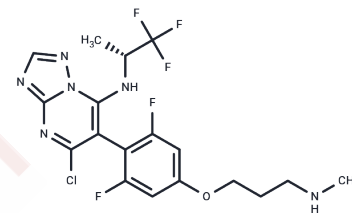


Tubulin-IN-51

Chemical Properties

CAS No. : 849550-36-3
 Formula: C₁₈H₁₈ClF₅N₆O
 Molecular Weight: 464.82
 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-51 is an orally active tubulin inhibitor with an IC ₅₀ of 31 nM. It promotes tubulin polymerization in vitro and does not competitively bind with Paclitaxel. Tubulin-IN-51 inhibits the binding of Vinblastine to tubulin and suppresses tumor growth in various nude mouse xenograft models, including those using A549 human non-small cell lung cancer (NSCLC) cells and U87-MG human glioblastoma.
Targets(IC50)	Apoptosis, Microtubule Associated
In vitro	Tubulin-IN-51 (Compound 8) enhances tubulin polymerization, similar to the action of paclitaxel, and prevents [³ H]vinblastine from binding to tubulin. At low concentrations (10-35 nM), Tubulin-IN-51 induces apoptosis by reducing the proportion of cells in the G1 phase, while at higher concentrations (35-200 nM), it arrests cells in the G2/M phase, mirroring the effects observed with paclitaxel. This compound inhibits the proliferation of KB, KB 8.5, and KBV1 cells with IC ₅₀ values of 23 nM, 67 nM, and 953 nM, respectively.
In vivo	Tubulin-IN-51 (Compound 8) administered intravenously at 15-20 mg/kg on days 0, 7, 14, and 21 post-scheduling is effective in inhibiting tumor growth in A549 NSCLC xenograft mouse models. Additionally, oral administration of Tubulin-IN-51 at 2.5-50 mg/kg on days 0 and 7 post-scheduling suppresses tumor growth in U87-MG human glioblastoma xenograft mouse models.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1514 mL	10.7569 mL	21.5137 mL
5 mM	0.4303 mL	2.1514 mL	4.3027 mL
10 mM	0.2151 mL	1.0757 mL	2.1514 mL
50 mM	0.043 mL	0.2151 mL	0.4303 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481