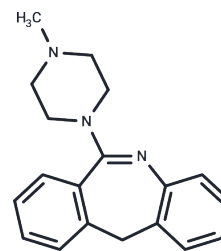


## Perlapine

## Chemical Properties

CAS No. :	1977-11-3
Formula:	C19H21N3
Molecular Weight:	291.39
Storage:	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>



## Biological Description

Description	Perlapine is a potent DREADD (Designer Receptors Exclusively Activated by Designer Drugs) agonist that specifically targets mutant muscarinic receptors. It exhibits remarkable selectivity for the hM3Dq mutant receptor, with a binding affinity and potency more than 10,000-fold higher than that for the wild-type hM3 receptor. As a pivotal chemogenetic tool, Perlapine enables highly specific activation of DREADD-expressing neurons, facilitating precise modulation in neural circuit and behavioral research.
Targets(IC50)	AChR
In vitro	Perlapine specifically activates hM3Dq with >10,000-fold selectivity over wild-type hM3 [1].
In vivo	Perlapine alters dopamine turnover, stimulates prolactin, and exhibits sedative/hypnotic properties in rats[1][2].

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.4318 mL	17.1591 mL	34.3183 mL
5 mM	0.6864 mL	3.4318 mL	6.8637 mL
10 mM	0.3432 mL	1.7159 mL	3.4318 mL
50 mM	0.0686 mL	0.3432 mL	0.6864 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

- Jang D S, Park E J, Kang Y H, et al. Potential cancer chemopreventive flavonoids from the stems of *Tephrosia toxicaria*[J]. *Journal of natural products*, 2003, 66(9): 1166-1170.
- Wilk S, Stanley M. Perlapine and dopamine metabolism: prediction of antipsychotic efficacy. *Eur J Pharmacol*. 1977 Jan 7;41(1):65-72. PubMed PMID: 12986.
- Bürki HR, Ruch W, Asper H. Effects of clozapine, thioridazine, perlapine and haloperidol on the metabolism of the biogenic amines in the brain of the rat. *Psychopharmacologia*. 1975;41(1):27-33. PubMed PMID: 235767.
- Allen SR, Oswald I. The effects of perlapine on sleep. *Psychopharmacologia*. 1973 Aug 22;32(1):1-9. PubMed PMID: 4359662.

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