
Product Data Sheet

Product Name: Biperiden HCl

Cat. No.: GC10621

Chemical Properties

Cas. No. 1235-82-1

Chemical Name 1-(5-bicyclo[2.2.1]hept-2-enyl)-1-phenyl-3-piperidin-1-ylpropan-1-ol;hydrochloride

SMILES C1CCN(CC1)CCC(C2CC3CC2C=C3)(C4=CC=CC=C4)O.ClFormula $C_{21}H_{30}ClNO$ M.Wt 347.92Solubility $\geq 8.7\text{mg/mL}$ in DMSO Storage Store at -20°C General tips For obtaining a higher solubility , please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

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

Structure **Protocol****Animal experiment :**

Animal models Male Lister Hooded rats model;

Dosage form 3, and 10 mg/kg; intraperitoneal injection; for 90 min; or 4 mg, oral administration

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

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Applications

Biperiden HCl acted as cognition impairer in rats and Biperiden (10 mg/kg) induced side-effects, with rats taking more time to start the task [1]. Moreover, oral doses of 4 mg of Biperiden HCl reached a Cmax of approximately 4 ng/mL [2].

Other notes

Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

References:

1. Szczodry, O., van der Staay, F. J. and Arndt, S. S. (2014) Modelling Alzheimer-like cognitive deficits in rats using biperiden as putative cognition impairer. Behav Brain Res. 274, 307-311
2. Brocks, D. R. (1999) Anticholinergic drugs used in Parkinson's disease: An overlooked class of drugs from a pharmacokinetic perspective. J Pharm Pharm Sci. 2, 39-46

Background

Biperiden HCl is an anticholinergic drug [1].

As an anticholinergic drug, biperiden is first used in the treatment of Parkinson's disease. It is a competitive antagonist of muscarinic receptor. It has been believed that in the patients of PD, a reduction of intranigral dopamine concentrations results in a relative

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imbalance between the dopaminergic and cholinergic neurological pathways. The anticholinergics can correct the imbalance through reducing the degree of neurotransmission mediated by neostriatal acetylcholine. Biperiden is also used to treat extrapyramidal side effects of antipsychotic drugs. In addition, the misuse of biperiden causing delirium has been reported in several clinical settings [1, 2].

References:

- [1] Brocks D R. Anticholinergic drugs used in Parkinson's disease: an overlooked class of drugs from a pharmacokinetic perspective. J Pharm Pharm Sci, 1999, 2(2): 39-46.
- [2] Espi Martinez F, Espi Forcen F, Shapov A, et al. Biperiden Dependence: Case Report and Literature Review. Case reports in psychiatry, 2012, 2012.

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