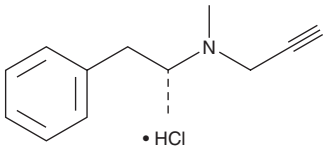
PRODUCT INFORMATION

R-(-)-Deprenyl (hydrochloride)

Item No. 15046

CAS Registry No.: 14611-52-0
Formal Name: (R)-N,α-dimethyl-N-2-propyn-1-yl-benzeneethanamine, monohydrochloride
Synonyms: L-Deprenyl, Selegiline
MF: $C_{13}H_{17}N \bullet HCl$
FW: 223.7
Purity: ≥98%
Supplied as: A crystalline 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

R-(-)-Deprenyl (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the R-(-)-deprenyl (hydrochloride) in the solvent of choice. R-(-)-Deprenyl (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of R-(-)-deprenyl (hydrochloride) in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of R-(-)-deprenyl (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of R-(-)-deprenyl (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Monoamine oxidase (MAO) inhibitors have utility in ameliorating a variety of neurological conditions, including depression.[1] R-(-)-Deprenyl is a selective, reversible inhibitor of MAO-B (K_i = 0.091 µM) over MAO-A (K_i = 9.06 µM).[2,3] In addition to finding use against depression, R-(-)-deprenyl provides neuroprotection which may be relevant to Parkinson's disease, Alzheimer's disease, Huntington's disease, and stroke.[1,4] The ability of this compound to slow the progression of disability in early Parkinson's disease may be independent of its effects on MAO activity.[4]

References

1. Wimbiscus, M., Kostenko, O., and Malone, D. MAO inhibitors: Risks, benefits, and lore. *Cleve. Clin. J. Med.* **77(12)**, 859-882 (2010).
2. Jagrat, M., Behera, J., Yabanoglu, S., *et al.* Pyrazoline based MAO inhibitors: Synthesis, biological evaluation and SAR studies. *Bioorg. Med. Chem. Lett.* **21(14)**, 4296-4300 (2011).
3. La Regina, G., Silvestri, R., Gatti, V., *et al.* Synthesis, structure-activity relationships and molecular modeling studies of new indole inhibitors of monoamine oxidases A and B. *Bioorg. Med. Chem.* **16(22)**, 9729-9740 (2008).
4. Hara, M.R., Thomas, B., Cascio, M.B., *et al.* Neuroprotection by pharmacologic blockade of the GAPDH death cascade. *Proc. Natl. Acad. Sci. USA* **103(10)**, 3887-3889 (2006).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM