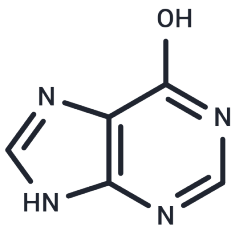
Data Sheet (Cat.No.T1362)

TargetMol

Hypoxanthine

Chemical Properties



CAS No. : 68-94-0

Formula: C5H4N4O

Molecular Weight: 136.11

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Hypoxanthine (Purin-6-ol), also known as purine-6-ol or Hyp. Hypoxanthine is a naturally occurring purine derivative and a reaction intermediate in the metabolism of adenosine and in the formation of nucleic acids by the nucleotide salvage pathway. Under normal circumstances hypoxanthine is readily converted to uric acid. hypoxanthine is first oxidized to xanthine, which is further oxidized to uric acid by xanthine oxidase.
Targets(IC50)	Endogenous Metabolite
In vitro	Hypoxanthine is a naturally occurring purine derivative. It is occasionally found as a constituent of nucleic acids, where it is present in the anticodon of tRNA in the form of its nucleoside inosine. It has a tautomer known as 6-hydroxypurine. Hypoxanthine is a necessary additive in a certain cell, bacteria, and parasite cultures as a substrate and nitrogen source. [1]
In vivo	A linear increase of plasma hypoxanthine with duration of hypoxemia is found in pigs, and there is no difference between arterial and venous plasma. There are good correlations between hypoxanthine and lactate, base deficit and pH. Moreover, there is a direct relationship between survival time and an increase in plasma hypoxanthine. Survival time correlates negatively with the rate of hypoxanthine increase (r=-0.62). All animals die when hypoxanthine exceeds 125 pM/liter. The increase of hypoxanthine, thus, reflected the prognosis of acute hypoxia in contrast to base deficit[1].

Solubility Information

Solubility	Ethanol: Insoluble, DMSO: 5 mg/mL (36.73 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	7.347 mL	36.735 mL	73.470 mL
5 mM	1.4694 mL	7.347 mL	14.694 mL
10 mM	0.7347 mL	3.6735 mL	7.347 mL
50 mM	0.1469 mL	0.7347 mL	1.4694 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Saugstad OD, Pediatr Res, 1988, 23(2), 143-150.
Chen J, Li T, Huang D, et al.Integrating UHPLC-MS/MS quantitative analysis and exogenous purine supplementation to elucidate the antidepressant mechanism of Chaigui granules by regulating purine metabolism.Journal of Pharmaceutical Analysis.2023
Skolnick P, et al. Life Sci, 1978, 23(14), 1473-1480.