**Product Name**: N-Desmethylclozapine

**Catalog Number**: T5158

**CAS Number**: 6104-71-8

**Molecular Formula**: C17H17ClN4

**Molecular Weight**: 312.80

**Description**: N-Desmethylclozapine is an antagonist of serotonin (5-HT) receptor subtype 5-HT2C (IC50: 7.1 nM). It also is an antagonist at dopamine D4 receptors, an agonist at δ-opioid receptors.

**Storage**: 2 years -80°C in solvent; 3 years -20°C powder;

**Solubility**

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Solubility</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>30 mg/mL</td>
</tr>
<tr>
<td>Ethanol</td>
<td>30 mg/mL</td>
</tr>
<tr>
<td></td>
<td>(&lt; 1 mg/ml refers to the product slightly soluble or insoluble)</td>
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</tbody>
</table>

**Receptor (IC50)**

<table>
<thead>
<tr>
<th>Receptor</th>
<th>IC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-HT2C</td>
<td>7.1 nM</td>
</tr>
</tbody>
</table>

**In vitro Activity**

N-desmethylclozapine antagonized 5-HT-stimulated phosphoinositide hydrolysis with IC50 values of 29.4 nM [1]. N-desmethylclozapine exhibited slight agonistic effects on the M1 mAChR and agonistic properties at the 5-HT1A receptor in the cerebral cortex and hippocampus. This compound also behaved as an agonist at the δ-opioid receptor in the cerebral cortex and the striatum [2]. Muscarinic agonist activity of N-desmethylclozapine was higher than that of clozapine, higher in excitatory neurons than in inhibitory neurons, sensitive to pirenzepine, and partially masked when co-applied with clozapine [3].

**In vivo Activity**

NDMC (3-30mg/kg) decreased exploratory locomotor activity in a dose-dependent manner, and the reduced locomotor activity was significantly antagonized by scopolamine at doses of 0.1 and 0.3mg/kg. NDMC (10-30mg/kg) dose-dependently increased prepulse inhibition (PPI) in DBA/2J mice [4].

**Animal Experiment**

**Animal Model:**

**Reference**


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