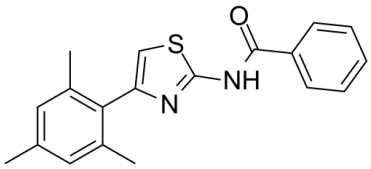
Data Sheet

Product Name:	INH6
Cat. No.:	CS-6433
CAS No.:	1001753-24-7
Molecular Formula:	C19H18N2OS
Molecular Weight:	322.42
Target:	Apoptosis
Pathway:	Apoptosis
Solubility:	DMSO : 50 mg/mL (155.08 mM; Need ultrasonic); H2O : < 0.1 mg/mL (insoluble)



BIOLOGICAL ACTIVITY:

INH6 is a potent **Nek2/Hec1** inhibitor; inhibits the growth of HeLa cells with an **IC_{50}** of 2.4 μM. IC50 & 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].

PROTOCOL (Extracted from published papers and Only for reference)

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].

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.

CAIndexNames:

Benzamide, N-[4-(2,4,6-trimethylphenyl)-2-thiazolyl]-

SMILES:

O=C(NC1=NC(C2=C(C)C=C(C)C=C2C)=CS1)C3=CC=CC=C3

Caution: Product has not been fully validated for medical applications. For research use only.

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