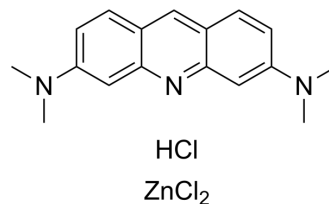


## Acridine Orange zinc chloride salt

|                           |   |
|---------------------------|---|
| <b>Cat. No.:</b>          | HY-D0942  |
| <b>CAS No.:</b>           | 10127-02-3  |
| <b>Molecular Formula:</b> | C <sub>17</sub> H <sub>20</sub> Cl <sub>3</sub> N <sub>3</sub> Zn                         |
| <b>Molecular Weight:</b>  | 438.1   |
| <b>Target:</b>            | Parasite; Fluorescent Dye; DNA Stain  |
| <b>Pathway:</b>           | Anti-infection; Others; Cell Cycle/DNA Damage   |
| <b>Storage:</b>           | Please store the product under the recommended conditions in the Certificate of Analysis. |



### BIOLOGICAL ACTIVITY

|                    |   |
|--------------------|---|
| <b>Description</b> | Acridine Orange (Euchrysin 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) <sup>[1][2][3]</sup> .   |
| <b>In Vitro</b>    | <p>Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs)<sup>[4]</sup>.</p> <ol style="list-style-type: none"> <li>1. Stain cells with Acridine Orange zinc chloride salt (1 μM; 20 min; 37°C).</li> <li>2. Wash cells with PBS.</li> <li>3. Cells are observed by a confocal laser scanning microscopy (FV3000, Olympus).</li> </ol> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> |
| <b>In Vivo</b>     | <p>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<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>  |

### 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 agarose gels by using glyoxal and acridine orange. Proc Natl Acad Sci U S A. 1977 Nov;74(11):4835-8.

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[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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**Caution: Product has not been fully validated for medical applications. For research use only.**

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