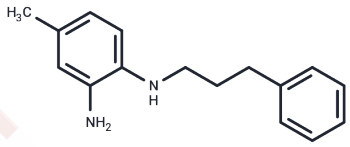
Data Sheet (Cat.No.T1930)

TargetMol

JSH-23

Chemical Properties



CAS No. : 749886-87-1

Formula: C16H20N2

Molecular Weight: 240.34

Appearance: no data available

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

Biological Description

Description	JSH-23 is an NF-κB inhibitor that inhibits NF-κB transcriptional activity (IC50=7.1 μM) but does not affect IκBα degradation. JSH-23 is an antioxidant with anti-inflammatory activity.
Targets(IC50)	NF-κB
In vitro	**METHODS**: Bone marrow macrophage BMMs were treated with JSH-23 (0.78-200 μM) for 48-96 h. Cell viability was measured by CCK-8 assay. **RESULTS**: JSH-23 had no detectable toxic effects at concentrations below 50 μM. [1] **METHODS**: Macrophages RAW 264.7 harboring the reporter gene pNF-κB-SEAP-NPT were treated with LPS (1 μg/mL) and JSH-23 (1-30 μM) for 16 days, and SEAP expression was assayed to reflect NF-κB transcriptional activity. **RESULTS**: JSH-23 inhibited LPS-induced SEAP expression in a dose-dependent manner by 23±3% at 3 μM, 68±3% at 10 μM, and 103±4% at 30 μM. JSH-23 inhibited NF-κB transcriptional activity. [2]
In vivo	**METHODS**: To investigate the role in diabetic neuropathy, JSH-23 (1-3 mg/kg) was administered orally to streptozotocin-induced diabetic rats once daily for two weeks. **RESULTS**: JSH-23 treatment significantly reversed nerve conduction and nerve blood flow deficits in diabetic animals. The treatment also partially corrected the reduced mechanical pain threshold.JSH-23 treatment inhibited nuclear translocation of the p65/p50 subunit in the sciatic nerve. [3]
Kinase Assay	Measurement of NF-κB transcriptional activity: Macrophages RAW 264.7 transfected stably with reporter plasmid of pNF-κB-SEAP-NPT are treated with 1 μg/ml LPS and/or sample for 16 hours. As the reporter, SEAP activity in the cell-free culture media is measured as followed. Single cell-derived stable transfectants are plated in 5 ml of T-25 flask, and the media is decanted 24 h later. At this time, cells are washed twice with phosphate-buffered saline, and incubations are initiated by addition of new media. Chemicals are added to the culture medium after 24 h of incubations. Aliquots (25 ml) of medium from a control or chemical-treated cultures are taken at 0, 3, 20, 24, 48, and 72 h, heated at 65°C for 5 min to eliminate the alkaline phosphatase activity, and used immediately or stored at -20°C. Mixtures consisting of dilution buffer (25 ml), assay buffer (97 ml), culture media (25 ml), and 4-methylumbelliferyl phosphate (MUP, 1 mM, 3 ml) in each well of the 96-well plates are incubated for 60 min in the dark at room temperature. Fluorescence emits the product of the SEAP/MUP is measured at 449 nm using a 96-well plate fluorometer after excitation at 360 nm.

Cell Research	Macrophages RAW 264.7 are incubated with various concentrations of JSH-23 compound for 24 h. The cells are treated with WST-1 solution and absorbance is measured at 450 nm.(Only for Reference)

Solubility Information

Solubility	DMSO: 50 mg/mL (208.04 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 16 mg/mL (66.57 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.1608 mL	20.8039 mL	41.6077 mL
5 mM	0.8322 mL	4.1608 mL	8.3215 mL
10 mM	0.4161 mL	2.0804 mL	4.1608 mL
50 mM	0.0832 mL	0.4161 mL	0.8322 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

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ZnO NPs delay the recovery of psoriasis-like skin lesions through promoting nuclear translocation of p-NFκB p65 and cysteine deficiency in keratinocytes