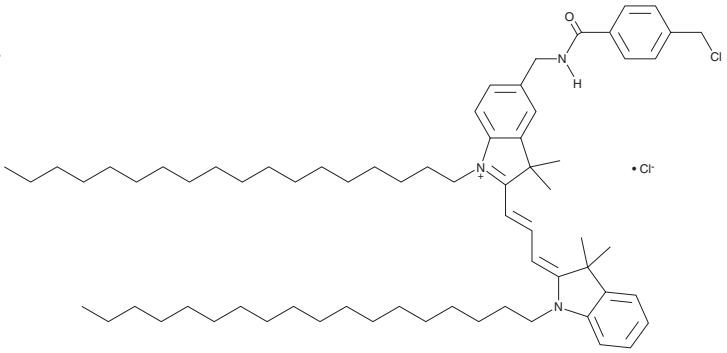
PRODUCT INFORMATION

CM-DiI

Item No. 45062

CAS Registry No.: 180854-97-1
Formal Name: 5-[[[4-(chloromethyl)benzoyl]amino]methyl]-2-[3-(1,3-dihydro-3,3-dimethyl-1-octadecyl-2H-indol-2-ylidene)-1-propen-1-yl]-3,3-dimethyl-1-octadecyl-3H-indolium, monochloride
MF: $C_{68}H_{105}ClN_3O \bullet Cl$
FW: 1,051.5
Purity: ≥90%
Ex./Em.: 548/563nm
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years
Special Conditions: Protect from light



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

CM-DiI is supplied as a solid. A stock solution may be made by dissolving the CM-dil in the solvent of choice, which should be purged with an inert gas. CM-DiI is soluble in DMSO.

Description

CM-DiI is a hydrophobic, fluorescent probe for cell membranes in culture and in live or fixed tissues. It displays excitation/emission maxima of 548/563 nm, respectively, and is resistant to photobleaching. CM-DiI produces a strong fluorescent signal when incorporated into cell membranes and lipid-containing structures and does not rapidly diffuse within the membrane. It is used to label and trace cell membranes to study cell migration, cell tracking, and axonal projections and is well suited for neuroscience research and fluorescence microscopy.

Assay Protocol

1. Prepare membrane-staining solution

    1. Dissolve CM-DiI in DMSO or ethanol to a final concentration of 1-5 mM to make the membrane staining stock solution.
    2. Dilute the membrane staining stock solution in serum-free culture medium or a suitable buffer, such as Hanks' Buffered Salt Solution (HBSS) or PBS, to make a 1-5 µM dye working solution.

NOTE 1: Aliquot and store unused CM-DiI stock solution at <-20°C. Repeated freeze-thaw cycles should be avoided.

NOTE 2: The final concentration of the working solution is application-specific. Staining conditions may be modified according to cell type and/or experimental conditions. It is recommended to test at concentrations spanning at least a ten-fold range.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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2. Prepare and stain the cells

    1. Adherent cells:
        1. Grow cells on sterile glass coverslips.
        2. Remove coverslips from growth medium and drain off any excess medium. Place coverslips in a humidity chamber.
        3. Add 100 µl of the dye working solution prepared in step 1B to the corner of the coverslip and gently agitate until all cells are covered.
        4. Incubate cells at 37°C for 2-20 minutes.*
        5. Drain off the dye working solution and wash the coverslips 2-3 times with growth medium. For each wash cycle, cover the cells with pre-warmed growth medium, incubate for 5-10 minutes, then drain off the medium.
        6. *Optional: Fix cells with 2-4% formaldehyde.*
        7. Observe cells using the fluorescence technique of choice.
    2. Suspension cells:
        1. Suspend cells at a density of 1 x 10^6 per ml in dye working solution.
        2. Incubate cells at 37°C for 2-20 minutes.*
        3. Centrifuge the labeled suspension cells at 1,000-1,500 rpm for 5 minutes.
        4. Remove the supernatant and gently resuspend the cells in pre-warmed growth medium.
        5. Repeat steps iii and iv two more times.
        6. *Optional: Fix cells with 2-4% formaldehyde.*
        7. Observe cells using the fluorescence technique of choice.

**NOTE 3: The optimal incubation time varies depending on cell type. It is recommended to start with a 20-minute incubation and optimize as needed to obtain uniform labeling.*

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