Acridine Orange zinc chloride salt

Cat. No.: HY-D0942

CAS No.: 10127-02-3

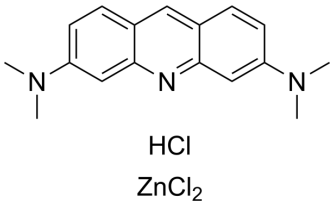
Molecular Formula: $C_{17}H_{20}Cl_3N_3Zn$

Molecular Weight: 438.1

Target: Parasite; Fluorescent Dye; DNA Stain

Pathway: Anti-infection; Others; Cell Cycle/DNA Damage

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (228.26 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2826 mL	11.4129 mL	22.8258 mL
	5 mM	0.4565 mL	2.2826 mL	4.5652 mL
	10 mM	0.2283 mL	1.1413 mL	2.2826 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Acridine Orange (Euchrysine 3RX) zinc chloride salt is a cell-penetrable nucleic acid-selective fluorescent dye. Acridine Orange zinc chloride salt produces orange fluorescence when it binds to ssDNA or RNA, and green fluorescence when it binds to dsDNA (Ex: 488 nM; Em: green fluorescence at 530 nm, orange fluorescence at 640 nm)[1][2][3].

In Vitro

Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs)[4].

1. Stain cells with Acridine Orange zinc chloride salt (1 μM; 20 min; 37℃).
2. Wash cells with PBS.
3. Cells are observed by a confocal laser scanning microscopy (FV3000, Olympus).

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Acridine Orange (0.1 mg/kg, i.v., dogs) zinc chloride salt shows no clinical signs of toxicity and no abnormalities were seen in the blood within 30 days[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Adv Funct Mater. 2023 Apr 14.
- Nat Commun. 2023 Jun 30;14(1):3877.
- Acta Pharm Sin B. 2021 Feb 11.
- Clin Transl Med. 2023 Mar;13(3):e1229.
- Cell Death Dis. 2021 Jan 13;12(1):80.

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REFERENCES

[1]. McMaster GK, et al. Analysis of single- and double-stranded nucleic acids on polyacrylamide and agarosegels by using glyoxal and acridine orange. Proc Natl Acad Sci U S A. 1977 Nov;74(11):4835-8.

[2]. Traganos F, et al. Simultaneous staining of ribonucleic and deoxyribonucleic acids in unfixed cells using acridine orange in a flow cytofluorometric system. J Histochem Cytochem. 1977 Jan;25(1):46-56.

[3]. Byvaltsev VA, et al. Acridine Orange: A Review of Novel Applications for Surgical Cancer Imaging and Therapy. Front Oncol. 2019 Sep 24;9:925.

[4]. Wang Q, et al. Substrate stiffness regulates the differentiation profile and functions of osteoclasts via cytoskeletal arrangement. Cell Prolif. 2022 Jan;55(1):e13172.

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