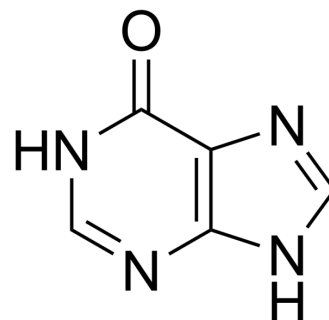


## Hypoxanthine

<b>Cat. No.:</b>	HY-N0091		
<b>CAS No.:</b>	68-94-0		
<b>Molecular Formula:</b>	C <sub>5</sub> H <sub>4</sub> N <sub>4</sub> O		
<b>Molecular Weight:</b>	136.11		
<b>Target:</b>	Endogenous Metabolite		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 10 mg/mL (73.47 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	7.3470 mL	36.7350 mL	73.4700 mL
		5 mM	1.4694 mL	7.3470 mL	14.6940 mL
10 mM		0.7347 mL	3.6735 mL	7.3470 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: 0.5% CMC-Na/saline water Solubility: 25 mg/mL (183.67 mM); Suspended solution; Need ultrasonic				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Hypoxanthine, a purine derivative, is a potential free radical generator and could be used as an indicator of hypoxia.	
<b>IC<sub>50</sub> &amp; Target</b>	Microbial Metabolite	Human Endogenous Metabolite
<b>In Vitro</b>	<p>Hypoxanthine is a potential free radical generator. Hypoxanthine seems to play a role in posthypoxic reoxygenation cell injury through oxygen radical production and is therefore involved in the pathogenesis of a number of diseases. Hypoxanthine also modulates a number of other processes because it reacts with benzodiazepine receptors and inhibits phosphodiesterase in the brain. Hypoxanthine inhibits the effect of several cytotoxic drugs and may therefore influence treatment with such drugs<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	
<b>In Vivo</b>	In pigs, a linear increase of plasma hypoxanthine with duration of hypoxemia is found, and there is no difference between	

arterial and venous plasma. There are good correlations between hypoxanthine and lactate, base deficit and pH. There is also a direct relationship between survival time and 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 therefore reflected the prognosis of acute hypoxia in contrast to base deficit<sup>[1]</sup>.

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

## CUSTOMER VALIDATION

- Talanta. 2023 Sep 6, 125171.
- Mol Ther Oncolytics. 28 August 2021.
- BMC Neurol. 2023 Dec 16;23(1):444.
- Research Square Preprint. 2022 Feb.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Saugstad OD, et al. Hypoxanthine as an indicator of hypoxia: its role in health and disease through free radical production. *Pediatr Res.* 1988 Feb;23(2):143-50.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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