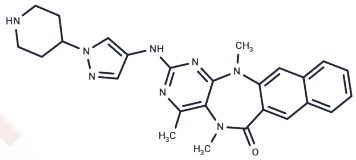
Data Sheet (Cat.No.T2374)

TargetMol

HTH-01-015

Chemical Properties



CAS No. : 1613724-42-7

Formula: C26H28N8O

Molecular Weight: 468.55

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	HTH-01-015 is a selective NUAK1 inhibitor with an IC50 of 100 nM.
Targets(IC50)	AMPK
In vitro	In HEK-293 cells express NUAK1 as well as NUAK2, HTH-01-015 suppresses NUAK1-mediated MYPT1 phosphorylation. HTH-01-015 suppresses cell migration In NUAK1+/+ MEFs, and inhibit U2OS cell invasion. Moreover, HTH-01-015 inhibits cell proliferation in both cell lines. [1] HTH-01-015 inhibitors markedly restricted cells from entering into mitosis in U2OS cells. [2]
Kinase Assay	Kinase activity assays: In vitro activities of purified GST-NUAK1 and GST-NUAK1[A195T] are measured using Cerenkov counting of incorporation of radioactive 32P from [γ-32P] ATP into Sakamototide substrate peptide. Reactions are carried out in a 50 μL reaction volume for 30 min at 30°C and reactions are terminated by spotting 40 μL of the reaction mix on to P81 paper and immediately immersing in 50 mM orthophosphoric acid. Samples are washed three times in 50 mM orthophosphoric acid followed by a single acetone rinse and air drying. The kinase-mediated incorporation of [γ-32P]ATP into Sakamototide is quantified by Cerenkov counting. One unit of activity is defined as that which catalyses the incorporation of 1 nmol of [32P]phosphate into the substrate over 1 h.
Cell Research	Cell proliferation assays are carried out colorimetrically in 96-well plates using the CellTiter 96? AQueous Non-Radioactive Cell Proliferation Assay kit following the manufacturer's protocol. Initially, 2000 cells per well are seeded for U2OS cells and 3000 cells per well are seeded for MEFs. The proliferation assays are carried out over 5 days in the presence or absence of 10 μM HTH-01-015.(Only for Reference)

Solubility Information

Solubility	DMSO: 52 mg/mL (110.98 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 28 mg/mL (59.76 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (2.13 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1342 mL	10.6712 mL	21.3424 mL
5 mM	0.4268 mL	2.1342 mL	4.2685 mL
10 mM	0.2134 mL	1.0671 mL	2.1342 mL
50 mM	0.0427 mL	0.2134 mL	0.4268 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

Banerjee S, et al. Biochem J. 2014, 457(1), 215-225.
Banerjee S, et al. Biochem J. 2014, 461(2), 233-245.