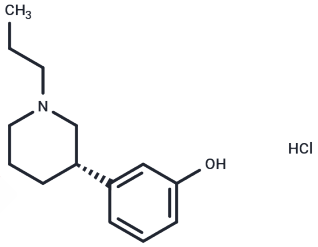
Data Sheet (Cat.No.T73684)

TargetMol

Preclamol hydrochloride

Chemical Properties



CAS No. : 88768-67-6

Formula: C14H22ClNO

Molecular Weight: 255.78

Storage: Keep away from moisture
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	Preclamol hydrochloride ((-)-3-PPP hydrochloride) is a selective dopamine autoreceptor agonist. It functions by specifically activating presynaptic autoreceptors, which triggers a negative feedback loop to inhibit the synthesis and release of dopamine. Unlike conventional neuroleptics that primarily block postsynaptic receptors, Preclamol offers a more refined modulation of the dopaminergic system. This unique pharmacological profile makes it a valuable tool in schizophrenia research, aiming to alleviate psychotic symptoms with a potentially lower risk of extrapyramidal side effects.
Targets(IC50)	Dopamine Receptor
In vitro	In vitro biochemical and electrophysiological assays demonstrate that Preclamol hydrochloride binds with high selectivity to dopamine autoreceptors. It inhibits the activity of tyrosine hydroxylase, the rate-limiting enzyme in dopamine synthesis, and significantly reduces the spontaneous firing rate of dopaminergic neurons. This mode of action establishes it as a standard reference compound for studying presynaptic regulatory mechanisms [1].

Solubility Information

Solubility	DMSO: 40 mg/mL (156.38 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.9096 mL	19.548 mL	39.0961 mL
5 mM	0.7819 mL	3.9096 mL	7.8192 mL
10 mM	0.391 mL	1.9548 mL	3.9096 mL
50 mM	0.0782 mL	0.391 mL	0.7819 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

Seth-Olov Thorberg, et al. Large scale synthesis and absolute configuration of (-)-3-ppp, a selective dopamine autoreceptor agonist. Tetrahedron. 1985, 41(1): 129-139.
Tamminga CA, et al. Pharmacologic properties of (-)-3PPP (preclamol) in man. J Neural Transm Gen Sect. 1992;88 (3):165-75.