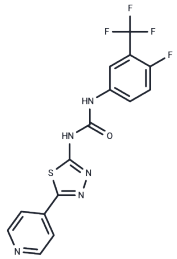
Data Sheet (Cat.No.T5413)

TargetMol

ML216

Chemical Properties



CAS No. : 1430213-30-1

Formula: C15H9F4N5OS

Molecular Weight: 383.32

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	ML216 (CID-49852229) is a small molecule inhibitor of BLM helicase with an IC50 of 1.8 μM, demonstrating 28-fold selectivity against the related helicases RECQ1, RECQ5, and E. coli UvrD (IC50s > 50 μM).
Targets(IC50)	DNA/RNA Synthesis
In vitro	ML216 shows cell-based activity and can induce sister chromatid exchanges, enhance the toxicity of aphidicolin, and exert antiproliferative activity in cells expressing BLM, but not those lacking BLM [2].
Cell Research	Cells were treated with BLM inhibitors at the indicated concentrations for up to 72 hr. At each time point, the WST-1 reagent (a pale tetrazolium derivative converted to an intensely-colored formazan product by the action of mitochondrial dehydrogenases) was added, and after a 4 hr incubation the plates were analyzed optically at 450 nm with a reference wavelength of 690 nm [2].

Solubility Information

Solubility	DMSO: 5 mg/mL (13.04 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6088 mL	13.0439 mL	26.0879 mL
5 mM	0.5218 mL	2.6088 mL	5.2176 mL
10 mM	0.2609 mL	1.3044 mL	2.6088 mL
50 mM	0.0522 mL	0.2609 mL	0.5218 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

Rosenthal AS, et al. Synthesis and SAR studies of 5-(pyridin-4-yl)-1,3,4-thiadiazol-2-amine derivatives as potent inhibitors of Bloom helicase. Bioorg Med Chem Lett. 2013 Oct 15;23(20):5660-6.
Ma X Y, Xu H Q, Zhao J F, et al.Discovery of a Novel Bloom's Syndrome Protein (BLM) Inhibitor Suppressing Growth and Metastasis of Prostate Cancer.International journal of molecular sciences.2022, 23(23): 14798.
Nguyen GH, et al. A small molecule inhibitor of the BLM helicase modulates chromosome stability in human cells. Chem Biol. 2013 Jan 24;20(1):55-62.
Ma X Y, Zhao J F, Ruan Y, et al.ML216-Induced BLM Helicase Inhibition Sensitizes PCa Cells to the DNA-Crosslinking Agent Cisplatin.Molecules.2022, 27(24): 8790.