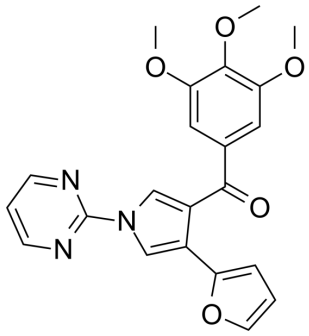
Tubulin inhibitor 30

Cat. No.:	HY-151879
CAS No.:	2873383-67-4
Molecular Formula:	$C_{22}H_{19}N_3O_5$
Molecular Weight:	405.4
Target:	Microtubule/Tubulin; Ferroptosis
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 30 (Compound 15) is a tubulin assembly inhibitor with an IC_{50} of 0.52 μM. Tubulin inhibitor 30 can induce ferroptosis[1].

IC_{50} & Target

IC50: 0.52 μM (Tubulin)[1]

In Vitro

Tubulin inhibitor 30 (Compound 15) (0-100 nM; 48 h) inhibits the viability of MCF-7, U-87 MG and OVCAR-3 cells[1].
Tubulin inhibitor 30 is metabolically stable when incubated with human liver microsomes[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	MCF-7, U-87 MG and OVCAR-3 cells
Concentration:	0-100 nM
Incubation Time:	48 h
Result:	Inhibited the cell viability with IC_{50}s of 4.0, 10.06 and 2.852 nM against MCF-7, U-87 MG and OVCAR-3 cells, respectively.

Western Blot Analysis[1]

Cell Line:	U-87 MG and OVCAR-3 cells
Concentration:	0-100 nM
Incubation Time:	48 h
Result:	Induced a significant increase of cleaved PARP.

In Vivo

Tubulin inhibitor 30 (Compound 15) (25mg/kg; i.p.; every 2 days) inhibits the in vivo tumorigenicity of the human GBM cell line U-87 MG and the human OC cell line SKOV-3, and causes oxidative stress injury and Fe^{2+} accumulation in mice[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	BALB/C$^{nu/nu}$ mice, U-87 MG or SKOV-3 model[1]
Dosage:	25 mg/kg
Administration:	Intraperitoneal injection, every 2 days
Result:	Inhibited tumorigenicity and tumor volume. Caused oxidative stress injury and Fe^{2+} accumulation.

REFERENCES

[1]. Puxeddu M, et al. Induction of Ferroptosis in Glioblastoma and Ovarian Cancers by a New Pyrrole Tubulin Assembly Inhibitor. J Med Chem. 2022 Nov 17.

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