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DATASHEET

Perlapine dihydrochloride (water soluble)

Product overview

Name	Perlapine dihydrochloride (water soluble)
Cat No	HB6126
Alternative names	NSC291840 dihydrochloride
Biological action	Activator
Purity	>98%
Description	Effective agonist for muscarinic-based DREADDs in vitro and in vivo. Non-CNO chemogenetic actuator. Water soluble.

Biological Data

Biological description

Perlapine dihdrochloride is the water soluble of perlapine which is a potent agonist at muscarinic based DREADDs such as the excitatory hM3Dq, hM1Dq and inhibitory hM4Di DREADDs (pEC_{50} values are 8.08, 8.38 and 7.27 at hM3Dq, hM1Dq and hM4Di respectively).

Perlapine exhibits >10,000-fold selectivity for hM3Dq over wildtype hM3 and interacts with wildtype hM1 and hM4 receptors with relatively low affinity. Perlapine lacks agonist activity at wild type receptors.

It has been reported that perlapine does not undergo back metabolism to clozapine.

Perlapine also acts as a sleep inducing, hypnotic agent.

CNO dihydrochloride (water soluble), Clozapine N-oxide (CNO) freebase, Compound 21, Salvinorin B (SalB) and perlapine freebase also available.

Stability Studies
For more info on the stability of water-soluble DREADD ligands in solution, please see the following guides:

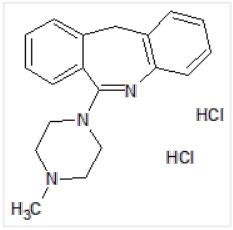
- Stability of Water-Soluble DREADD ligands in Solution: A Technical Review

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in water (100 mM). Always store solutions at -20°C.
Handling	• Hydroscopic solid, contact with air may cause material to become sticky. Product performance should not be affected but we recommend storing the material in a sealed jar. • Always store solutions at -20°C.
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not

Storage instructions	-20°C for human or veterinary use

Chemical Data

Chemical name	6-(4-Methyl-1-piperazinyl)-11H-dibenz[b,e]azepine dihydrochloride
Molecular Weight	360.3
Chemical structure	
Molecular Formula	$C_{19}H_{21}N_3.2HCl$
PubChem identifier	0
SMILES	CN1CCN(CC1)C2=NC3=CC=CC=C3CC4=CC=CC=C42.Cl.Cl
Source	Synthetic
Appearance	White solid

References

The first structure-activity relationship studies for designer receptors exclusively activated by designer drugs.

Chen et al (2015) ACS Chem Neurosci 6(3)
PubMedID 25587888

6-(4-Methyl-1-piperazinyl)morphanthridine (Perlapine), a new tricyclic compound with sedative and sleep-promoting properties. A pharmacological study.

Stille et al (1973) Psychopharmacologia 24(4)
PubMedID 4695567

DREADDs for Neuroscientists.

Roth Bl (2016) Neuron 89(4)
PubMedID 26889809

DREADD Agonist 21 Is an Effective Agonist for Muscarinic-Based DREADDs in Vitro and in Vivo

Thompson et al (2018) ACS Pharmacol. Transl. Sci. Thompson et al

DREADDs: The Power of the Lock, the Weakness of the Key. Favoring the Pursuit of Specific Conditions Rather than Specific Ligands.

Goutaudier et al (2019) eNeuro 6
PubMedID 31562177