

## Dil

Dil (DiIC<sub>18</sub>(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<sub>18</sub> carbon) hydrocarbon chains into the lipid bilayer. Particularly, it has been extensively used for the anterograde and retrograde labeling of neurons.



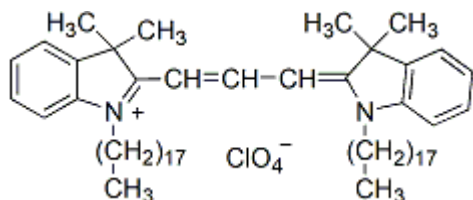
### Product attributes

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

## Product Description

Dil is a widely used carbocyanine membrane dye that labels cell membranes by inserting its two long (C<sub>18</sub> 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 Dil solution for labeling cell membranes, and [Dil in Vegetable Oil](#), a ready-to-use solution for microinjection studies.

- DilC<sub>18</sub>(3); 1,1'-dioctadecyl-3,3,3',3'-tetramethylindocarbocyanine
- λ<sub>Ex</sub>/λ<sub>Em</sub> (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<sub>59</sub>H<sub>97</sub>ClN<sub>2</sub>O<sub>4</sub>
- MW: 933.88
- [41085-99-8]



## References

1. Biochemistry 19, 6050 (1980)
2. J. Immunology 127, 893 (1981)
3. Trends in Neurosci 9, 333 (1989)
4. J Cell Biol 103, 171 (1986)

This datasheet was generated on January 14, 2026 at 07:33:00 AM. Visit product page to check for updated information before use.

Product link: <https://biotium.com/product/dii-diic183-or-11-dioctadecyl-3333-tetramethylindocarbocyanineperchlorate/>