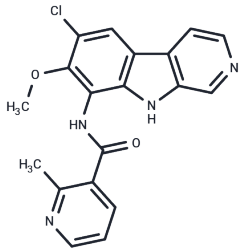
Data Sheet (Cat.No.TQ0306)

TargetMol

MLN120B

Chemical Properties



CAS No. : 783348-36-7

Formula: C19H15ClN4O2

Molecular Weight: 366.8

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	MLN120B is a selective and ATP competitive IKKβ inhibitor (IC50: 60 nM).
Targets(IC50)	IκB/IKK
In vitro	MLN120B almost completely blocks the stimulation of MM.1S, U266, and INA6 cell growth, as well as IL-6 secretion from BMSCs, induced by multiple myeloma cell adherence to BMSCs [1]. MLN120B shows an inhibitory effect on LPS induced NF-κB activation in RAW267.4 cells. The IC50 values of MLN120B is 1.4, 14.8 or 27.3 μM for NF-κB2-luc2, IL8-luc2 or TNF-AIP3-luc2 reporter transfected cells, respectively [3].
In vivo	MLN120B (50 mg/kg, p.o.) inhibits human multiple myeloma cell growth in vivo [1]. MLN120B (12 mg/kg twice daily, p.o.) inhibits paw swelling in a dose-dependent manner and offers significant protection against arthritis-induced weight loss as well as cartilage and bone erosion [2].
Cell Research	Multiple myeloma cells are cultured with MLN120B, harvested, washed, and lysed using lysis buffer [50 mM Tris-HCl (pH 7.4), 150 mM NaCl, 1% NP40, 5 mM EDTA, 5 mM NaF, 2 mM Na3VO4, 1 mM phenylmethylsulfonyl fluoride, 5 μg/mL leupeptin, 5 μg/mL aprotinin]. Whole-cell lysates are subjected to Western blotting using phosphorylated IκBα, IκBα, phosphorylated p65 NF-κB, and p65 NF-κB antibodies [1].
Animal Research	Human fetal long bone grafts are implanted into SCID mice (SCID-hu mice). Approximately 4 weeks following bone implantation, 2.5×10^6 INA6 multiple myeloma cells in 50 μL PBS is injected directly into human bone within SCID-hu hosts. Soluble human IL-6 receptor (shuIL-6R) released from INA6 cells is assessed in mouse sera by ELISA as in our prior studies. Mice are treated orally with vehicle alone or MLN120B 50 mg/kg (twice daily) for 3 weeks after the detection of measurable shuIL-6R in mouse sera [1].

Solubility Information

Solubility	DMSO: 30 mg/mL (81.79 mM),Sonication is recommended. H2O: Insoluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.45 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	2.7263 mL	13.6314 mL	27.2628 mL
5 mM	0.5453 mL	2.7263 mL	5.4526 mL
10 mM	0.2726 mL	1.3631 mL	2.7263 mL
50 mM	0.0545 mL	0.2726 mL	0.5453 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

Hideshima T, et all. MLN120B, a novel IkappaB kinase beta inhibitor, blocks multiple myeloma cell growth in vitro and in vivo. Clin Cancer Res. 2006 Oct 1;12(19):5887-94.

Schopf L, et al. IKKbeta inhibition protects against bone and cartilage destruction in a rat model of rheumatoid arthritis. Arthritis Rheum. 2006 Oct;54(10):3163-73.

Ansaldi D, et al. Imaging pulmonary NF-kappaB activation and therapeutic effects of MLN120B and TDZD-8. PLoS One. 2011;6(9):e25093.