Dicyclomine

Cat. No.: HY-B1339A

CAS No.: 77-19-0

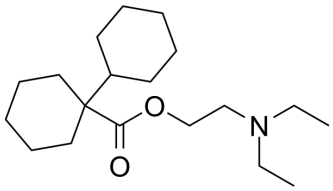
Molecular Formula: $C_{19}H_{35}NO_2$

Molecular Weight: 309.49

Target: mAChR

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Dicyclomine (Dicycloverine) is a potent and orally active muscarinic cholinergic receptors antagonist. Dicyclomine (Dicycloverine) shows high affinity for muscarinic M1 receptor subtype (K_i=5.1 nM) and M2 receptor subtype (K_i=54.6 nM) in brush-border membrane and basal plasma membranes, respectively[1]. Dicyclomine is an antispasmodic agent and relieves smooth muscle spasm of the gastrointestinal tract in vivo[2].

In Vivo

Dicyclomine (Dicycloverine) (intraperitoneal injection; 8 mg/kg; daily) exacerbates the cognitive impairments in all the measurements. In addition, the memory impairments are worse in dicyclomine-treated 3xTg-AD mice compared to dicyclomine-treated NonTg mice[2].

Dicyclomine (Dicycloverine) (intraperitoneal injection; 2.0, 4.0, and 8.0 mg/kg; 7 days) produces a highly significant effect on performance in the paired-associates learning (PAL) task in mice.And systemic treatment at lower doses show behavioral impairments in mice in spatial tasks[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57Bl/6 mice[1]
Dosage:	2.0, 4.0, and 8.0 mg/kg
Administration:	Intraperitoneal injection; daily; 7 days
Result:	Produced impairments due to actions of the agent outside of the hippocampus.

REFERENCES

[1]. Antonella Caccamo, et al. M1 Receptors Play a Central Role in Modulating AD-like Pathology in Transgenic Mice. 2006 Mar 2;49(5):671-82.doi: 10.1016/j.neuron.2006.01.020.

[2]. Antonella Caccamo, et al. M1 Receptors Play a Central Role in Modulating AD-like Pathology in Transgenic Mice. 2006 Mar 2;49(5):671-82.doi: 10.1016/j.neuron.2006.01.020.

[3]. Susan J Bartko,et al. A Computer-Automated Touchscreen Paired-Associates Learning (PAL) Task for Mice: Impairments Following Administration of Scopolamine or Dicyclomine and Improvements Following Donepezil.Psychopharmacology (Berl). 2011 Mar;214(2):537-48.

Caution: Product has not been fully validated for medical applications. For research use only.

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