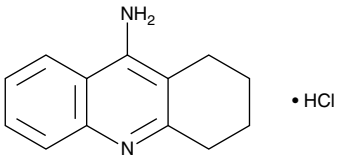
Product Information

Tacrine (hydrochloride)

Item No. 70240

CAS Registry No.: 1684-40-8
Formal Name: 1,2,3,4-tetrahydro-9-acridinamine, monohydrochloride
Synonyms: Cognex; Romotal
MF: $C_{13}H_{14}N_2 \cdot HCl$
FW: 234.7
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 243, 326, 339 nm



Laboratory Procedures

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

Tacrine (hydrochloride) is supplied as a crystalline solid. Organic solvent-free aqueous solutions of tacrine (hydrochloride) can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of tacrine (hydrochloride) in PBS (pH 7.2) is approximately 16 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Tacrine is a derivative of aminoacridine which functions as an inhibitor of both acetylcholinesterase and butyrylcholinesterase.[1] It has been used clinically in the treatment of Alzheimer's disease.[2,3] Tacrine also inhibits the uptake of serotonin and noradrenaline in rat cerebral cortex[2,4] and decreases depolarization-induced calcium influx through L-type calcium channels in SN56 neuronal cells.[5]

References

1. Crismon, M.L. Pharmacokinetics and drug interactions of cholinesterase inhibitors administered in Alzheimer's disease. *Pharmacotherapy* **18**, 47-54 (1998).
2. Drukarch, B., Leysen, J.E., and Stoof, J.C. Further analysis of the neuropharmacological profile of 9-amino-1,2,3,4-tetrahydroacridine (THA), an alleged drug for the treatment of Alzheimer's disease. *Life Sci.* **42**, 1011-1017 (1988).
3. Giacobini, E. Cholinesterase inhibitors for Alzheimer's disease therapy: From tacrine to future applications. *Neurochem. Int.* **32**, 413-419 (1998).
4. McKenna, M.T., Proctor, G.R., Young, L.C., *et al.* Novel tacrine analogues for potential use against Alzheimer's disease: Potent and selective acetylcholinesterase inhibitors and 5-HT uptake inhibitors. *J. Med. Chem.* **40**, 3516-3523 (1997).
5. Dolezal, V., Lisá, V., and Tucek, S. Effect of tacrine on intracellular calcium in cholinergic SN56 neuronal cells. *Brain Res.* **769**, 219-224 (1997).

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