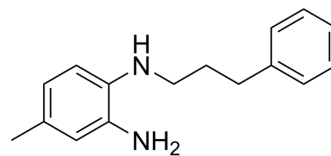


## JSH-23

Cat. No.:	HY-13982		
CAS No.:	749886-87-1		
Molecular Formula:	C <sub>16</sub> H <sub>20</sub> N <sub>2</sub>		
Molecular Weight:	240.34		
Target:	NF-κB		
Pathway:	NF-κB		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 56 mg/mL (233.00 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	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

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: ≥ 2.5 mg/mL (10.40 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (10.40 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

JSH-23 is an NF-κB inhibitor which inhibits NF-κB transcriptional activity with an IC<sub>50</sub> of 7.1 μM in lipopolysaccharide (LPS)-stimulated macrophages RAW 264.7. JSH-23 inhibits nuclear translocation of NF-κB p65 without affecting IκBα degradation [1].

#### IC<sub>50</sub> & Target

NF-κB  
 7.1 μM (IC<sub>50</sub>, in RAW 264.7 cells)

#### In Vitro

JSH-2 (1-300 μM; 24 hours) at <100 μM does not show significant cytotoxic effects on the RAW 264.7 cells<sup>[1]</sup>. Nuclear amount of NF-κB p65 is markedly increased upon exposure to LPS for 1 h. Treatment of JSH-23 (30 μM; 1 hours) to

LPS- stimulated RAW 264.7 cells decreases nuclear content of NF- $\kappa$ B p65 in a dose-dependent manner<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### Cell Cytotoxicity Assay<sup>[1]</sup>

Cell Line:	Macrophages RAW 264.7
Concentration:	1, 3, 10, 30, 100, 300 $\mu$ M
Incubation Time:	24 hours
Result:	Did not show significant cytotoxic effects at <100 $\mu$ M.

#### Western Blot Analysis<sup>[1]</sup>

Cell Line:	Macrophages RAW 264.7 with LPS-stimulated
Concentration:	30 $\mu$ M
Incubation Time:	1 hour
Result:	Decreased nuclear content of NF- $\kappa$ B p65 in a dose-dependent manner, corresponding to 49 $\pm$ 4% inhibition at 3 $\mu$ M, 75 $\pm$ 7% at 10 $\mu$ M and 95 $\pm$ 8% at 30 $\mu$ M.

#### In Vivo

JSH-23 (1 mg/kg, 3 mg/kg; orally administered; daily; for 2 weeks) significantly reverses the nerve conduction and nerve blood flow deficits seen in diabetic rats<sup>[2]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Sprague Dawley diabetic rats (250-270 g) <sup>[2]</sup>
Dosage:	1 mg/kg, 3 mg/kg
Administration:	Orally administered; daily; for 2 weeks
Result:	Produced significant improvement in motor nerve conduction velocity (MNCV).

## CUSTOMER VALIDATION

- Signal Transduct Target Ther. 2021 Apr 24;6(1):167.
- Immunity. 2024 Jul 23:S1074-7613(24)00351-0.
- Nat Immunol. 2023 Nov;24(11):1813-1824.
- Sci Immunol. 2022 Jan 21;7(67):eabj5501.
- Sci Transl Med. 2023 Sep 27;15(715):eade3157.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Shin HM, et al. Inhibitory action of novel aromatic diamine compound on lipopolysaccharide-induced nuclear translocation of NF- $\kappa$ B without affecting I $\kappa$ B degradation. FEBS Lett. 2004 Jul 30;571(1-3):50-4.

[2]. Kumar A, et al. JSH-23 targets nuclear factor- $\kappa$ B and reverses various deficits in experimental diabetic neuropathy: effect on neuroinflammation and antioxidant

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA