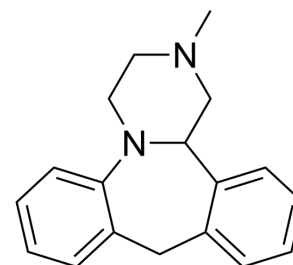


Mianserin hydrochloride

Cat. No.:	HY-B0188A
CAS No.:	21535-47-7
Molecular Formula:	C ₁₈ H ₂₁ ClN ₂
Molecular Weight:	300.83
Target:	Histamine Receptor
Pathway:	GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 2 years; -20°C, 1 year (sealed storage, away from moisture)



HCl

SOLVENT & SOLUBILITY

In Vitro	DMSO : 50 mg/mL (166.21 mM; Need ultrasonic)																									
	H ₂ O : 25 mg/mL (83.10 mM; ultrasonic and warming and heat to 60°C)																									
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent</th> <th rowspan="2">Mass</th> <th colspan="3">Concentration</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Preparing Stock Solutions</td> <td>1 mM</td> <td>3.3241 mL</td> <td>16.6207 mL</td> <td>33.2414 mL</td> </tr> <tr> <td>5 mM</td> <td>0.6648 mL</td> <td>3.3241 mL</td> <td>6.6483 mL</td> </tr> <tr> <td>10 mM</td> <td>0.3324 mL</td> <td>1.6621 mL</td> <td>3.3241 mL</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Solvent	Mass	Concentration			1 mg	5 mg	10 mg	Preparing Stock Solutions	1 mM	3.3241 mL	16.6207 mL	33.2414 mL	5 mM	0.6648 mL	3.3241 mL	6.6483 mL	10 mM	0.3324 mL	1.6621 mL	3.3241 mL				
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Please refer to the solubility information to select the appropriate solvent.																										
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (8.31 mM); Clear solution																									
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (8.31 mM); Clear solution																									
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (8.31 mM); Clear solution																									

BIOLOGICAL ACTIVITY

Description	Mianserin hydrochloride (Org GB 94) is a H ₁ receptor inverse agonist and is a psychoactive agent of the tetracyclic antidepressant.
IC₅₀ & Target	H ₁ Receptor
In Vitro	Mianserin hydrochloride (Org GB 94) is a psychoactive drug of the tetracyclic antidepressant (TeCA) therapeutic family. It is classified as a noradrenergic and specific serotonergic antidepressant (NaSSA) and has antidepressant, anxiolytic (anti-anxiety), hypnotic (sedating), antiemetic (nausea and vomiting-attenuating), orexigenic (appetite-stimulating), and

antihistamine effects. It is not approved for use in the US, but its analogue, mirtazapine, is. Mianserin was the first antidepressant to reach the UK market that was less dangerous than the tricyclic antidepressants in overdose. Mianserin is an antagonist/inverse agonist of the H1, 5-HT1D, 5-HT2A, 5-HT2B, 5-HT2C, 5-HT3, 5-HT6, 5-HT7, α 1-adrenergic, and α 2-adrenergic receptors, and also inhibits the reuptake of norepinephrine. As a high affinity H1 receptor inverse agonist, mianserin has strong antihistamine effects (sedation, weight gain, etc.). Contrarily, it has negligible affinity for the mACh receptors, and thus lacks any anticholinergic properties. It was recently found to be a potent kappa opioid receptor agonist. In addition, mianserin also appears to be a potent antagonist of the neuronal octopamine receptor. What implications this may have on mood are currently unknown, however octopamine has been implicated in the regulation of sleep, appetite and insulin production and therefore may theoretically contribute to the overall side effect profile of mianserin. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Olianas MC, et al. The atypical antidepressant mianserin exhibits agonist activity at κ -opioid receptors. *Br J Pharmacol.* 2012 Nov;167(6):1329-41.
- [2]. Roeder T. High-affinity antagonists of the locust neuronal octopamine receptor. *Eur J Pharmacol.* 1990 Nov 27;191(2):221-4.
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Caution: Product has not been fully validated for medical applications. For research use only.

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