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Produktinformation



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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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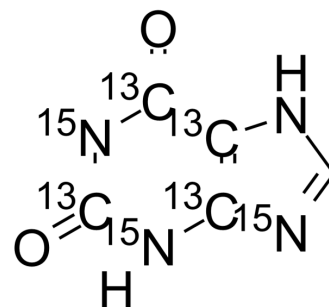
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1-Methylxanthine-13C4,15N3

Cat. No.:	HY-W008449S1
CAS No.:	1173018-69-3
Molecular Formula:	C ₂ ¹³ C ₄ H ₆ N ¹⁵ N ₃ O ₂
Molecular Weight:	173.09
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	1-Methylxanthine-13C4,15N3 is the 13C-labeled and 15N-labeled 1-Methylxanthine. 1-Methylxanthine, a caffeine derivative, is an essential human urinary metabolite of caffeine and theophylline (1,3-dimethylxanthine, TP) ^[1] . 1-Methylxanthine enhances the radiosensitivity of tumor cells ^[2] .
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]. Algharrawi KH, et al. Direct conversion of theophylline to 3-methylxanthine by metabolically engineered E. coli. *Microb Cell Fact.* 2015 Dec 21;14:203.
- [3]. Youn H, et al. 1-Methylxanthine enhances the radiosensitivity of tumor cells. *Int J Radiat Biol.* 2009 Feb;85(2):167-74.

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

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