

# Clozapine

**Catalog No: tcsc0644**



## Available Sizes

**Size:** 100mg

**Size:** 500mg

**Size:** 5g



## Specifications

**CAS No:**

5786-21-0

**Formula:**

$C_{18}H_{19}ClN_4$

**Pathway:**

GPCR/G Protein;Neuronal Signaling

**Target:**

Dopamine Receptor;Dopamine Receptor

**Purity / Grade:**

>98%

**Solubility:**

DMSO : 50 mg/mL (152.99 mM; Need ultrasonic)

**Alternative Names:**

HF 1854

**Observed Molecular Weight:**

326.82

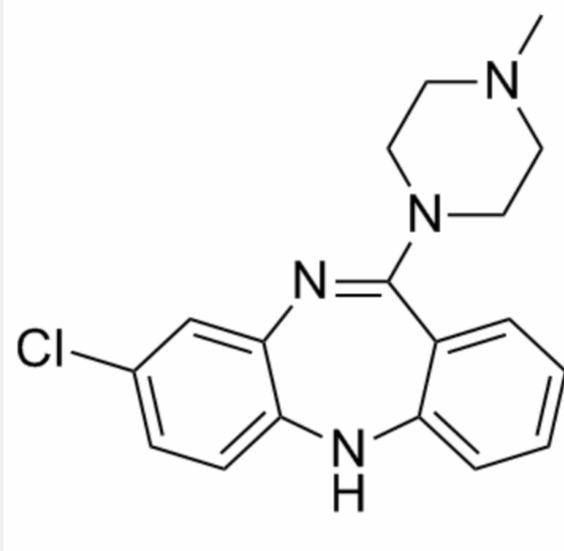
## Product Description

Clozapine (HF 1854) is an antipsychotic used to treat schizophrenia. Clozapine is a potent antagonist of dopamine and a number of other receptors, with a  $K_i$  of 9.5 nM for **M1** receptor.

IC50 & Target:  $K_i$ : 9.5 nM (M1), 51 nM ( $\alpha$ 2-adrenoceptor), 75 nM (D2)<sup>[1]</sup>

**In Vitro:** Clozapine shows the unique property of having antipsychotic action but no Parkinson-like motor side effects. The chemical structure of clozapine facilitates a relatively rapid dissociation from D2 receptors. After short-term occupation of D2 receptors, peak neural activity raises synaptic dopamine, which then displaces clozapine. While clozapine also occupies other types of receptors, they may not have a significant role in preventing parkinsonism. Clozapine is very potent at D2 receptor with a  $K_i$  of 75 nM. Clozapine is also potent at the  $\alpha$ 2-adrenoceptor with a  $K_i$  value of 51 nM<sup>[1]</sup>. Clozapine causes paradoxical downregulation of 5-HT<sub>2A</sub> receptors. Clozapine also binds to 5-HT<sub>6</sub> and 5-HT<sub>7</sub> receptors with high affinity<sup>[2]</sup>.

**In Vivo:** Head-twitch response is decreased and [<sup>3</sup>H]ketanserin binding is downregulated in 1, 7, and 14 days after chronic clozapine. 5-HT<sub>2A</sub> mRNA is reduced 1 day after chronic clozapine. Induction of c-fos, but not egr-1 and egr-2, is rescued 7 days after chronic clozapine<sup>[3]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!