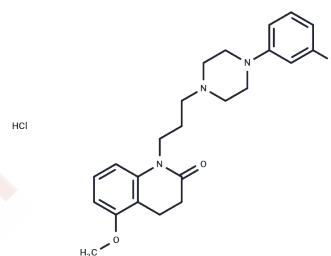


OPC-14523 hydrochloride

Chemical Properties

CAS No. :	145969-31-9
Formula:	C ₂₃ H ₂₉ Cl ₂ N ₃ O ₂
Molecular Weight:	450.4
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	OPC-14523 hydrochloride is an orally active sigma and 5-HT _{1A} receptor agonist with antidepressant-like activity, showing high affinity for the sigma receptor $\sigma_{1/2}$ (IC ₅₀ =47/56 nM), the 5-HT _{1A} receptor (IC ₅₀ =2.3 nM), and the 5-HT transporter (IC ₅₀ =80 nM).
Targets(IC ₅₀)	5-HT Receptor, Sigma receptor
In vitro	OPC-14523 inhibits the in vitro reuptake of 3H-5-HT (IC ₅₀ = 27 nM), but exhibits very weak inhibition activity against the reuptake of 3H-NE and 3H-DA. OPC-14523 does not inhibit activity at the A or B receptors or muscarinic receptors.
In vivo	In Wistar rats (140-245 g), OPC-14523 hydrochloride (0.3-100 mg/kg; orally; daily for 0, 2, 4, 7 days) reduces immobility time in the depression experiment[1].

Solubility Information

Solubility	DMSO: 60 mg/mL (133.21 mM), Sonication is recommended. H ₂ O: 3 mg/mL (6.66 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: 2.5 mg/mL (5.55 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	2.2202 mL	11.1012 mL	22.2025 mL
5 mM	0.444 mL	2.2202 mL	4.4405 mL
10 mM	0.222 mL	1.1101 mL	2.2202 mL
50 mM	0.0444 mL	0.222 mL	0.444 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

Tottori K, et al. Antidepressant-like responses to the combined sigma and 5-HT_{1A} receptor agonist OPC-14523. *Neuropharmacology*. 2001;41(8):976-988.

Bermack JE, et al. Effects of the potential antidepressant OPC-14523 [1-[3-[4-(3-chlorophenyl)-1-piperazinyl]propyl]-5-methoxy-3,4-dihydro-2-quinolinone monomethanesulfonate] a combined sigma and 5-HT_{1A} ligand: modulation of neuronal activity in the dorsa.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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