

## ER-Tracker Green

## Chemical Properties

CAS No. : 730931-46-1

Formula: C37H42BClF2N6O6S

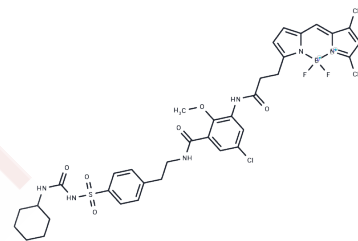
Molecular Weight: 783.09

Storage:

Keep away from direct sunlight, Keep away from moisture

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	ER-Tracker Green (ERTG) is a cell permeable live cell stain for live cell imaging. ER-Tracker Green has an excitation wavelength of 504 nm and an emission wavelength of 511 nm.
Targets(IC50)	Others
In vitro	The cellular autophagy of mitochondria and endoplasmic reticulum (ER) is referred to as mitophagy and ER-phagy, respectively, and is assessed using organelle quality probes MitoTracker Green (MTG) and ER Tracker Green (ERTG) in flow cytometry assays[4].
Cell Research	<p>Instructions</p> <p>I. Solution preparation</p> <ol style="list-style-type: none"> <li>1. Stock solution: Dissolve ER-Tracker Green (ERTG) in DMSO to prepare a stock solution with a concentration of 10 mM. Avoid strong light exposure when preparing the solution because ERTG is light-sensitive.</li> <li>2. Working solution: Dilute the stock solution to the desired concentration, usually 100nm-5 μM, using appropriate culture medium (such as DMEM, RPMI) or serum-free culture medium.</li> </ol> <p>II. Application steps:</p> <p>Live cell staining</p> <ol style="list-style-type: none"> <li>1. Culture cells in appropriate culture medium until the desired confluence is reached.</li> <li>2. Add working solution to live cells and incubate at 37°C for 30-60 minutes.</li> <li>3. During incubation, ensure that cells are protected from light to avoid dye degradation.</li> <li>4. After incubation, gently wash cells with culture medium or PBS to remove excess dye.</li> <li>5. Imaging: Observe the stained cells using a fluorescence microscope. ERTG is excited at 504 nm and emits fluorescence at 511 nm.</li> </ol> <p>Notes: For optimal imaging, use filters suitable for green fluorescence.</p> <p>6. Calibration and Controls:</p> <ol style="list-style-type: none"> <li>1) Control group: Set up a cell group without ER-Tracker Green to ensure specificity of staining.</li> <li>2) Standard curve: If necessary, cells with known concentrations of ER-Tracker Green can be stained to establish a standard curve between fluorescence intensity and dye concentration.</li> </ol>

## A DRUG SCREENING EXPERT

Cell Research	<p>Notes:</p> <ol style="list-style-type: none"><li>1) Photosensitivity: ER-Tracker Green is light sensitive. Avoid exposing the dye and stained cells to strong light during the experiment, especially during staining and imaging.</li><li>2) Storage conditions: ER-Tracker Green stock solution should be stored at -20°C in the dark to prevent degradation. Avoid repeated freezing and thawing.</li><li>3) Cell viability: Although ERTG is designed for live cell imaging, cell viability should be monitored because long-term exposure to high concentrations of dye may affect cell function.</li></ol> <p>The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.</p>
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### Solubility Information

Solubility	DMSO: 30 mg/mL (38.31 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.277 mL	6.385 mL	12.7699 mL
5 mM	0.2554 mL	1.277 mL	2.554 mL
10 mM	0.1277 mL	0.6385 mL	1.277 mL
50 mM	0.0255 mL	0.1277 mL	0.2554 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Kang JS, et al. Effect of additional cytoplasm injection on the cloned bovine embryo organelle distribution and stress mitigation. *Theriogenology*. 2024 Mar 1;216:12-19.

Shao Y, Wang J, Zhu D. [Rictor regulates mitochondrial calcium signaling in mouse embryo stem cell-derived cardiomyocytes]. *Zhejiang Da Xue Xue Bao Yi Xue Ban*. 2019 May 25;48(1):65-74. Chinese.

Zhang Q, et al. In Situ Partial Treatment of Single Cells by Laminar Flow in the "Open Space". *Anal Chem*. 2019 Jan 15;91(2):1644-1650.

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