

Product Data Sheet

Product Name: Diphenidol-d10

Cat. No.: GC49129

Chemical Properties

Cas. No. 2928181-97-7

SMILES OC(C1=CC=CC=C1)(CCCN2C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C2([2H])([2H])[2H])C3=CC=CC=C3

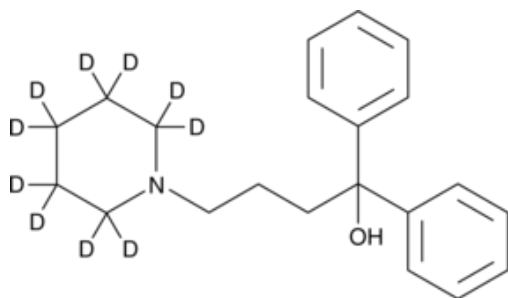
Formula C₂₁H₁₇D₁₀NO M.Wt 319.5

Solubility DMSO: soluble, Methanol: soluble Storage -20°C

General For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution: ship with blue ice All other available size: ship with RT, or Condition blue ice upon request.

Structure



Background

Diphenidol-d₁₀ is intended for use as an internal standard for the quantification of diphenidol by GC- or LC-MS. Diphenidol is an antagonist of muscarinic acetylcholine receptors (mAChRs; K_is = 0.43, 2.8, 1.1, 0.91, and 1.28 μM in CHO cell membranes expressing M₁₋₅ receptors, respectively).¹ It also inhibits K_v channels in Neuro2A cells (IC₅₀ = 28.2 μM), as well as L-type voltage-gated calcium channels in differentiated NG 108-15 cells in a concentration-dependent manner.² Microiontophoretic application of diphenidol inhibits rotation-induced firing of medial vestibular nucleus neurons in a cat model of vertigo.³ Diphenidol (3.2 mg/kg, i.v.) prevents apomorphine-induced emesis in dogs.⁴ Formulations containing diphenidol have been used in the treatment of vertigo and as antiemetics.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

1.Varoli, L., Andreani, A., Burnelli, S., et al.Diphenidol-related diamines as novel muscarinic M4 receptor antagonistsBioorg. Med. Chem. Lett.18(9)2972-2976(2008) 2.Leung, Y.M., Wong, K.L., Cheng, K.S., et al.Inhibition of voltage-gated K⁺ channels and Ca²⁺ channels by diphenidolPharmacol. Rep.64(3)739-744(2012) 3.Kawabata, A., Sasa, M., Kishimoto, T., et al.Effects of anti-vertigo drugs on medial vestibular nucleus neurons activated by horizontal rotationJpn. J. Pharmacol.55(1)101-106(1991) 4.Nakayama, H., Yamakuni, H., Nakayama, A., et al.Diphenidol has no actual broad antiemetic activity in dogs and ferretsJ. Pharmacol. Sci.96(3)301-306(2004)

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA