

**Product Name:** Deschloroclozapine

**Catalog No.:** 7193

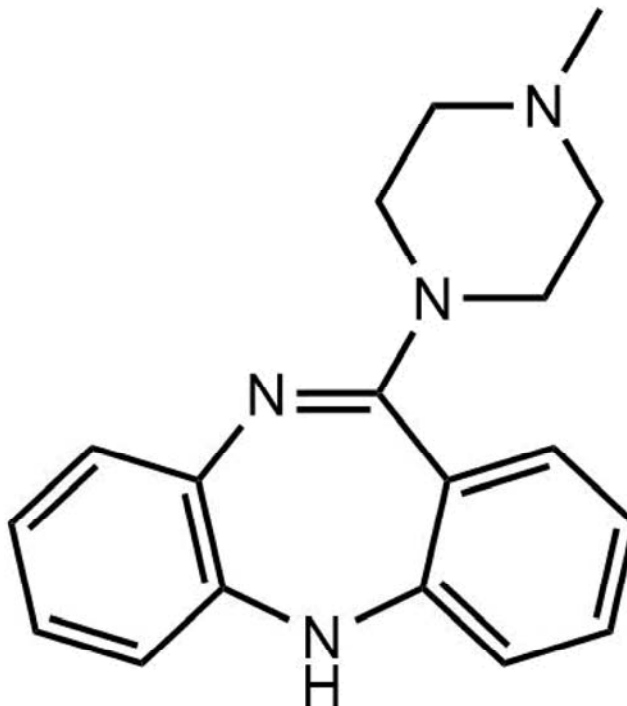
**Batch No.:** 2

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:** C<sub>18</sub>H<sub>20</sub>N<sub>4</sub>  
**Batch Molecular Weight:** 292.39  
**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 99.7% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	73.94	6.89	19.16
Found	73.76	6.92	19.16

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**Description:**

Deschloroclozapine is a high affinity and highly potent activator of muscarinic DREADDs ( $K_i$  values are 6.3 nM for  $hM_3D_q$  and 4.2 nM for  $hM_4D_i$ , in vitro;  $EC_{50}$  values are 0.13 nM for  $hM_3D_q$  and 0.081 nM for  $hM_4D_i$ , in vitro). Derivative of clozapine (Cat. No. 0444). Exhibits 100-fold greater affinity for  $hM_3D_q$  and  $hM_4D_i$  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 activa... Please see product specific page on [www.tocris.com](http://www.tocris.com) for full description.

**Physical and Chemical Properties:**

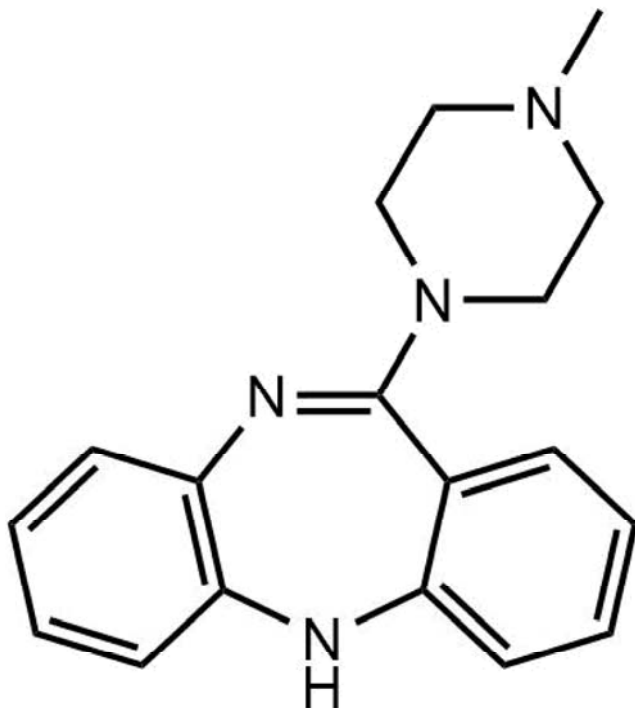
Batch Molecular Formula:  $C_{18}H_{20}N_4$

Batch Molecular Weight: 292.39

Physical Appearance: Yellow solid

**Minimum Purity:**  $\geq 98\%$

**Batch Molecular Structure:**



**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.

**References:**

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~~Nagai et al (2020) Deschloroclozapine, a potent and selective chemogenetic actuator enables rapid neuronal and behavioral~~  
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[info@bio-techne.com](mailto:info@bio-techne.com)

Tel: (800) 343 7475

[info.cn@bio-techne.com](mailto:info.cn@bio-techne.com)

Tel: +44 (0)1235 529449

[www.tocris.com/distributors](http://www.tocris.com/distributors)

[techsupport@bio-techne.com](mailto:techsupport@bio-techne.com)

Tel: +86 (21) 52380373

Tel: +1 612 379 2956