Xanthine

Cat. No.: HY-W017389

CAS No.: 69-89-6

Molecular Formula: $C_5H_4N_4O_2$

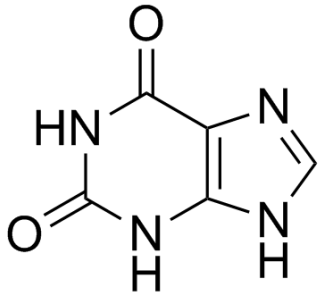
Molecular Weight: 152.11

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

1M NaOH : 50 mg/mL (328.71 mM; Need ultrasonic)

DMSO : 3.33 mg/mL (21.89 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
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

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Xanthine, a plant alkaloid found in tea, coffee, and cocoa, is a mild stimulant of the central nervous system. Xanthine also acts as an intermediate product on the pathway of purine degradation[1][2][3].

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

A number of stimulants are derived from Xanthine including caffeine and theobromine. Xanthine is a product on the pathway of purine degradation. Xanthine is subsequently converted to uric acid by the action of the Xanthine oxidase enzyme.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Pundir CS, Devi R. Biosensing methods for xanthine determination: a review. Enzyme Microb Technol. 2014;57:55-62.

[2]. David A. Taylor, et al. Central Nervous SystemStimulants.

[3]. Ashihara H, et al. Xanthine Alkaloids: Occurrence, Biosynthesis, and Function in Plants. Prog Chem Org Nat Prod. 2017;105:1-88.

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com