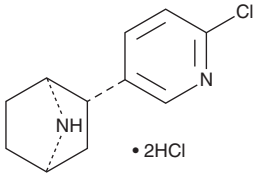
PRODUCT INFORMATION

(±)-Epibatidine (hydrochloride)

Item No. 31193

CAS Registry No.: 162885-01-0
Formal Name: (1R,2R,4S)-*rel*-2-(6-chloro-3-pyridinyl)-7-azabicyclo[2.2.1]heptane, dihydrochloride
MF: $C_{11}H_{13}ClN_2 \bullet 2HCl$
FW: 281.6
Purity: ≥98%
UV/Vis.: λ_{max}: 215, 270 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



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

Laboratory Procedures

(±)-Epibatidine (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the (±)-epibatidine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. (±)-Epibatidine (hydrochloride) is soluble in the organic solvent DMSO.

Description

(±)-Epibatidine is an alkaloid that has been found in Ecuadoran poison frog (*E. tricolor*) skin extracts and an agonist of α4β2 subunit-containing nicotinic acetylcholine receptors (nAChRs; K_i = 43 pM).[1,2] It is selective for α4β2 subunit-containing nAChRs over α7 nAChRs (K_i = 230 nM).[1] (±)-Epibatidine enhances $^{86}Rb^+$ flux in IMR-32 cells (EC_{50} = 7 nM) and induces dopamine release from rat striatal slices (EC_{50} = 0.4 nM), effects that can be reduced by the nAChR antagonist mecamylamine (Item No. 14602). *In vivo*, (±)-epibatidine induces analgesia in the hot plate test and the Straub-tail response in mice (ED_{50}s = 0.005 and 0.02 mg/kg, respectively).[2]

References

1. Sullivan, J.P., Decker, M.W., Brioni, J.D., *et al.* (+/-)-Epibatidine elicits a diversity of in vitro and in vivo effects mediated by nicotinic acetylcholine receptors. *J. Pharmacol. Exp. Ther.* **271(2)**, 624-631 (1994).
2. Spande, T.F., Garraffo, H.M., Edwards, M.W., *et al.* Epibatidine: A novel (chloropyridyl)azabicycloheptane with potent analgesic activity from an Ecuadoran poison frog. *J. Am. Chem. Soc.* **114(9)**, 3475-3478 (1992).

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