

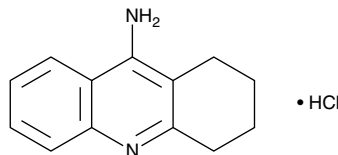
Product Information



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: C₁₃H₁₄N₂ • 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).

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

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Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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