Data Sheet (Cat.No.T0665)

TargetMol

Xanthine

Chemical Properties

CAS No. : 69-89-6

Formula: C5H4N4O2

Molecular Weight: 152.11

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	Xanthine (Isoxanthine) is a product on the pathway of purine degradation. Xanthine is subsequently converted to uric acid by the action of the Xanthine oxidase enzyme. Xanthine is found in most body tissues and fluids in various organisms. Biologically Xanthine is produced from guanine by cypin (guanine deaminase). Furthermore, Xanthines act as antagonists for adenosine receptors, with selectivity depending on whether there are substitution of alkyl groups.
Targets(IC50)	Endogenous Metabolite,Adenosine Receptor

Solubility Information

Solubility	DMSO: 1.28 mg/mL (8.41 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.5742 mL	32.8709 mL	65.7419 mL
5 mM	1.3148 mL	6.5742 mL	13.1484 mL
10 mM	0.6574 mL	3.2871 mL	6.5742 mL
50 mM	0.1315 mL	0.6574 mL	1.3148 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

SMITH SC, et al. The use of amberlite resin in a separation of xanthine and guanine. J Am Chem Soc. 1948 Nov;70 (11):3719.

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

Daly JW, Adenosine receptors: development of selective agonists and antagonists. Prog Clin Biol Res. 1987;230:41-63.

Overington JP, et al. Nat Rev Drug Discov. 2006 Dec;5(12):1993-6.

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