

Tubulin-IN-52

Chemical Properties

CAS No. : 2099064-75-0

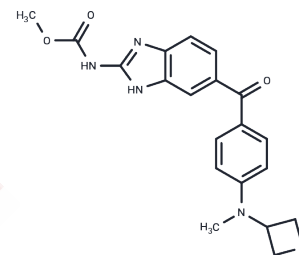
Formula: C₂₀H₂₀N₄O₄

Molecular Weight: 380.40

Keep away from moisture, Store at low temperature

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Tubulin-IN-52 is a potent, selective tubulin polymerization inhibitor with an IC ₅₀ of 2.9 μM. Tubulin-IN-52 induces apoptosis in tumor cells by triggering a caspase cascade via the mitochondrial apoptosis pathway. Tubulin-IN-52 significantly inhibits tumor growth without significant toxicity. Tubulin-IN-52 can be used in cancer-related research.
Targets(IC50)	Microtubule Associated
In vitro	<p>Methods: PC3MLN4 cells were treated with 1 μM Tubulin-IN-52 for 24 or 48 hours. Cell cycle analysis was performed using PI staining and flow cytometry, and the Dean/Jett/Fox model. Immunofluorescence staining with an anti-α-tubulin antibody was used to assess tubulin organization and quantity.</p> <p>Results: Treatment with Tubulin-IN-52 for 24 hours caused an accumulation of cells in the G2/M phase, while treatment for 48 hours disrupted tubulin organization and reduced tubulin levels. [1]</p>
In vivo	<p>Methods: To investigate the antitumor effects of Tubulin-IN-52, male BALB/c nude mice were subcutaneously inoculated with PC3MLN4 cells. When tumor volume reached 35 mm³, intraperitoneal injections of Tubulin-IN-52 (30 mg/kg) were initiated, administered every other day, three times a week, for two weeks.</p> <p>Results: Tubulin-IN-52 significantly inhibited tumor growth but did not cause a significant decrease in body weight.[1]</p>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6288 mL	13.1441 mL	26.2881 mL
5 mM	0.5258 mL	2.6288 mL	5.2576 mL
10 mM	0.2629 mL	1.3144 mL	2.6288 mL
50 mM	0.0526 mL	0.2629 mL	0.5258 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Cheong JE, Zaffagni M, Chung I, et al. Synthesis and anticancer activity of novel water soluble benzimidazole carbamates. *Eur J Med Chem.* 2018;144:372-385.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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