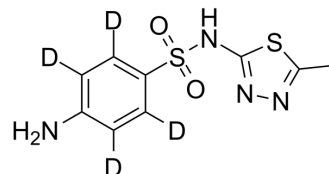


Sulfamethizole-d4

Cat. No.:	HY-B0333S
Molecular Formula:	C ₉ H ₆ D ₄ N ₄ O ₂ S ₂
Molecular Weight:	274.36
Target:	Bacterial; Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Sulfamethizole-d4 is the deuterium labeled Sulfamethizole. Sulfamethizole is a sulfathiazole antibacterial agent.
In Vitro	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 ^[1] . 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]. Watanabe, H. and J.W. Hastings, Inhibition of bioluminescence in *Photobacterium phosphoreum* by sulfamethizole and its stimulation by thymine. *Biochim Biophys Acta*, 1990. 1017(3): p. 229-34.
- [3]. Kern, M.B., N. Frimodt-Moller, and F. Espersen, Effects of sulfamethizole and amdinocillin against *Escherichia coli* strains (with various susceptibilities) in an ascending urinary tract infection mouse model. *Antimicrob Agents Chemother*, 2003. 47(3): p. 1002-9.

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

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