

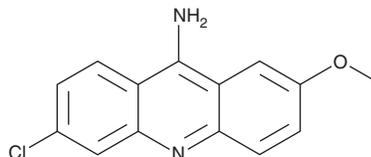
PRODUCT INFORMATION



9-Amino-6-chloro-2-methoxyacridine

Item No. 22439

CAS Registry No.: 3548-09-2
Formal Name: 6-chloro-2-methoxy-9-acridinamine
Synonyms: ACMA, NSC 15300
MF: C₁₄H₁₁ClN₂O
FW: 258.7
Purity: ≥98%
UV/Vis.: λ_{max}: 218, 277, 340, 412, 435 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

9-Amino-6-chloro-2-methoxyacridine (ACMA) is supplied as a crystalline solid. A stock solution may be made by dissolving the ACMA in the solvent of choice, which should be purged with an inert gas. ACMA is soluble in the organic solvent methanol, at a concentration of approximately 1 mg/ml. ACMA is miscible in water. We do not recommend storing the aqueous solution for more than one day.

Description

9-Amino-6-chloro-2-methoxyacridine (ACMA) is a cell-permeable fluorescent probe that intercalates into DNA.¹ It selectively binds to poly(dA-dT) sequences with the fluorescence lifetime decreasing with incorporation of guanosine. It is used for labeling DNA and displays excitation/emission spectra of 411/475 nm, respectively.² ACMA fluorescence is pH-dependent and is quenched when a pH gradient is established, a property that has been utilized in animal- and plant-based studies.³⁻⁵ It also inhibits acetylcholinesterase with a Ki value of 49 nM.⁶

References

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2. Härd, T., Fan, P., Magde, D., *et al.* On the flexibility of DNA: Time-resolved fluorescence polarization of intercalated quinacrine and 9-amino-6-chloro-2-methoxyacridine. *J. Phys. Chem.* **93(10)**, 4338-4345 (1989).
3. Baracca, A., Bucchi, L., Ghelli, A., *et al.* Protonophoric activity of NADH coenzyme Q reductase and ATP synthase in coupled submitochondrial particles from horse platelets. *Biochem. Biophys. Res. Commun.* **235(3)**, 469-473 (1997).
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6. Bencharit, S., Morton, C.L., Hyatt, J.L., *et al.* Crystal structure of human carboxylesterase 1 complexed with the Alzheimer's drug tacrine: From binding promiscuity to selective inhibition. *Chem. Biol.* **10(4)**, 341-349 (2003).

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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