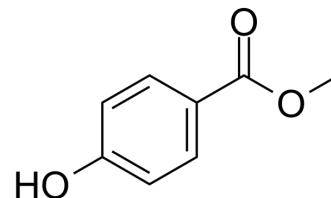


Methyl paraben

Cat. No.:	HY-N0349		
CAS No.:	99-76-3		
Molecular Formula:	C ₈ H ₈ O ₃		
Molecular Weight:	152.15		
Target:	Bacterial; Endogenous Metabolite		
Pathway:	Anti-infection; 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	DMSO : 100 mg/mL (657.25 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	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	<ol style="list-style-type: none"> 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 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 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 ^{[1][2][3][4]} .
In Vitro	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 ^[2] . Methyl paraben (100 μg/mL; 48-72 h) significantly inhibits follicle growth in mice ^[3] .

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

In Vivo

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^[4].

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

- [1]. Soni MG, et al. Evaluation of the health aspects of methyl paraben: a review of the published literature. Food Chem Toxicol. 2002 Oct;40(10):1335-73.
- [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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