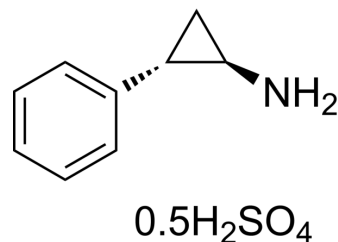


Tranlycypromine hemisulfate

Cat. No.:	HY-B1496
CAS No.:	13492-01-8
Molecular Formula:	C ₉ H ₁₂ NO ₂ S _{0.5}
Molecular Weight:	182.23
Target:	Monoamine Oxidase; Histone Demethylase
Pathway:	Neuronal Signaling; Epigenetics
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 1 year; -20°C, 6 months (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 12.5 mg/mL (68.59 mM; Need ultrasonic)																						
	DMSO : 5 mg/mL (27.44 mM; ultrasonic and warming and heat to 60°C)																						
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent</th> <th rowspan="2">Mass</th> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> <tr> <th>Concentration</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="3">Preparing Stock Solutions</td> <td>1 mM</td> <td>5.4876 mL</td> <td>27.4379 mL</td> <td>54.8757 mL</td> </tr> <tr> <td>5 mM</td> <td>1.0975 mL</td> <td>5.4876 mL</td> <td>10.9751 mL</td> </tr> <tr> <td>10 mM</td> <td>0.5488 mL</td> <td>2.7438 mL</td> <td>5.4876 mL</td> </tr> </tbody> </table>	Solvent	Mass	1 mg	5 mg	10 mg	Concentration				Preparing Stock Solutions	1 mM	5.4876 mL	27.4379 mL	54.8757 mL	5 mM	1.0975 mL	5.4876 mL	10.9751 mL	10 mM	0.5488 mL	2.7438 mL	5.4876 mL
	Solvent			Mass	1 mg	5 mg	10 mg																
		Concentration																					
Preparing Stock Solutions	1 mM	5.4876 mL	27.4379 mL	54.8757 mL																			
	5 mM	1.0975 mL	5.4876 mL	10.9751 mL																			
	10 mM	0.5488 mL	2.7438 mL	5.4876 mL																			
Please refer to the solubility information to select the appropriate solvent.																							
In Vivo	1. Add each solvent one by one: PBS Solubility: 20 mg/mL (109.75 mM); Clear solution; Need ultrasonic and warming and heat to 60°C																						

BIOLOGICAL ACTIVITY

Description	Tranlycypromine (SKF 385) hemisulfate is an irreversible, nonselective monoamine oxidase (MAO) inhibitor used in the treatment of depression. Tranlycypromine hemisulfate is also a lysine-specific demethylase 1 (LSD1) inhibitor, suppresses lesion growth and improves generalized hyperalgesia in mouse with induced endometriosis. Tranlycypromine has antidepressant effects ^{[1][2]} .
IC₅₀ & Target	KDM1/LSD1
In Vitro	Tranlycypromine (10 nM to 10 μM) exerts neuroprotective effects against toxicity induced by human Aβ(1-42) oligomers independently from the presence of glial cells ^[1] . Tranlycypromine (100 μM) significantly protects RGCs from glutamate neurotoxicity-induced apoptosis as well as apoptosis induced by oxidative stress. Tranlycypromine promotes mitogen-activated protein kinase 12 (p38 MAPKγ) expression under conditions of glutamate (Glu)-induced stress. Besides, tranlycypromine contributes to RGC survival via alterations of p38 MAPKγ activity ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Tranlycypromine treatment significantly and substantially reduces the lesion size and improves generalized hyperalgesia in a dose-dependent fashion in mice with induced endometriosis. In addition, tranlycypromine treatment results in reduced immunoreactivity to biomarkers of proliferation, angiogenesis, and H3K4 methylation, leading to arrested EMT and lesion growth^[2]. Tranlycypromine (500 mM) injection exerts neuroprotective effects within intracellular apoptotic signaling pathways and suppresses morphologic changes in the retina of the rat, suppresses caspase 3 activity and recovers p38 MAPK γ expression in the retina after NMDA-induced injury, and enhances RGC survival after retinal injury via the attenuation of NMDA neurotoxicity^[3]. Tranlycypromine (10 μ g/g) causes an approximate and significant doubling of labeled cells in the combined brain regions examined, as detected by BrdU immunohistochemistry. Tranlycypromine causes the greatest increase in cell proliferation in the cerebellum^[4].

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

PROTOCOL

Animal Administration ^[3]

Briefly, the rats are anesthetized with an intraperitoneal injection of a 1:1 mixture of xylazine hydrochloride (4 mg/kg) and ketamine hydrochloride (10 mg/kg). Then, the pupil is dilated with phenylephrine hydrochloride and tropicamide eye drops, and 20 nmol NMDA with or without tranlycypromine is injected into the vitreous cavity. To assess the inhibitory effect of mitogen-activated protein kinase (MAPK), 100 nmol BIRB796 is intravitreally injected at the same time of NMDA injection. The injections are performed under a microscope using a 33-gauge needle connected to a microsyringe; the needle is inserted approximately 1.0 mm behind the corneal limbus. Next, either PBS (vehicle control) or 500 mM tranlycypromine (1000 nmol) mixed with 10 mM NMDA (20 nmol) in a total volume of 2.0 μ L is injected into the vitreous cavity.

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

CUSTOMER VALIDATION

- 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.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Caraci F, et al. Neuroprotective effects of the monoamine oxidase inhibitor tranlycypromine and its amide derivatives against A β (1-42)-induced toxicity. *Eur J Pharmacol*. 2015 Oct 5;764:256-263.
- [2]. Sun Q, et al. Tranlycypromine, a lysine-specific demethylase 1 (LSD1) inhibitor, suppresses lesion growth and improves generalized hyperalgesia in mouse with induced endometriosis. *Reprod Biol Endocrinol*. 2016 Apr 9;14:17.
- [3]. Tsutsumi T, et al. Potential Neuroprotective Effects of an LSD1 Inhibitor in Retinal Ganglion Cells via p38 MAPK Activity. *Invest Ophthalmol Vis Sci*. 2016 Nov 1;57(14):6461-6473.
- [4]. Romanczyk TB, et al. The antidepressant tranlycypromine alters cellular proliferation and migration in the adult goldfish brain. *Anat Rec (Hoboken)*. 2014 Oct;297(10):1919-26.

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