

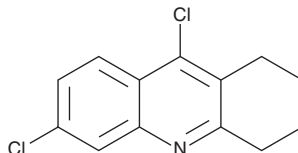
PRODUCT INFORMATION



6,9-Dichloro-1,2,3,4-tetrahydroacridine

Item No. 30502

CAS Registry No.: 5396-25-8
Synonyms: NSC 1227
MF: $C_{13}H_{11}Cl_2N$
FW: 252.1
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 234 nm
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 2 years



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

Laboratory Procedures

6,9-Dichloro-1,2,3,4-tetrahydroacridine is supplied as a crystalline solid. A stock solution may be made by dissolving the 6,9-dichloro-1,2,3,4-tetrahydroacridine in the solvent of choice, which should be purged with an inert gas. 6,9-Dichloro-1,2,3,4-tetrahydroacridine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 6,9-dichloro-1,2,3,4-tetrahydroacridine in ethanol and DMSO is approximately 1 mg/ml and approximately 5 mg/ml in DMF.

6,9-Dichloro-1,2,3,4-tetrahydroacridine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 6,9-dichloro-1,2,3,4-tetrahydroacridine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 6,9-Dichloro-1,2,3,4-tetrahydroacridine has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

6,9-Dichloro-1,2,3,4-tetrahydroacridine is a synthetic intermediate in the synthesis of tacrine-based acetylcholinesterase (AChE) inhibitors.¹ It is also an intermediate in the synthesis of multifunctional tacrine hybrids that possess radical scavenging, amyloid- β aggregation inhibitory, and/or β -secretase 1 (BACE1) inhibitory activities in addition to their activity as AChE inhibitors.^{2,3}

References

1. Recanatini, M., Cavalli, A., Belluti, F., *et al.* SAR of 9-amino-1,2,3,4-tetrahydroacridine-based acetylcholinesterase inhibitors: Synthesis, enzyme inhibitory activity, QSAR, and structure-based CoMFA of tacrine analogues. *J. Med. Chem.* **43(10)**, 2007-2018 (2000).
2. Digiacoimo, M., Chen, Z., Wang, S., *et al.* Synthesis and pharmacological evaluation of multifunctional tacrine derivatives against several disease pathways of AD. *Bioorg. Med. Chem. Lett.* **25(4)**, 807-810 (2015).
3. Li, S.Y., Jiang, N., Xie, S.S., *et al.* Design, synthesis and evaluation of novel tacrine-rhein hybrids as multifunctional agents for the treatment of Alzheimer's disease. *Org. Biomol. Chem.* **12(5)**, 801-814 (2014).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM