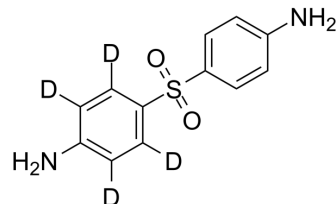


## Dapsone-d4

<b>Cat. No.:</b>	HY-B0688S1
<b>CAS No.:</b>	1346602-12-7
<b>Molecular Formula:</b>	C <sub>12</sub> H <sub>8</sub> D <sub>4</sub> N <sub>2</sub> O <sub>2</sub> S
<b>Molecular Weight:</b>	252.33
<b>Target:</b>	Antibiotic; Parasite; Bacterial; Reactive Oxygen Species
<b>Pathway:</b>	Anti-infection; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Dapsone-d4 (4,4'-Diaminodiphenyl sulfone-d4) is the deuterium labeled Dapsone. Dapsone (4,4'-Diaminodiphenyl sulfone) is an orally active and blood-brain penetrant sulfonamide antibiotic with bacteriostatic, antimycobacterial and antiprotozoal activities <sup>[1]</sup> . Dapsone exerts effective antileprosy activity and inhibits folate synthesis in cell extracts of <i>M. leprae</i> . Dapsone is used for dermatologic disorder research, including leprosy, dermatitis herpetiformis, acne vulgaris et al <sup>[2]</sup> [3].
<b>In Vitro</b>	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019;53(2):211-216.
- [2]. Yi Zhu, et al. Dapsone and sulfones in dermatology: overview and update. *J Am Acad Dermatol*
- [3]. Dapsone, Drug.com
- [4]. 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.
- [5]. 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.

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

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