# Procyclidine hydrochloride

**Cat. No.:** HY-B1487

**CAS No.:** 1508-76-5

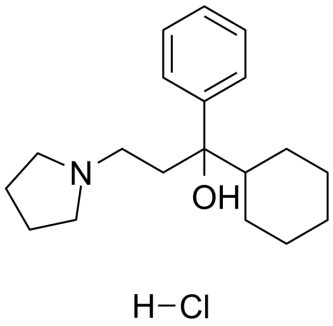
**Molecular Formula:** $C_{19}H_{30}ClNO$

**Molecular Weight:** 323.9

**Target:** iGluR; mAChR

**Pathway:** Membrane Transporter/Ion Channel; Neuronal Signaling; GPCR/G Protein

**Storage:** 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)




## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 50 mg/mL (154.37 mM; ultrasonic and warming and heat to 60°C)
$H_2O$ : 5.56 mg/mL (17.17 mM; ultrasonic and warming and heat to 60°C)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 3.0874 mL | 15.4369 mL | 30.8737 mL |
| 5 mM | 0.6175 mL | 3.0874 mL | 6.1747 mL |
| 10 mM | 0.3087 mL | 1.5437 mL | 3.0874 mL |

Please refer to the solubility information to select the appropriate solvent.

## BIOLOGICAL ACTIVITY

**Description**

Procyclidine (Tricyclamol, (±)-Procyclidine) hydrochloride , an anticholinergic agent, is a muscarinic receptor antagonist that also has the properties of an N-methyl-D-aspartate (NMDA) antagonist. Procyclidine hydrochloride can be used in studies of Parkinson's disease and related psychiatric disorders such as Soman-induced epilepsy[1][2].

**$IC_{50}$ & Target**

NMDA Receptor[1]

**In Vivo**

Procyclidine (subcutaneous injection, 0.3-6.0 mg/kg) hydrochloride in combination with physostigmine (PhS) increases protection in a dose-dependent manner in rats and guinea pigs infected with soman and can prevent seizures altogether[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

| | |
|---|---|
| Animal Model: | Male Sprague-Dawley rats, Dunkin-Hartley male guinea pigs[1] |
| Dosage: | 0.3-6.0 mg/kg |
| Administration: | Subcutaneous injection; once |

| | |
|---|---|
| Result: | Increased protection, resulting in 1.92, 2.24, 3.95 and 5.07 fold in rats, 3.00, 3.25, 4.50 and 4.70 fold in guinea pigs at the doses of 0.3, 1.0, 3.0 or 6.0 mg/kg, respectively.<br>Protected the neurological integrity of the brain and prevented Soman-induced severe brain damage in the hippocampus, cortex, amygdala and thalamus. |

## REFERENCES


[1]. Yun-Bae Kim, et al. Effects of combinational prophylactics composed of physostigmine and procyclidine on soman-induced lethality, seizures and brain injuries. Environ Toxicol Pharmacol. 2002 Jan;11(1):15-21.

[2]. Ulrich Ettinger, et al. Effects of procyclidine on eye movements in schizophrenia. Neuropsychopharmacology. 2003 Dec;28(12):2199-208.





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