

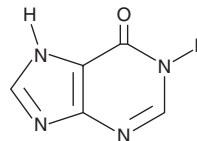
PRODUCT INFORMATION



Hypoxanthine

Item No. 22254

CAS Registry No.: 68-94-0
Formal Name: 1,9-dihydro-6H-purin-6-one
Synonyms: 6-Hydroxypurine, NSC 14665, NSC 129419
MF: C₅H₄N₄O
FW: 136.1
Purity: ≥98%
UV/Vis.: λ_{max}: 251 nm
Supplied as: A crystalline 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 is supplied as a crystalline solid. A stock solution may be made by dissolving the hypoxanthine in the solvent of choice, which should be purged with an inert gas. Hypoxanthine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of hypoxanthine in these solvents is approximately 0.5, 30, and 20 mg/ml, respectively.

Hypoxanthine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, hypoxanthine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Hypoxanthine has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Hypoxanthine is an endogenous purine derivative and the major purine involved in the purine salvage pathway in the brain.¹ Intrastratial 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 dysfunction, 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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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