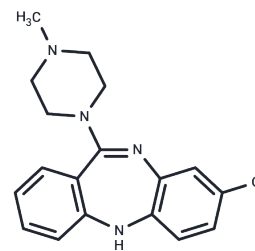


Clozapine

Chemical Properties

CAS No. :	5786-21-0
Formula:	C ₁₈ H ₁₉ ClN ₄
Molecular Weight:	326.82
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	Clozapine (HF 1854) is a tricyclic dibenzodiazepine, classified as an atypical antipsychotic agent. It binds several types of central nervous system receptors, and displays a unique pharmacological profile. Clozapine is a serotonin antagonist, with strong binding to 5-HT 2A/2C receptor subtype. It also displays strong affinity to several dopaminergic receptors, but shows only weak antagonism at the dopamine D2 receptor, a receptor commonly thought to modulate neuroleptic activity.
Targets(IC50)	5-HT Receptor, Adrenergic Receptor, AChR, Dopamine Receptor
In vitro	Clozapine significantly facilitated NMDA-evoked responses in a concentration-dependent manner (EC ₅₀ : 14 nM). Clozapine produced excitatory postsynaptic potentials, which were blocked by glutamate receptor antagonists, suggesting that these excitatory postsynaptic potentials were the result of an increased release of excitatory amino acids. Clozapine is a full agonist at muscarinic M4 receptors, with an EC ₅₀ =11 nM, and a -logEC ₅₀ =6.52. The EC ₅₀ =11 nM. Clozapine is a full agonist at muscarinic M4 receptors, with an EC ₅₀ =11 nM, and inhibits forskolin-stimulated cAMP accumulation. Clozapine is a potent antagonist of agonist-induced responses at four other muscarinic receptor subtypes.
In vivo	Clozapine significantly facilitated NMDA-evoked responses in a concentration-dependent manner (EC ₅₀ : 14 nM). Clozapine produced excitatory postsynaptic potentials, which were blocked by glutamate receptor antagonists, suggesting that these excitatory postsynaptic potentials were the result of an increased release of excitatory amino acids. Clozapine is a full agonist at muscarinic M4 receptors, with an EC ₅₀ =11 nM, and a -logEC ₅₀ =6.52. The EC ₅₀ =11 nM. Clozapine is a full agonist at muscarinic M4 receptors, with an EC ₅₀ =11 nM, and inhibits forskolin-stimulated cAMP accumulation. Clozapine is a potent antagonist of agonist-induced responses at four other muscarinic receptor subtypes.

Solubility Information

Solubility	DMSO: 82.5 mg/mL (252.43 mM), Sonication is recommended. 2eq.HCl: 16.3 mg/mL (49.87 mM), Heating is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (6.12 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>
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0598 mL	15.2989 mL	30.5979 mL
5 mM	0.612 mL	3.0598 mL	6.1196 mL
10 mM	0.306 mL	1.5299 mL	3.0598 mL
50 mM	0.0612 mL	0.306 mL	0.612 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

Robertson GS, et al. Neuroscience, 1992, 46(2), 315-328.
 Xu Z, Guo L, Yu J, et al. Ligand recognition and G protein coupling of trace amine receptor TAAR1. Nature. 2023: 1-3.
 Nguyen TV, et al. Proc Natl Acad Sci U S A, 1992, 89(10), 4270-4274.
 Brunello N, et al. Neuropsychopharmacology, 1995, 13(3), 177-213.
 Arvanov VL, et al. J Pharmacol Exp Ther, 1997, 283(1), 226-234.
 Zorn SH, et al. Eur J Pharmacol, 1994, 269(3), R1-2.

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