Thiethylperazine

Cat. No.: HY-B1794

CAS No.: 1420-55-9

Molecular Formula: $C_{22}H_{29}N_3S_2$

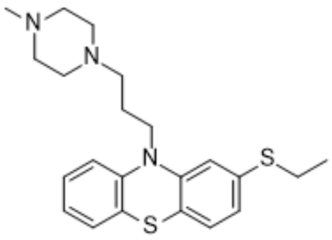
Molecular Weight: 399.62

Target: Dopamine Receptor; Histamine Receptor; Bacterial; Amyloid-β

Pathway: GPCR/G Protein; Neuronal Signaling; Immunology/Inflammation; Anti-infection

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (250.24 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5024 mL	12.5119 mL	25.0238 mL
	5 mM	0.5005 mL	2.5024 mL	5.0048 mL
	10 mM	0.2502 mL	1.2512 mL	2.5024 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Thiethylperazine, a phenothiazine derivate, is an orally active and potent dopamine D2-receptor and histamine H1-receptor antagonist. Thiethylperazine is also a selective ABCC1activator that reduces amyloid-β (Aβ) load in mice. Thiethylperazine has anti-emetic, antipsychotic and antimicrobial effects[1][2][3].

IC_{50} & Target

D_2 Receptor

H_1 Receptor

In Vitro

Thiethylperazine can enhance the antibiotic (Vancomycin) activity at a concentration as low as 2 μg/mL. Thiethylperazine inhibits Vancomycin-sensitive E. faecalis ATCC 29212, Vancomycin-resistant E. faecalis ATCC 51299 and vancomycin-resistant E. faecalis (VREF) isolates with MIC values of 8 μg/mL, 16 μg/mL and 8 μg/mL, respectively[3].

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

In Vivo

Thiethylperazine (3 mg/kg; intramuscular injection; twice daily; for 30 days) significantly reduces Aβ42 levels in young APP/PS1 mice[2].

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Animal Model:	Young Aβ precursor protein (APPswe) and mutant presenilin-1 (PS1) (APP/PS1) mice[2]
Dosage:	3 mg/kg
Administration:	Intramuscular injection; twice daily; for 30 days
Result:	Significantly reduced Aβ42 levels in APP/PS1 mice.

REFERENCES

[1]. Czeizel AE, et al. Case-control study of teratogenic potential of thiethylperazine, an anti-emetic drug. BJOG. 2003 May;110(5):497-9.

[2]. Krohn M, et al. Cerebral amyloid-β proteostasis is regulated by the membrane transport protein ABCC1 in mice. J Clin Invest. 2011 Oct;121(10):3924-31.

[3]. Rahbar M, et al. Enhancement of vancomycin activity by phenothiazines against vancomycin-resistant Enterococcus faecium in vitro. Basic Clin Pharmacol Toxicol. 2010 Aug;107(2):676-9.

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