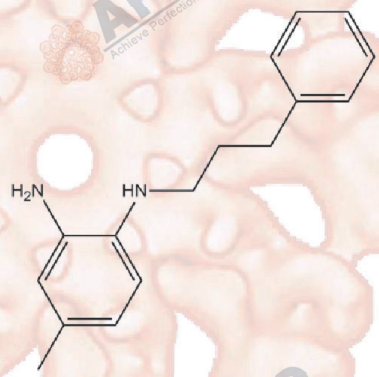
Product Data Sheet

JSH-23

Cat. No.: B1645
CAS No.: 749886-87-1
Formula: C16H20N2
M.Wt: 240.34
Synonyms:
Target: NF-κB
Pathway: Immunology/Inflammation
Storage: Store at -20° C



Solvent & Solubility

In Vitro

⩾24 mg/mL in DMSO; insoluble in H2O; ⩾17.1 mg/mL in EtOH with ultrasonic

Preparing Stock Solutions

Concentration \ Mass / Solvent	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

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

Biological Activity

Shortsummary	NF-κB inhibitor
IC_{50} & Target	7.1 μM (NF-κB)

In Vitro

Cell Viability Assay

Cell Line:	LPS-stimulated RAW264.7 cells
Preparation method:	The solubility of this compound in DMSO is >12mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	0, 1, 3, 10 and 30 μM

	Applications:	In LPS-stimulated RAW264.7 cells, JSH-23 inhibited LPS-induced SEAP expression in a dose-dependent way by 23±3%, 68±3% and 103±4% at 3 μM, 10 μM and 30 μM, respectively. JSH-23 also dose-dependently decreased LPS-induced DNA binding activity of NF-κB. JSH-23 showed differential inhibitory effects on LPS-induced expressions of the pro-inflammatory transcripts.
In Vivo	**Animal experiment**	
	Animal models:	cisplatin-induced acute kidney injury (AKI) male C57BL/6 mice
	Dosage form:	20 mg/kg (10 mg/kg 8 hours prior to cisplatin injection and 5 mg/kg on days 1 and 2 after cisplatin injection) or 40 mg/kg(20 mg/kg 8 hours prior to cisplatin injection and 20 mg/kg on day 1 after cisplatin injection); intraperitoneal (IP) injection
	Applications:	In cisplatin-induced AKI male C57BL/6 mice, JSH-23 (total dose of 40 mg/kg) significantly reduced BUN, serum creatinine and serum NGAL. JSH-23 resulted in a significant decrease in ATN score and MPO activity but not tubular apoptosis score in the kidney. JSH-23 also significantly decreased IL-1, IL-6, CXCL1 and TNF-α.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Linnan Yang, Jing Sun, et al. "Synergetic Functional Nanocomposites Enhance Immunotherapy in Solid Tumors by Remodeling the Immunoenvironment." Advanced Science. 16 February 2019.
2. Lee YC, Wang LJ, et al. "ABT-263-induced MCL1 upregulation depends on autophagy-mediated 4EBP1 downregulation in human leukemia cells." Cancer Lett. 2018 Jun 15;432:191-204.PMID:29913235
3. Dela Pena-Ponce MG, Jimenez MT, et al. "The Helicobacter pylori type IV secretion system promotes IL-8 synthesis in a model of pediatric airway epithelium via p38 MAP kinase." PLoS One. 2017 Aug 15;12(8):e0183324.PMID:28813514

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References

[1] Shin HM, Kim MH, Kim BH, Jung SH, Kim YS, Park HJ, Hong JT, Min KR, Kim Y. Inhibitory action of novel aromatic diamine compound on lipopolysaccharide-induced nuclear translocation of NF-kappaB without affecting IkappaB degradation. FEBS Lett. 2004 Jul 30;571(1-3):50-4.

[2] Ozkok A1, Ravichandran K1, Wang Q1, et al. NF-κB transcriptional inhibition ameliorates cisplatin-induced acute kidney injury (AKI). Toxicol Lett. 2016 Jan 5;240(1):105-13.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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