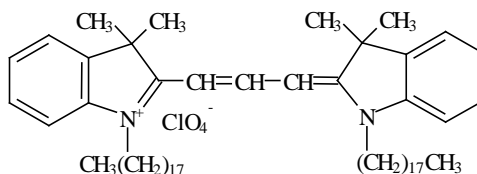


PRODUCT AND SAFETY DATA SHEET

PRODUCT NAME: 1,1'-dioctadecyl-3,3,3',3'-tetramethylindocarbocyanine perchlorate
(DiI; DiIC₁₈(3))**CATALOG #:** 60010**MOLECULAR INFORMATION:** C₅₉H₉₇ClN₂O₄
Mwt: 934
[41085-99-8]**PROPERTIES:**

Color & Form	Red solid
Purity	≥ 95% by TLC
Solubility	Soluble in DMSO or EtOH
$\lambda_{\text{ex}}/\lambda_{\text{em}}$	550 nm / 565 nm (MeOH)
Extinction Coefficient	145,000 (MeOH)

STORAGE AND HANDLING:

Store at 4 °C and protect from light especially when in solution.

APPLICATION:

DiI (full chemical name: 1,1'-dioctadecyl-3,3,3',3'-tetramethylindocarbocyanine perchlorate) is a widely used carbocyanine membrane dye that labels cell membranes by inserting its two long (C₁₈ carbon) hydrocarbon chains into the lipid bilayers. 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. Also, because of its low toxicity and the tendency to give highly stable cell labeling, the dye has been generally used for long term cell tracing of cells both in cultures and in living embryos or animals. The dye is usually applied to cells either from an ethanol solution (for cells in cultures) or directly from the dye crystals (for neurons in tissues, for example). DiI emits its fluorescence in the orange red region and it is often used together with the green fluorescent dye DiO (See **60011**) for dual color studies.

Ref.: Derzko, Z., et al. *Biochemistry* **19**, 6050(1980); Leuther, M.D., et al. *J. Immunology* **127**, 893(1981); Honig, M.G. and Hume, R.I. *Trends in Neurosci.* **9**, 333(1989); Honig, M.G. and Hume, R.I. *J. Cell Biol.* **103**, 171(1986); McConnell, S.K., et al. *Science* **245**, 978(1989).

TOXICITY:

Unknown.

FIRST AID:

Potentially harmful. Avoid prolonged or repeated exposure. Avoid getting in eyes, on skin, or on clothing. Wash thoroughly after handling. If eye or skin contact occurs, wash affected areas with plenty of water for 15 minutes and seek medical advice. In case of inhaling or swallowing, move individual to fresh air and seek medical advice immediately.

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