

9-氨基-6-氯-2-甲氧基吖啶 9-Amino-6-chloro-2-methoxyacridine (ACMA)

产品编号	产品名称	包装规格
NBS5825-5mg	9-Amino-6-chloro-2-methoxyacridine (ACMA) 9-氨基-6-氯-2-甲氧基吖啶	5mg
NBS5825-10mg	9-Amino-6-chloro-2-methoxyacridine (ACMA) 9-氨基-6-氯-2-甲氧基吖啶	10mg

产品简介:

9-氨基-6-氯-2-甲氧基吖啶 (9-Amino-6-chloro-2-methoxyacridine, ACMA) 是一种细胞通透性的荧光探针, 一种 DNA 嵌入剂, 选择性结合 poly (dA-dT)序列, 随着插入鸟苷荧光寿命逐渐减少。ACMA 能用于 DNA 标记, 激发/发射波长为 411/475nm, 可采用大多数紫外光源激发, 因而兼容更短和更长波长的染料。ACMA 荧光依赖 pH, 并在形成 pH 梯度时淬灭, 这一特征被用于基于动物和植物的研究中。ACMA 也抑制胆碱酯酶活性, K_i 为 49nM。

产品特性:

- 1) CAS NO: 3548-09-2
- 2) 化学名: 6-chloro-2-methoxy-9-acridinamine
- 3) 同义名: ACMA, NSC 15300
- 4) 分子式: $C_{14}H_{11}ClN_2O$
- 5) 分子量: 258.7
- 6) 外观: 固体
- 7) 纯度: $\geq 98\%$
- 8) Ex/Em: 411/475nm
- 9) 溶解性: 溶于甲醇

保存条件:

-20°C 避光干燥保存, 2 年有效。

产品使用： 染色示例（来自文献，仅作参考）

Ref 1) Jin, R., He, S., Black, K.A. et al. Ion currents through Kir potassium channels are gated by anionic lipids. Nat Commun 13, 490(2022).

<https://doi.org/10.1038/s41467-022-28148-4>

Assay: Liposomal fluorimetric assay

Method: The pH sensitive dye 9-amino-chloro-2-methoxyacridine (ACMA) was added to a final concentration of 2 μ M from a freshly prepared 200 μ M stock in 100% (v/v) ethanol. Fluorescence emission at 483 nm (excitation at 419 nm) was monitored over time with pathlengths of 2 and 10 mm for excitation and emission, respectively.

Ref 2) Furrer EM, Ronchetti MF, Verrey F, Pos KM. Functional characterization of a NapA Na(+)/H(+) antiporter from Thermus thermophilus. FEBS Lett. 2007 Feb 6;581(3):572-8. doi: 10.1016/j.febslet.2006.12.059. Epub 2007 Jan 17. PMID: 17254570.

Assay: 9-Amino-6-chloro-2-methoxyacridine (ACMA) fluorescence assay to detect Na⁺/H⁺ antiport activity

Method: Na⁺/H⁺ antiporter activity was measured in a thermostated cuvette containing a continuously stirred suspension of 2 ml of 10 mM Tris-HEPES at various pH (6.0–8.0), 140 mM choline chloride, 5 mM MgCl₂, 2 μ M ACMA and membranes (200 μ g of protein). The changes in pH inside the membranes were monitored by following the (de)quenching of ACMA fluorescence (excitation 410 nm; emission 480 nm).

注意事项：

1. 荧光染料均存在淬灭问题，请尽量注意避光，以减缓荧光淬灭。
2. 为了您的安全和健康，请穿实验服并戴一次性手套操作。

本产品仅用于生命科学研究，不得用于医学诊断及其它用途！