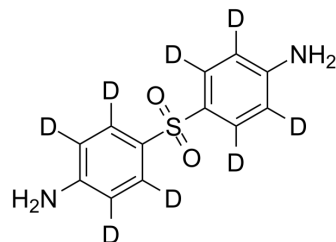


Dapsone-d₈

Cat. No.:	HY-B0688S		
CAS No.:	557794-38-4		
Molecular Formula:	C ₁₂ H ₄ D ₈ N ₂ O ₂ S		
Molecular Weight:	256.35		
Target:	Bacterial; Reactive Oxygen Species; Antibiotic; Parasite		
Pathway:	Anti-infection; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (975.23 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	3.9009 mL	19.5046 mL	39.0092 mL
5 mM	0.7802 mL	3.9009 mL	7.8018 mL
10 mM	0.3901 mL	1.9505 mL	3.9009 mL

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

BIOLOGICAL ACTIVITY

Description

Dapsone-d₈ is a deuterium labeled Dapsone. Dapsone is an orally active and blood-brain penetrant sulfonamide antibiotic with antibacterial, antigenic and anti-inflammatory activities[1]. Dapsone exerts effective antileprosy activity and inhibits folate synthesis in cell extracts of *M. leprae*. Dapsone can be used as an anticonvulsant and also in the research of skin and glioblastoma diseases[2][3][4][5].

In Vitro

Dapsone (0.06 mM; 30 min) suppresses intra- and extracellular production of superoxide (O₂⁻) and elastase release triggered by [N-Formyl-Met-Leu-Phe](#) (HY-P0224) (1 μM) and physiological agonist C5a (100 nM), but not by [Phorbol 12-myristate 13-acetate](#) (HY-18739) (100 nM)[5].

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

In Vivo

Dapsone (5 mg/kg; i.p.; single dose) shows neuroprotective effects and substantially improves memory acquisition in [Scopolamine](#) (HY-N0296)-induced memory impairment in mice[6].

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

Animal Model:	Scopolamine-induced memory impairment model in mice ^[6]
Dosage:	0.1, 0.3, 1, 5, and 10 mg/kg; 1 mg/kg for Scopolamine
Administration:	Intraperitoneal injection; single dose
Result:	Improved memory acquisition.

REFERENCES

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- [5]. D Voeller, et al. Interaction of Pneumocystis carinii dihydropteroate synthase with sulfonamides and diaminodiphenyl sulfone (dapsone). J Infect Dis. 1994 Feb;169(2):456-9.
- [6]. Esther Moreno, et al. Evaluation of Skin Permeation and Retention of Topical Dapsone in Murine Cutaneous Leishmaniasis Lesions. Pharmaceutics. 2019 Nov 13;11(11):607.
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Caution: Product has not been fully validated for medical applications. For research use only.

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