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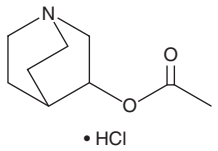
PRODUCT INFORMATION

Aceclidine (hydrochloride)

Item No. 17910

CAS Registry No.: 6109-70-2
Formal Name: 1-azabicyclo[2.2.2]octan-3-ol, 3-acetate, monohydrochloride
MF: $C_9H_{15}NO_2 \bullet HCl$
FW: 205.7
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that aceclidine (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

Aceclidine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the aceclidine (hydrochloride) in the solvent of choice. Aceclidine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of aceclidine (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 aceclidine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of aceclidine (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

Aceclidine is an agonist of muscarinic receptors (EC_{50} = 1.8-17 µM for human M_2).[1] It induces contraction of iris sphincter muscle, resulting in miosis.[2,3] Aceclidine has applications in glaucoma therapy and in basic research regarding muscarinic receptor signaling.[1,2,4]

References

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3. Smith, S.A. and Smith, S.E. Factors determining the potency of cholinomimetic miotic drugs and their effect upon the light reflex in man. *Br. J. Clin. Pharmac.* **6**, 149-153 (1978).
4. Shannon, H.E., Hart, J.C., Bymaster, F.P., *et al.* Muscarinic receptor agonists, like dopamine receptor antagonist antipsychotics, inhibit conditioned avoidance response in rats. *J. Pharmacol. Exp. Ther.* **290(2)**, 901-907 (1999).

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