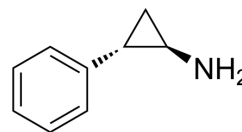


Tranlycypromine hydrochloride

Cat. No.:	HY-17447A
CAS No.:	1986-47-6
Molecular Formula:	C ₉ H ₁₂ ClN
Molecular Weight:	169.65
Target:	Monoamine Oxidase
Pathway:	Neuronal Signaling
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



H-Cl

Relative stereochemistry

SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 100 mg/mL (589.45 mM; Need ultrasonic)					
	DMSO : 100 mg/mL (589.45 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		5.8945 mL	29.4724 mL	58.9449 mL
5 mM			1.1789 mL	5.8945 mL	11.7890 mL	
	10 mM		0.5894 mL	2.9472 mL	5.8945 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 (14.74 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (14.74 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (14.74 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Tranlycypromine hydrochloride (SKF 385 hydrochloride) is an irreversible inhibitor of lysine-specific demethylase 1 (LSD1/BHC110) and monoamine oxidase (MAO). Tranlycypromine hydrochloride inhibits LSD1, MAO A and MAO B with IC ₅₀ s of 20.7, 2.3 and 0.95 μM, respectively. Tranlycypromine hydrochloride can be used for the research of depression ^{[1][2][3]} .	
IC₅₀ & Target	MAO-A 2.3 μM (IC ₅₀)	MAO-B 0.95 μM (IC ₅₀)
In Vitro	Tranlycypromine hydrochlorid (50 μM-5 mM; 1 h or 12-14 h) inhibits histone and nucleosomal demethylation ^[1] .	

Tranlycypromine hydrochlorid (2 μ M; 3 h) shows a specific derepression of OCT4 transcription^[1].

Tranlycypromine hydrochlorid (0-100 μ M; 15 min) shows IC₅₀ values of 20.7, 2.3 and 0.95 μ M for LSD1, MAO A and MAO B, respectively^[2].

Tranlycypromine hydrochlorid (0-800 μ M) shows K_i values of 242.7, 101.9 and 16 μ M for LSD1, MAO A and MAO B, respectively^[2].

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

Western Blot Analysis^[1]

Cell Line:	Sf21 insect cell line
Concentration:	50 μ M, 200 μ M, 1 mM and 5 mM
Incubation Time:	12-14 hours or 1 hour
Result:	Showed inhibitory activities of histone H3K4 demethylation and nucleosomal demethylation.

RT-PCR^[1]

Cell Line:	P19 EC cell line
Concentration:	2 μ M
Incubation Time:	3 hours
Result:	Decreased Oct4 mRNA levels.

In Vivo

Tranlycypromine hydrochlorid (3 mg/kg; i.p. once daily for 3 days) decreases LPS-mediated microglial activation and proinflammatory cytokine COX-2 and IL-6 levels in wild-type mice^[3].

Tranlycypromine hydrochlorid (3 mg/kg; i.p. once daily for 7 days) down-regulates A β -mediate microglial activation in 5xFAD mice^[3].

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

Animal Model:	Wild-type mice ^[3]
Dosage:	3 mg/kg
Administration:	Intraperitoneal injection; 3 mg/kg once daily for 3 days
Result:	Significantly down-regulated LPS-stimulated microglial activation in the cortex and Hippocampus, and LPS-induced astrocyte activation only in the cortex. Reduced LPS-induced COX-2 levels in hippocampus CA1, decreased LPS-evoked IL-6 levels in the cortex and hippocampus CA1 and suppressed LPS-mediated IL-1 β levels in the cortex.

Animal Model:	5xFAD mice ^[3]
Dosage:	3 mg/kg
Administration:	Intraperitoneal injection; 3 mg/kg once daily for 7 days
Result:	Differentially regulated microglial and astrocyte activation in this mouse model of AD.

- Biomaterials. 2018 Dec 6;193:30-46.
- Biol Reprod. 2020 Dec 1;103(6):1229-1237.
- Biochem Biophys Res Commun. 2019 May 14;512(4):852-858.
- Patent. US20180263995A1.

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REFERENCES

- [1]. Lee MG, et al. Histone H3 lysine 4 demethylation is a target of nonselective antidepressive medications. Chem Biol. 2006 Jun;13(6):563-7.
- [2]. Schmidt DM, McCafferty DG. trans-2-Phenylcyclopropylamine is a mechanism-based inactivator of the histone demethylase LSD1. Biochemistry. 2007 Apr 10;46(14):4408-16.
- [3]. Park H, et al. The MAO Inhibitor Tranylcypromine Alters LPS- and A β -Mediated Neuroinflammatory Responses in Wild-type Mice and a Mouse Model of AD. Cells. 2020 Aug 28;9(9):1982.
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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