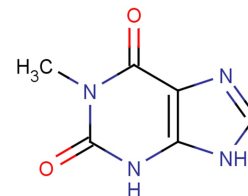


## 1-Methylxanthine

## Chemical Properties

CAS No.:	6136-37-4
Formula:	C <sub>6</sub> H <sub>6</sub> N <sub>4</sub> O <sub>2</sub>
Molecular Weight:	166.14
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



## Biological Description

Description	1-Methylxanthine is an essential human urinary metabolite of caffeine and theophylline. 1-Methylxanthine enhances the radiosensitivity of tumor cells.
Targets(IC <sub>50</sub> )	Human Endogenous Metabolite: None
In vitro	1-Methylxanthine exhibits similar activities to other naturally occurring methylxanthines. Unlike caffeine and theobromine, 3-Methylxanthine, and 1-methylxanthine do not occur naturally at high levels in plants [1]. 1-Methylxanthine (3 mM; for 30 min) increases the radiation-induced clonogenic and apoptotic cell (RKO human colorectal cancer cells carrying wild type protein 53 kDa (p53)) death [2].

## Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
------------	---

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.019 mL	30.095 mL	60.19 mL
5 mM	1.204 mL	6.019 mL	12.038 mL
10 mM	0.602 mL	3.01 mL	6.019 mL
50 mM	0.12 mL	0.602 mL	1.204 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

## Reference

1. Algharrawi KH, et al. Direct conversion of theophylline to 3-methylxanthine by metabolically engineered E. coli. Microb Cell Fact. 2015 Dec 21;14:203.
2. Youn H, et al. 1-Methylxanthine enhances the radiosensitivity of tumor cells. Int J Radiat Biol. 2009 Feb;85(2):167-74.

Inhibitors · Natural Compounds · Compound Libraries

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use.

Tel:781-999-4286

E-mail:[info@targetmol.com](mailto:info@targetmol.com)

Address:36 Washington Street,Wellesley Hills,MA 02481