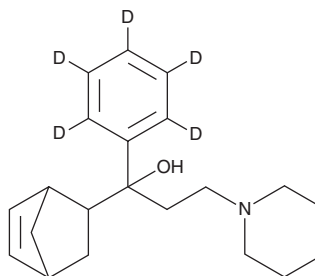


PRODUCT INFORMATION



Biperiden-d₅ Item No. 33469

CAS Registry No.: 2938691-75-7
Formal Name: α-bicyclo[2.2.1]hept-5-en-2-yl-(α-phenyl-d₅)-1-piperidinepropanol
MF: C₂₁H₂₄D₅NO
FW: 316.5
Chemical Purity: ≥98% (Biperiden)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Biperiden-d₅ is intended for use as an internal standard for the quantification of biperiden by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Biperiden-d₅ is supplied as a solid. A stock solution may be made by dissolving the biperiden-d₅ in the solvent of choice, which should be purged with an inert gas. Biperiden-d₅ is soluble in acetonitrile, DMSO, and methanol.

Description

Biperiden is an antagonist of muscarinic acetylcholine receptors (mAChRs; IC₅₀s = 0.48, 6.3, 3.9, 2.4, and 6.3 nM for M₁₋₅ receptors, respectively).¹ It increases spontaneous and electrically evoked dopamine release and electrically evoked acetylcholine (ACh) release from rabbit caudate nucleus slices preincubated with dopamine.² Biperiden (10 μM) also inhibits NMDA-induced ACh release in rabbit caudate nucleus slices.³ Biperiden (0.01-1.0 mg/kg) reduces physostigmine-induced tremor in rats.⁴ Formulations containing biperiden have been used as an adjuvant treatment for Parkinson's disease.

References

1. Bolden, C., Cusack, B., and Richelson, E. Antagonism by antimuscarinic and neuroleptic compounds at the five cloned human muscarinic cholinergic receptors expressed in Chinese hamster ovary cells. *J. Pharmacol. Exp. Ther.* **260**(2), 576-580 (1992).
2. Jackisch, R., Huang, H.Y., Reimann, W., et al. Effects of the antiparkinsonian drug budipine on neurotransmitter release in central nervous system tissue *in vitro*. *J. Pharmacol. Exp. Ther.* **264**(2), 889-898 (1993).
3. Jackisch, R., Kruchen, A., Saueremann, W., et al. The antiparkinsonian drugs budipine and biperiden are use-dependent (uncompetitive) NMDA receptor antagonists. *Eur. J. Pharmacol.* **264**(2), 207-211 (1994).
4. Gothóni, P., Lehtinen, M., and Fincke, M. Drugs for Parkinson's disease reduce tremor induced by physostigmine. *Naunyn Schmiedebergs Arch. Pharmacol.* **323**(3), 205-210 (1983).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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