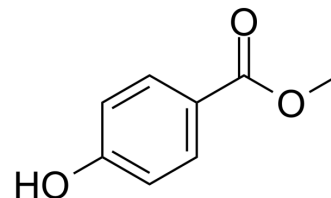


## Methyl paraben

Cat. No.:	HY-N0349
CAS No.:	99-76-3
Molecular Formula:	C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>
Molecular Weight:	152.15
Target:	Bacterial; Endogenous Metabolite
Pathway:	Anti-infection; Metabolic Enzyme/Protease
Storage:	<div> <div>Powder</div> <div>-20°C    3 years</div> <div>4°C    2 years</div> </div> <div> <div>In solvent</div> <div>-80°C    6 months</div> <div>-20°C    1 month</div> </div>



### SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (657.25 mM; Need ultrasonic)					
	Preparing Stock Solutions	<div><div>Solvent</div><div>Concentration</div></div>	Mass	1 mg	5 mg	10 mg
		1 mM		6.5725 mL	32.8623 mL	65.7246 mL
		5 mM		1.3145 mL	6.5725 mL	13.1449 mL
		10 mM		0.6572 mL	3.2862 mL	6.5725 mL
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (16.43 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (16.43 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (16.43 mM); Clear solution					

### BIOLOGICAL ACTIVITY

Description	Methyl Paraben is a standardized methyl paraben allergen isolated from Yunnan hemlock ( <i>Tsuga dumosa</i> ). Methyl Paraben is commonly used as a stable, non-volatile preservative. Methyl Paraben increases histamine release and cellular regulation of immunity, blocks sodium channels, and prevents ischemia-reperfusion injury <sup>[1][2][3][4]</sup> .
In Vitro	<p>Methyl paraben (0-1 μM; 48 h) reduces basal lipolysis of mature 3T3-L1 white fat cells, such as insulin-stimulated glucose uptake. But does not change the base 2-NBDG uptake<sup>[2]</sup>.</p> <p>Methyl paraben (100 μg/mL; 48-72 h) significantly inhibits follicle growth in mice<sup>[3]</sup>.</p>

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Methyl paraben (1, 10 and 50 mg/kg; ip; single dose, 30 min before 6-OHDA) prevents rotation behavior induced by Apomorphine (HY-12723) and significantly improves motor deficits in 6-OHDA (HY-B1081) -injured mice <sup>[4]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Food Res Int. 2021 Jan;139:109974.
- Molecules. 2021, 26(21), 6528.

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## REFERENCES

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- [2]. Elmore SE, et al. Disruption of normal adipocyte development and function by methyl- and propyl- paraben exposure. Toxicol Lett. 2020 Nov 1;334:27-35.
- [3]. Kopalli SR, et al. Methylparaben protects 6-hydroxydopamine-induced neurotoxicity in SH-SY5Y cells and improved behavioral impairments in mouse model of Parkinson's disease. Neurotoxicology. 2013 Jan;34:25-32.
- [4]. Gal A, et al. Propylparaben inhibits mouse cultured antral follicle growth, alters steroidogenesis, and upregulates levels of cell-cycle and apoptosis regulators. Reprod Toxicol. 2019 Oct;89:100-106.
- [5]. Elmore SE, et al. Disruption of normal adipocyte development and function by methyl- and propyl- paraben exposure. Toxicol Lett. 2020 Nov 1;334:27-35.
- [6]. Gal A, et al. Propylparaben inhibits mouse cultured antral follicle growth, alters steroidogenesis, and upregulates levels of cell-cycle and apoptosis regulators. Reprod Toxicol. 2019 Oct;89:100-106.
- [7]. Kopalli SR, et al. Methylparaben protects 6-hydroxydopamine-induced neurotoxicity in SH-SY5Y cells and improved behavioral impairments in mouse model of Parkinson's disease. Neurotoxicology. 2013 Jan;34:25-32.

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

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