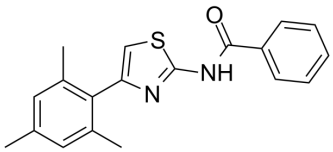
INH6

Cat. No.:	HY-100541
CAS No.:	1001753-24-7
Molecular Formula:	$C_{19}H_{18}N_2OS$
Molecular Weight:	322.42
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (155.08 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1015 mL	15.5077 mL	31.0154 mL
	5 mM	0.6203 mL	3.1015 mL	6.2031 mL
	10 mM	0.3102 mL	1.5508 mL	3.1015 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.75 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

INH6 is a potent Nek2/Hec1 inhibitor; inhibits the growth of HeLa cells with an IC_{50} of 2.4 μM.

IC_{50} & Target

IC50: 2.4 μM (HeLa), 1.7 μM (MB231), 2.1 μM (MB468), 2.5 μM (K562)[1]

In Vitro

Hec1 is an oncogene overly expressed in many human cancers. Small molecule INH (Inhibitor of Nek2/Hec1) targeting the Hec1 and its regulator, Nek2, in the mitotic pathway is identified to inactivate Hec1/Nek2 function mediated by protein degradation that subsequently leads to chromosome mis-segregation and cell death. INH6 treated cells exhibit increased mitotic population with multipolar spindle configurations. An increased rate of chromosome misalignment is detected upon treatment with INH6 of HeLa cells expressing the chromosome marker protein H2B-GFP. INH6 treated cells shows progressive morphological changes characteristic of dying cells (e.g., membrane bubbling), which is further confirmed by cell cycle profiling with FACS analysis. Approximately 20% of INH6 treated cells are apoptotic 72 hrs after treatment[1].

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

PROTOCOL

Cell Assay [1]

Standard XTT assays with a four-day drug treatment procedure were performed to measure the dose-dependent cytotoxicity of INH analogs in cultured cells. Triplicate sets were measured and compiled for final data presentation. Cells were plated on 96-well dishes one day before the drug treatment, followed by drug treatment (2.5 μM INH6) on day 2 and XTT assay on day 5 after drug addition. The absorption at 595 nm was measured with a plate reader and converted to cell survival percentages in comparison to mock treated groups[1].

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

REFERENCES

[1]. Qiu XL, et al. Synthesis and biological evaluation of a series of novel inhibitor of Nek2/Hec1 analogues. J Med Chem. 2009 Mar 26;52(6):1757-67.

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