

Certificate of Analysis

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Product Name: Clozapine

Catalog No.: 0444

Batch No.: 6

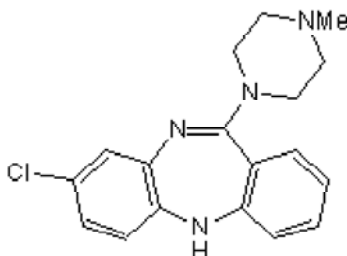
CAS Number: 5786-21-0

EC Number: 227-313-7

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₈ H ₁₉ ClN ₄
Batch Molecular Weight:	326.83
Physical Appearance:	Yellow solid
Solubility:	DMSO to 100 mM ethanol to 50 mM 2eq.HCl to 50 mM with gentle warming
Storage:	Store at RT
Batch Molecular Structure:	



2. ANALYTICAL DATA

Melting Point:	Between 183 - 185°C
HPLC:	Shows 99.3% purity
¹H NMR:	Consistent with structure
Mass Spectrum:	Consistent with structure
Microanalysis:	
	Carbon Hydrogen Nitrogen
	Theoretical 66.15 5.86 17.14
	Found 66.55 5.89 17.12

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

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

Description:

Clozapine is an 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:

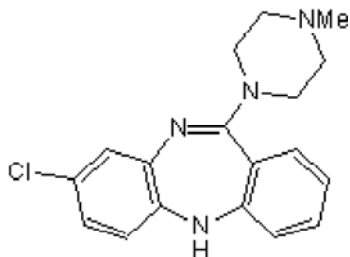
Batch Molecular Formula: C₁₈H₁₉ClN₄

Batch Molecular Weight: 326.83

Physical Appearance: Yellow solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 50 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.

References:

Jensen et al (2013) Design, synthesis, and pharmacological characterization of N- and O-substituted 5,6,7,8-tetrahydro-4H-isoxazolo [4,5-d]diazepin-3-ol analogues: novel 5-HT_{2A/5-HT2C} receptor agonists with pro-cognitive J.Med.Chem. **56** 1211. PMID: 23301527.

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

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

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