Lipocrine
Catalog No. 10006733

Formal Name: 1,2,3,4-tetrahydro-6-chloro-9-(N-D.L-α-lipooylamidopropy1)-amino-acridine

MF: C₂₂H₅₃ClN₃Os₂
FW: 478.1
Purity: ≥98%

Laboratory Procedures
For long term storage, we suggest that lipocrine be stored as supplied at -20°C. It should be stable for at least one year.
Lipocrine is supplied as a solution in methylene chloride:ethanol. To change the solvent, simply evaporate the methylene chloride:ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of lipocrine in these solvents is approximately 30 mg/ml.

Lipocrine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methylene chloride:ethanol solution of lipocrine should be diluted with the aqueous buffer of choice. Lipocrine has a solubility of approximately 0.25 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Alzheimer’s Disease (AD) is a leading cause of dementia characterized by massive deposits of aggregated amyloid β (Aβ) and neurofibrillar tangles in the brain. Several inhibitors of acetylcholinesterase (AChE) such as tacrine, donepezil, rivastigmine, and galantamine, enhance cholinergic function and have been approved for the symptomatic treatment of AD. Lipocrine is a hybrid compound of lipoic acid and the AChE inhibitor tacrine. It is a potent, mixed-type inhibitor of AChE that is at least 1,600-fold more potent than tacrine, exhibiting an IC₅₀ of 0.25 nM. Lipocrine also inhibits AChE-induced Aβ aggregation with an IC₅₀ of 45 μM, making it only 3-fold less effective than propidium, the most potent inhibitor of this process, and significantly more potent than all other AChE inhibitors ever tested. The lipoic acid component of the molecule adds beneficial antioxidant capacity, inhibiting formation of reactive oxygen species by 64% at a concentration of 50 μM.

References

Related Products
Tacrine (hydrochloride) - Cat. No. 70240 • DL-α-Lipoic Acid - Cat. No. 10005728 • δα(7)-Tacrine - Cat. No. 10005836

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.

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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.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

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