

Dil Staining Solution

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Keep away from direct sunlight
Store at -20°C
Actual storage temperature shall be subject to the COA.

Biological Description

Description

Dil (1,1'-Diocadecyl-3,3,3',3'-tetramethylindocarbocyanine perchlorate) is a commonly used lipophilic fluorescent dye. The long alkyl chains of the Dil molecule exhibit strong hydrophobicity, allowing them to associate with the hydrophobic core of the lipid bilayer in cell membranes through van der Waals interactions. Meanwhile, the indole ring portion is exposed to the hydrophilic surface of the membrane, interacting with the aqueous environment or the polar regions of membrane proteins, which helps prevent Dil from detaching from the membrane.

Once incorporated into the cell membrane, Dil can laterally diffuse, gradually labeling the entire membrane. Upon excitation, it emits bright orange-red fluorescence, with a maximum excitation wavelength of 549 nm and a maximum emission wavelength of 565 nm. The labeling of cell membranes by Dil is reversible; in the presence of unlabeled neighboring cells, Dil can be transferred between cells through membrane contact.

Dil is widely used as an anterograde or retrograde tracer for living or fixed neurons and other types of cells or tissues.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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