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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

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- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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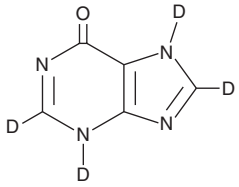
PRODUCT INFORMATION

Hypoxanthine-d_4

Item No. 36330

CAS Registry No.: 2483831-32-7
Formal Name: 1,9-dihydro-1,9-d_2-6H-purin-6-one-2,8-d_2
Synonym: 6-Hydroxypurine-d_4
MF: $C_5D_4N_4O$
FW: 140.1
Chemical Purity: ≥98% (Hypoxanthine)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Hypoxanthine-d_4 is intended for use as an internal standard for the quantification of hypoxanthine (Item No. 22254) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Hypoxanthine-d_4 is supplied as a solid. A stock solution may be made by dissolving the hypoxanthine-d_4 in the solvent of choice, which should be purged with an inert gas. Hypoxanthine-d_4 is soluble in DMSO.

Description

Hypoxanthine is an endogenous purine derivative and the major purine involved in the purine salvage pathway in the brain.[1] Intrastriatal administration of hypoxanthine (10 µM) increases mitochondrial complex II, also known as succinate dehydrogenase, activity and decreases cytochrome c oxidase activity, resulting in neuroenergetic impairment, ATP depletion, and cellular apoptosis in rats. Hypoxanthine also induces hyperuricemia in mice.[2] Spinal fluid levels of hypoxanthine are increased in patients with Lesh-Nyhan syndrome, an inborn error of metabolism characterized by cognitive deficits, motor dysunction, self-mutilation, and hyperuricemia.

References

1. Biasibetti-Brendler, H., Schmitz, F., Pierozan, P., *et al.* Hypoxanthine induces neuroenergetic impairment and cell death in striatum of young adult Wistar rats. *Mol. Neurobiol.* **55(5)**, 4098-4106 (2018).
2. Yong, T., Zhang, M., Chen, D., *et al.* Actions of water extract from *Cordyceps militaris* in hyperuricemic mice induced by potassium oxonate combined with hypoxanthine. *J. Ethnopharmacol.* **194**, 403-411 (2016).

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