

Certificate of Analysis

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Product Name: Deschloroclozapine

Catalog No.: 7193

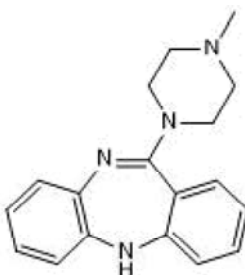
Batch No.: 1

CAS Number: 1977-07-7

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₂₀N₄·¼H₂O
Batch Molecular Weight: 296.89
Physical Appearance: Yellow solid
Solubility: DMSO to 100 mM
 ethanol to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	72.82	6.96	18.87
Found	72.95	6.89	19.08

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

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Description:

High affinity and highly potent activator of muscarinic DREADDs (K_i values are 6.3 nM for hM₃D_q and 4.2 nM for hM₄D_i, in vitro; EC₅₀ values are 0.13 nM for hM₃D_q and 0.081 nM for hM₄D_i, in vitro). Derivative of clozapine (Cat. No. 0444). Exhibits 100-fold greater affinity for hM₃D_q and hM₄D_i compared to clozapine N-oxide (CNO; Cat. No. 4936), and 50-fold greater affinity compared to DREADD agonist 21 (Cat. No. 5548). Displays low 'off-target' receptor binding (K_i >100 nM at majority of GPCRs, ion channels and transporters tested). Displays rapid (approx. 10 minutes after i.p injection) binding and activation of hM₃D_q and hM₄D_i ... Please see product datasheet on www.tocris.com for full description.

Physical and Chemical Properties:

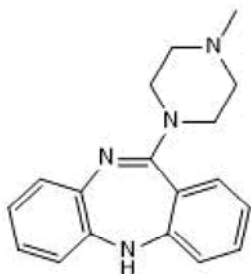
Batch Molecular Formula: C₁₈H₂₀N₄·¼H₂O

Batch Molecular Weight: 296.89

Physical Appearance: Yellow solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Nagai et al (2020) Deschloroclozapine, a potent and selective chemogenetic actuator enables rapid neuronal and behavioral modulations in mice and monkeys *Nat.Neurosci.* **23** 1157. PMID: 32632286.

Storage: Store at RT

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 100 mM

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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