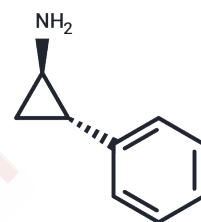


Tranlycypromine (2-PCPA) hydrochloride

Chemical Properties

CAS No. :	1986-47-6
Formula:	C ₉ H ₁₁ N·HCl
Molecular Weight:	169.66
Storage:	Store under nitrogen, Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



HCl

Biological Description

Description	Tranlycypromine (2-PCPA) hydrochloride (SKF-385 HCl), a Monoamine Oxidase inhibitor, is effective in the treatment of major depression, dysthymic disorder, and atypical depression.
Targets(IC50)	Histone Demethylase, MAO, Monoamine Oxidase
In vitro	Compared with the control group, Tranlycypromine at dosages of 5 mg/kg and 10 mg/kg significantly and gradually increased muscle activity in male rats; however, a 2 mg/kg dosage of Tranlycypromine had no effect. Additionally, Tranlycypromine administered at 10 mg/kg markedly increased the number of copulatory behaviors in male rats.
In vivo	In bovine aortic endothelial cells, Tranlycypromine (500 µg/mL) markedly inhibits bradykinin-induced release of arachidonic acid. Additionally, Tranlycypromine suppresses the activity of CYP2A6 (IC ₅₀ : 0.42 µM) and CYP2E1 (IC ₅₀ : 3 µM) in human liver microsomes (HLMs), inducing type II and cyclopropylbenzene type I difference spectra in HLMs. Nicotine metabolism mediated by CYP2A6 in HLMs is completely inhibited by R-(+)-Tranlycypromine (K _i : 0.05 µM), (±)-Tranlycypromine (K _i : 0.08 µM), and S-(-)-Tranlycypromine (K _i : 2.0 µM).
Kinase Assay	PDE activity is determined with some modifications. The assay mixture contain 50 mM Tris (pH 7.4), 5 mM MgCl ₂ , 0.5 µM cAMP or cGMP, and [3H]cAMP or [3H]cGMP (about 30,000 cpm/assay), the indicated concentration of the inhibitor and an aliquot of the enzyme solution at a final assay volume of 200 µL. Stock solutions of the compounds are diluted 1:100 (v/v) in the Tris buffer mentioned above; appropriate dilutions are prepared in 1% (v/v) DMSO/Tris buffer, which are diluted 1:2 (v/v) in the assays to obtain the desired final concentrations of the inhibitors at a DMSO concentration of 0.5% (v/v). DMSO itself affected none of the PDE activities. After preincubation for 5 min at 37° C, the reaction is started by the addition of substrate (cAMP or cGMP) and the assays are incubated for further 15 min at 37°C. Then 50 µL of 0.2 N HCl is added to stop the reaction and the assays are left on ice for about 10 min. Following incubation with 25 µg of 5'-nucleotidase (Crotalus atrox snake venom) for 10 min at 37°C, the assays are loaded on QAE Sephadex A-25 (1 mL of bed volume in Poly-Prep chromatography columns). The columns are eluted with 2 mL of 30 mM ammonium formate (pH 6.0) and the eluate is counted for radioactivity. Results are corrected for blank values (measured in the presence of denatured protein) that are below 5% of total radioactivity. The

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Kinase Assay	amount of cyclic nucleotides hydrolyzed did not exceed 30% of the original substrate concentration[3].
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Solubility Information

Solubility	H2O: 17 mg/mL (100.2 mM),Sonication is recommended. DMSO: 250 mg/mL (1473.54 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (11.79 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.8941 mL	29.4707 mL	58.9414 mL
5 mM	1.1788 mL	5.8941 mL	11.7883 mL
10 mM	0.5894 mL	2.9471 mL	5.8941 mL
50 mM	0.1179 mL	0.5894 mL	1.1788 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Zhang W, et al. Drug Metab Dispos, 2001, 29(6), 897-902.
- Hong SL, et al. J Biol Chem, 1980, 255(20), 9538-9540.
- Taavitsainen P, et al. Drug Metab Dispos, 2001, 29(3), 217-222.
- Negishi T, et al. Environ Health Perspect, 2004, 112(11), 1159-1164.

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