and 33.47% (3.00 μM) of cell accumulation in G2/M phase.

REFERENCES

[1]. Yang F, et al. Synthesis, and biological evaluation of 3, 6-diaryl-[1, 2, 4] triazolo [4, 3-a] pyridine analogues as new potent tubulin polymerization inhibitors[J]. European Journal of Medicinal Chemistry, 2020, 204: 112625.

[2]. Yang F, et al. Novel [1, 2, 4] triazolo [1, 5-a] pyrimidine derivatives as potent antitubulin agents: Design, multicomponent synthesis and antiproliferative activities[J]. Bioorganic Chemistry, 2019, 92: 103260.

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