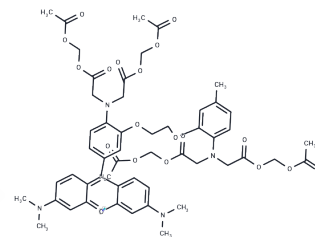


Rhod-2 AM

Chemical Properties

| | |
|-------------------|--|
| CAS No. : | 145037-81-6 |
| Formula: | C52H59BrN4O19 |
| Molecular Weight: | 1123.94 |
| Storage: | Keep away from direct sunlight, Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i> |



Biological Description

| | |
|---------------|---|
| Description | Rhod-2 AM is a fluorescent probe of the mitochondrion with λ_{ex} of 552 nm and λ_{em} of 581 nm. |
| Targets(IC50) | Others |
| In vitro | Inhibition of mitochondrial Ca^{2+} uptake by ruthenium red (RR) or DIDS in IMR5 cells infected with poliovirus (PV) is illustrated following fluorescence staining with Rhod-2 AM at 6 h p.i.[1]. |
| Cell Research | <p>Detection of Ca^{2+} changes in mitochondria</p> <p>I. Solution preparation</p> <ol style="list-style-type: none"> 1. Mother solution preparation: Dissolve Rhod-2 AM in DMSO to a storage concentration of 10mM. 2. Working solution preparation: Dilute it in serum-free cell culture medium or PBS buffer as needed to obtain a working concentration of 1~10 μM. <p>II. Operation steps</p> <ol style="list-style-type: none"> 1. Wash 3 times with serum-free cell culture medium or PBS buffer. 2. Add an appropriate amount of working solution containing Rhod-AM and incubate in a carbon dioxide incubator for 60 minutes. (Adjust according to cell type and dye concentration to ensure that the probe can fully enter the mitochondria) 3. After washing with serum-free cell culture medium or PBS buffer, resuspend the cells in a medium containing serum. 4. Detect by flow cytometry, pay attention to avoid light. <p>The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.</p> |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|-----------|-----------|
| 1 mM | 0.8897 mL | 4.4486 mL | 8.8973 mL |
| 5 mM | 0.1779 mL | 0.8897 mL | 1.7795 mL |
| 10 mM | 0.089 mL | 0.4449 mL | 0.8897 mL |
| 50 mM | 0.0178 mL | 0.089 mL | 0.1779 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

- Luo R, et al. STIM2 variants regulate Orai1/TRPC1/TRPC4-mediated store-operated Ca²⁺ entry and mitochondrial Ca²⁺ homeostasis in cardiomyocytes. *Cell Calcium*. 2024 May;119:102871.
- Li C, Pan Y, Tan Y, et al. PINK1-Dependent Mitophagy Reduced Endothelial Hyperpermeability and Cell Migration Capacity Under Simulated Microgravity. *Frontiers in cell and developmental biology*. 2022, 10.
- Jeong PS, et al. Role of the Notch signaling pathway in porcine oocyte maturation. *Cell Commun Signal*. 2025 Jan 2; 23(1):1.
- Zhang R, et al. PEDF Prevents Mitochondrial Function Decay and ER Stress Induced by Rotenone in Aging RPE Cells. *Front Biosci (Landmark Ed)*. 2023 Nov 29;28(11):319.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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