Data Sheet (Cat.No.T209426)

TargetMol

Tubulin/HDAC-IN-4

Chemical Properties

CAS No. :

Formula: C24H26N2O6

Molecular Weight:

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/HDAC-IN-4 (compound 9n) is a dual inhibitor targeting microtubules (Tubulin) and HDAC, exhibiting IC50 values of 0.73, 0.43, 0.62, and 2.34 μM for HDAC1, HDAC2, HDAC6, and HDAC7, respectively. It disrupts microtubule assembly by binding to the colchicine site and induces apoptosis and G2/M cell cycle arrest. Additionally, Tubulin/HDAC-IN-4 significantly increases intracellular ROS levels and demonstrates both anti-angiogenic and anticancer properties.
Targets(IC50)	Apoptosis,Reactive Oxygen Species,Microtubule Associated,HDAC
In vitro	Tubulin/HDAC-IN-4 (compound 9n), in concentrations ranging from 0 to 10 μM over 72 hours, exhibits cytotoxic effects against MDA-MB-231 and A549 cells, with IC_{50} values of 0.34, 0.29, 0.016, 0.15, and 0.16 μM for PC-3, U251, and MCF-7 cells, respectively. The compound also inhibits colony formation in PC-3 cells in a dose-dependent manner at concentrations of 2.5, 5, 10, 20, and 40 nM over 24 hours. Furthermore, Tubulin/HDAC-IN-4 disrupts tubulin polymerization at concentrations of 0.2, 1, 5, and 25 μM with an IC_{50} of 4.82 μM. It increases the expression of Ac-α-tubulin and Ac-Histone H3 in PC-3 cells at 0.08, 0.16, and 0.32 μM over 24 hours. Additionally, the compound induces apoptosis, G2/M phase cell cycle arrest, and significantly elevates intracellular ROS levels at 0.08, 0.16, and 0.32 μM over the same period.
In vivo	Administered intravenously at doses of 10 and 20 mg/kg every two days for 21 days, Tubulin/HDAC-IN-4 demonstrates anticancer activity.

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