

Dyes and Stains

DiOC6(3) Iodide

Green fluorescent lipophilic dye for staining cell membranes and other hydrophobic structures in live and fixed cells

Catalog #100-0815

25 mg



Scientists Helping Scientists™ | WWW.STEMCELL.COM

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

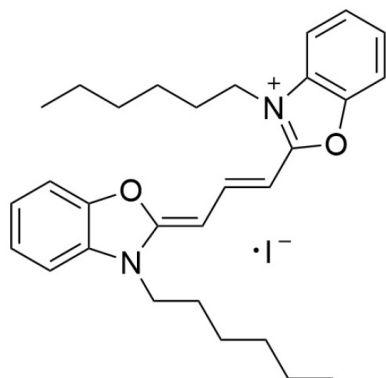
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

DiOC6(3) Iodide, or 3,3'-dihexyloxacarbocyanine iodide, is a green fluorescent lipophilic dye that is membrane permeable. At low concentrations, DiOC6(3) Iodide accumulates in the mitochondria of live cells. At higher concentrations, DiOC6(3) Iodide stains other membranes of live cells, including the endoplasmic reticulum and the Golgi apparatus. DiOC6(3) Iodide also stains extracellular vesicles.

Chemical Name:	3,3'-dihexyloxacarbocyanine iodide
Alternative Name:	3-hexyl-2-[3-(3-hexyl-2(3H)-benzoxazolylidene)-1-propen-1-yl]-benzoxazolium, iodide
CAS Number:	53213-82-4
Chemical Formula:	C ₂₉ H ₃₇ IN ₂ O ₂
Molecular Weight:	572.52 g/mol
Excitation Wavelength:	483 nm
Emission Wavelength:	501 nm
Structure:	



Properties

Storage:	Store at -20°C.
Shelf Life:	Stable until expiry date (EXP) on box label. Protect product from prolonged exposure to light.
Format:	Red powder

Directions for Use

Please read the entire protocol before proceeding.

Preparation of DiOC6(3) Iodide Stock and Working Solutions

1. To prepare a stock solution, dissolve DiOC6(3) Iodide in dimethyl sulfoxide (DMSO) or ethanol at 1 - 10 mM.
NOTE: If not used immediately, aliquot and store at -20°C. After thawing aliquots, use immediately; do not re-freeze.
2. To prepare a DiOC6(3) Iodide working solution, dilute the stock solution in a suitable buffer (e.g. phosphate-buffered saline [PBS]) to 1 - 10 µM. Use the working solution immediately; do not store.
NOTE: The optimal concentration of the working solution should be determined for different cell types and/or experimental conditions. For best results, test concentrations that span at least a 10-fold range.

Staining Cells

Refer to section A for staining cells in suspension or section B for staining adherent cells.

A. CELLS IN SUSPENSION

1. Centrifuge cell suspension and remove and discard supernatant.
2. Resuspend cells at 1×10^6 cells/mL in DiOC6(3) Iodide working solution in a conical tube (e.g. Catalog #38009).
3. Incubate at 37°C for 2 - 20 minutes; protect from light.
NOTE: The optimal incubation time should be determined for different cell types.
4. Centrifuge the cells at 110 - 250 x g for 5 minutes. Remove and discard supernatant.
5. Gently resuspend the cells in warm (37°C) culture medium to wash the cells.
6. Wash the cells 2 additional times by repeating steps 4 and 5.

B. ADHERENT CELLS

1. Culture adherent cells on a sterile glass coverslip until they reach the desired level of confluence.
2. Remove coverslip from culture medium and gently drain off excess medium. Place coverslip in a humidity chamber.
3. Pipette 100 µL of DiOC6(3) Iodide working solution onto the corner of the coverslip and gently agitate until all cells are covered.
4. Incubate the coverslip at 37°C for 2 - 20 minutes; protect from light.
NOTE: The optimal incubation time should be determined for different cell types.
5. Drain off the solution and wash the coverslips 2 - 3X with culture medium. For each wash cycle, cover the cells with warm (37°C) culture medium, incubate at 37°C for 5 - 10 minutes protected from light, then drain off the medium.

Fluorescence Detection

- Microscopy: DiOC6(3) Iodide can be detected with a standard FITC filter. 31001-Chroma and XF23-Omega optical filters are recommended.
- Flow cytometry: DiOC6(3) Iodide-labeled cells can be analyzed using the conventional FL1 flow cytometer detection channel.

PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2021 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, and Scientists Helping Scientists are trademarks of STEMCELL Technologies Canada Inc. All other trademarks are the property of their respective holders. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.