

Product Name: Clozapine

CAS Number: 5786-21-0

IUPAC Name: 8-Chloro-11-(4-methyl-1-piperazinyl)-5*H*-dibenzo[*b,e*][1,4]diazepine

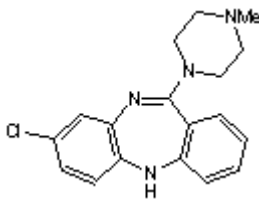
Catalog No.: 0444

Batch No.: 5

EC Number: 227-313-7

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₁₉ClN₄
Batch Molecular Weight: 326.83
Physical Appearance: Yellow solid
Solubility: ethanol to 100 mM
 2eq.HCl to 50 mM with gentle warming
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.33 (Dichloromethane:Methanol [10:1])
Melting Point: Between 182 - 187°C
HPLC: Shows 100% purity
¹H NMR: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen			
Theoretical	66.15	5.86	17.14	0 0 0
Found	66.07	5.72	16.99	0 0 0

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Atypical antipsychotic drug, with a much lower tendency to cause extrapyramidal side effects than conventional neuroleptics. Displays a broad range of pharmacological actions; the antipsychotic effects are thought to be mediated principally by 5-HT_{2A/2C} and dopamine receptor blockade (K_i values are 21, 170, 170, 230 and 330 nM for D₄, D₃, D₁, D₂ and D₅ receptors respectively).

Physical and Chemical Properties:

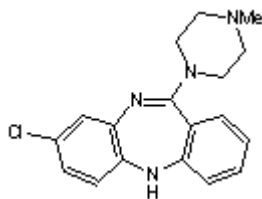
Batch Molecular Formula: C₁₈H₁₉ClN₄

Batch Molecular Weight: 326.83

Physical Appearance: Yellow solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Canton et al (1990) Binding of typical and atypical antipsychotics to 5-HT_{1C} and 5-HT₂ sites: clozapine potently interacts with 5-HT_{1C} sites. *Eur.J.Pharmacol.* **191** 93. PMID: 1982659.

Ellenbroek et al (1991) The involvement of dopamine D₁ and D₂ receptors in the effects of the classical neuroleptic haloperidol and the atypical neuroleptic clozapine. *Eur.J.Pharmacol.* **196** 103. PMID: 1678712.

Seeman and Van Tol (1994) Dopamine receptor pharmacology. *Trends Pharmacol.Sci.* **15** 264. PMID: 7940991.

Jensen et al (2013) Design, synthesis, and pharmacological characterization of *N*- and *O*-substituted 5,6,7,8-tetrahydro-4*H*-isoxazolo [4,5-*d*]diazepin-3-ol analogues: novel 5-HT_{2A}/5-HT_{2C} receptor agonists with pro-cognitive properties. *J.Med.Chem.* **56** 1211. PMID: 23301527.

Storage: Store at RT

Solubility & Usage Info:

ethanol to 100 mM

2eq.HCl to 50 mM with gentle warming

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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