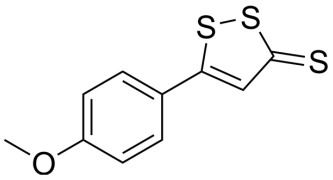
Anethole trithione

Cat. No.:	HY-B1223
CAS No.:	532-11-6
Molecular Formula:	$C_{10}H_8OS_3$
Molecular Weight:	240.36
Target:	mAChR
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 12.5 mg/mL (52.01 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.1604 mL	20.8021 mL	41.6043 mL
	5 mM	0.8321 mL	4.1604 mL	8.3209 mL
	10 mM	0.4160 mL	2.0802 mL	4.1604 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 (10.40 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Anethole trithione, a sulfur heterocyclic choleretic, is a bile secretion-stimulating agent. Anethole trithione enhances salivary secretion and increases mAChRs, and can be used for dry mouth research[1][2].

In Vitro

Anethole trithione, a slow-releasing H_2S donor, is a bile secretion-stimulating drug or cholagogue that protects the liver via an increase in glutathione levels and phase II detoxifying enzymes. Anethole trithione is a potentially efficacious chemoprevention agent for lung cancer and exerts chemopreventive effects in several target organs, such as the liver and colon, by increasing the detoxification rate of carcinogens in these target organs. Anethole trithione protects blood-brain barrier integrity following cerebral ischemia[2].

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

In Vivo

Chronic treatment with Anethole trithione increases the salivary secretion from the rat submaxillary gland induced by electrical stimulation of the parasympathetic nerve and by injection of pilocarpine. In parallel with the enhancement of the

salivary secretion, the number of the muscarinic acetylcholine receptors is significantly increased[3].

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CUSTOMER VALIDATION

- bioRxiv. 2023 Jun 3.

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REFERENCES

[1]. T Nagano, et al. Enhancement of salivary secretion and neuropeptide (substance P, alpha-calcitonin gene-related peptide) levels in saliva by chronic anethole trithione treatment. J Pharm Pharmacol. 2001 Dec;53(12):1697-702.

[2]. Sheng Huang, et al. Synthesis, Characterization, and In Vivo Evaluation of Desmethyl Anethole Trithione Phosphate Prodrug for Ameliorating Cerebral Ischemia-Reperfusion Injury in Rats. ACS Omega. 2020 Feb 24;5(9):4595-4602.

[3]. Y Ukai, et al. Chronic anethole trithione treatment enhances the salivary secretion and increases the muscarinic acetylcholine receptors in the rat submaxillary gland. Arch Int Pharmacodyn Ther. 1984 Oct;271(2):206-12.

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