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DiI

DiI (DiIC$_{18}$(3); 1,1'-dioctadecyl-3,3,3',3'-tetramethylindocarbocyanine) is a widely used carbocyanine membrane dye that labels cell membranes by inserting its two long (C$_{18}$ carbon) hydrocarbon chains into the lipid bilayer. Particularly, it has been extensively used for the anterograde and retrograde labeling of neurons.

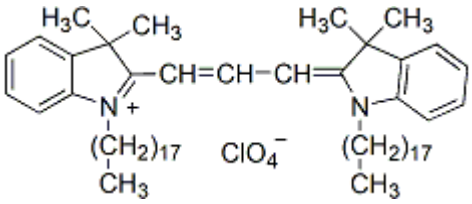
Product attributes

CAS number	41085-99-8
Probe cellular localization	Membrane/cell surface, Membrane/vesicular
For live or fixed cells	For fixed cells, For live/intact cells
Assay type/options	Co-cultures, Extended staining (several days to weeks)
Fixation options	Fix before staining (formaldehyde), Fix after staining (formaldehyde), Permeabilize before staining
Colors	Red
Excitation/Emission	549/565 nm

Product Description

DiI is a widely used carbocyanine membrane dye that labels cell membranes by inserting its two long (C$_{18}$ carbon) hydrocarbon chains into the lipid bilayer. Particularly, it has been extensively used for the anterograde and retrograde labeling of neurons. The intense fluorescence and high photostability of the dye make it possible to visualize the fine structures (axons and dendrites) of the neurons. Due to its low toxicity and the tendency to give highly stable cell labeling, the dye has also been generally used for long term cell tracing of cells both in cultures and in living embryos or animals. Please also see CellBrite™ Orange, a DiI solution for labeling cell membranes, and DiI in Vegetable Oil, a ready-to-use solution for microinjection studies.

- DiIC$_{18}$(3); 1,1'-dioctadecyl-3,3,3',3'-tetramethylindocarbocyanine
- $\lambda_{Ex}/\lambda_{Em}$ (MeOH) = 549/565 nm
- ε = 148,000
- Dark red solid soluble at 1-2 mM (with heating) in DMF, DMSO, or ethanol
- Soluble at 1-2 mM in vegetable oil with heating and sonication
- Store at 4 °C
- $C_{59}H_{97}ClN_2O_4$
- MW: 933.88
- [41085-99-8]



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