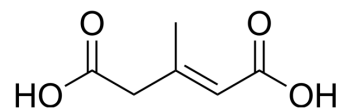


3-Methylglutaconic acid

Cat. No.:	HY-139427		
CAS No.:	5746-90-7		
Molecular Formula:	C ₆ H ₈ O ₄		
Molecular Weight:	144.13		
Target:	GABA Receptor		
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (14.43 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

3-Methylglutaconic acid is the major metabolites accumulating in 3-Methylglutaconic aciduria (MGTA). 3-Methylglutaconic acid can induce lipid oxidative damage and protein oxidative. 3-Methylglutaconic acid decreases the non-enzymatic antioxidant defenses in cerebral cortex supernatants to elicit oxidative stress in the cerebral cortex. 3-Methylglutaconic acid can be used for brain damage disease research^[1].

In Vitro

3-Methylglutaconic acid (0.1-5.0 mM, 1 h) induces lipid oxidative damage and antioxidants (TRO, MEL and SOD plus CAT) prevent the lipid peroxidation at higher doses of 5 mM in rat cerebral cortex supernatants^[1].
3-Methylglutaconic acid (0.1-5.0 mM, 1 h) induces protein oxidative damage and diminishes non-enzymatic antioxidant defenses in rat cerebral cortex supernatants^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Guilhan Leinritz, et al. Induction of oxidative stress by the metabolites accumulating in 3-methylglutaconic aciduria in cerebral cortex of young rats. *Life Sci.* 2008 Mar 12;82(11-12):652-62.
- [2]. N L Alsip, et al. Cardiovascular effects of 3-mercaptpropionic acid and levels of GABA in regions of the brain of guinea-pigs. *Neuropharmacology.* 1984 Mar;23(3):349-57.
- [3]. E Girardi, et al. 3-mercaptpropionic acid-induced seizures decrease NR2B expression in Purkinje cells: cyclopentyladenosine effect. *Cell Mol Neurobiol.* 2010 Oct;30(7):985-90.
- [4]. Leinritz G, et al. Induction of oxidative stress by the metabolites accumulating in 3-methylglutaconic aciduria in cerebral cortex of young rats. *Life Sci.* 2008 Mar 12;82(11-12):652-62.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA