



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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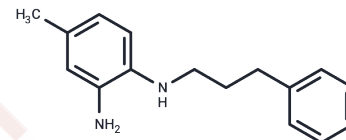
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## JSH-23

## Chemical Properties

|                   |  |
|-------------------|--|
| CAS No. :         | 749886-87-1  |
| Formula:          | C <sub>16</sub> H <sub>20</sub> N <sub>2</sub>                                       |
| Molecular Weight: | 240.34   |
| Appearance:       | no data available  |
| Storage:          | store at low temperature<br>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 (IC <sub>50</sub> =7.1 μM) but does not affect IκBα degradation. JSH-23 is an antioxidant with anti-inflammatory activity.  |
| Targets(IC <sub>50</sub> ) | NF-κB   |
| In vitro                   | <p><b>METHODS:</b> 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.</p> <p><b>RESULTS:</b> JSH-23 had no detectable toxic effects at concentrations below 50 μM. [1]</p> <p><b>METHODS:</b> 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.</p> <p><b>RESULTS:</b> 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]</p>  |
| In vivo                    | <p><b>METHODS:</b> 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.</p> <p><b>RESULTS:</b> 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]</p>  |
| 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. |

## A DRUG SCREENING EXPERT

|               |  |
|---------------|--|
| 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),<br>H <sub>2</sub> O: < 1 mg/mL (insoluble or slightly soluble),<br>Ethanol: 16 mg/mL (66.6 mM),<br>&lt; 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

Mei L, et al. The Novel Antioxidant Compound JSH-23 Prevents Osteolysis by Scavenging ROS During Both Osteoclastogenesis and Osteoblastogenesis. Front Pharmacol. 2021 Sep 9;12:734774.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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