Dicyclomine-d4

Cat. No.: HY-B1339AS

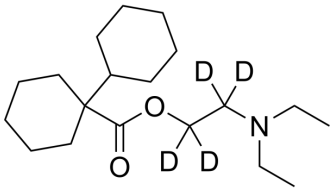
Molecular Formula: $C_{19}H_{31}D_4NO_2$

Molecular Weight: 313.51

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-d_4 is the deuterium labeled Dicyclomine[1]. Dicyclomine (Dicycloverine) is a potent and orally active muscarinic cholinergic receptors antagonist. Dicyclomine (Dicycloverine) shows high affinity for muscarinic M1 receptor subtype (Ki=5.1 nM) and M2 receptor subtype (Ki=54.6 nM) in brush-border membrane and basal plasma membranes, respectively[2]. Dicyclomine is an antispasmodic agent and relieves smooth muscle spasm of the gastrointestinal tract in vivo[3].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

[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]. Antonella Caccamo, et al. M1 Receptors Play a Central Role in Modulating AD-like Pathology in Transgenic Mice. 2006 Mar 249(5):671-82.doi: 10.1016/j.neuron.2006.01.020.

[4]. 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 Mar214(2):537-48.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA