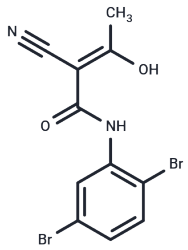
Data Sheet (Cat.No.T6217)

TargetMol

(Z)-LFM-A13

Chemical Properties



CAS No. : 244240-24-2

Formula: C11H8Br2N2O2

Molecular Weight: 360

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	(Z)-LFM-A13(IC50=2.5 μM), a specific Bruton's tyrosine kinase (BTK), is more than 100-fold specificity than other protein kinases, such as JAK1, JAK2, HCK, EGFR, and IRK.
Targets(IC50)	BTK,JAK,PLK
In vitro	In BTK+ B-lineage leukemic cells, (Z)-LFM-A13 enhances their sensitivity to ceramide- or vincristine-induced apoptosis. [1] In BCL-1 cells, NALM-6 cells, or normal BALB/c splenocytes, LFM-13 inhibits the enzymatic activity of BTK in BCL-1 cells without affecting the BTK protein expression levels [2] In human neutrophils, (Z)-LFM-A13 decreases the tyrosine phosphorylation induced by fMet-Leu-Phe and inhibits the production of superoxide anions and the stimulation of adhesion, chemotaxis, and phospholipase D activity. [3]
In vivo	In BALB/c mice bearing BCL-1 leukemia, combination of(Z)-LFM-A13 (50 mg/kg/day i.p.) and the standard triple-drug VPL prolongs the median survival time. [2] In primary myeloma-bearing SCID-rab mice,(Z)-LFM-A13 inhibits osteoclast activity, prevents myeloma-induced bone resorption and suppresss myeloma growth. [4]

Solubility Information

Solubility	DMSO: 67 mg/mL (186.11 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7778 mL	13.8889 mL	27.7778 mL
5 mM	0.5556 mL	2.7778 mL	5.5556 mL
10 mM	0.2778 mL	1.3889 mL	2.7778 mL
50 mM	0.0556 mL	0.2778 mL	0.5556 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.

Reference

Mahajan S, et al. J Biol Chem. 1999, 274(14), 9587-9599.
Wan J, Yu X, Niu J Q, et al. Inhibition of Bruton's Tyrosine Kinase Protects Against Burn Sepsis-Induced Intestinal Injury. Frontiers in Medicine. 2022, 9.
Uckun FM, et al. Clin Cancer Res. 2002, 8(5), 1224-1233.
Gilbert C, et al. J Immunol. 2003, 170(10), 5235-5243.
Bam R, et al. Am J Hematol. 2013, 88(6), 463-471.