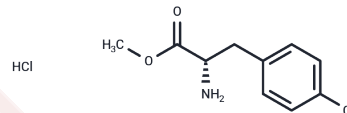


pCPA methyl ester hydrochloride

Chemical Properties

CAS No. :	14173-40-1
Formula:	C10H13ClN2O2
Molecular Weight:	250.12
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	pCPA methyl ester hydrochloride (4-Chloro-DL-phenylalanine methyl ester hydrochloride) is an inhibitor of tryptophan hydroxylase inhibitor and 5-HT synthesis. pCPA methyl ester hydrochloride is permeable across the blood-brain barrier and reduces 5-HT central availability.
Targets(IC50)	5-HT Receptor, Hydroxylase
In vivo	In C57BL/6 elite male mice, 5-HT levels decreased by 85% and 55% in the hippocampus of mice treated with oral or i.p. PCPA methyl ester hydrochloride(250, 500 mg/kg), respectively, whereas in the prefrontal cortex, 5-HT levels decreased by 65% and 50%[4].

Solubility Information

Solubility	H2O: 45 mg/mL (179.91 mM), Sonication and heating to 60°C are recommended. DMSO: 245 mg/mL (979.53 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: 5 mg/mL (19.99 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	3.9981 mL	19.9904 mL	39.9808 mL
5 mM	0.7996 mL	3.9981 mL	7.9962 mL
10 mM	0.3998 mL	1.999 mL	3.9981 mL
50 mM	0.080 mL	0.3998 mL	0.7996 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

- Fabio Bellia, et al. Transient serotonin depletion at adolescence, but not at early infancy, reduced subsequent anxiety-like behavior and alcohol intake in female mice. *Psychopharmacology (Berl)*. 2021 Jan;238(1):215-225.
- Wallace et al (2014) Vort. restores reversal learning impaired by 5-HT depletion or chronic intermittent cold stress in rats. *Int.J.Neuropsychopharmacol.* 17 1695 PMID: 24852131
- Dool-Ri Oh, et al. Sedative and hypnotic effects of *Vaccinium bracteatum* Thunb. through the regulation of serotonergic and GABA A-ergic systems: Involvement of 5-HT 1A receptor agonistic activity. *Biomed Pharmacother.* 2019 Jan;109:2218-2227.
- ocío B Foltran, et al. Neurochemical, Behavioral, and Neurogenic Validation of a Hyposerotonergic Animal Model by Voluntary Oral Consumption of para-Chlorophenylalanine. *ACS Chem Neurosci.* 2020 Mar 18;11(6):952-959.
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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481