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DiO

DiO, also called $DiOC_{18}(3)$, is a green fluorescent, lipophilic carbocyanine dye that is widely used as a lipophilic tracer.

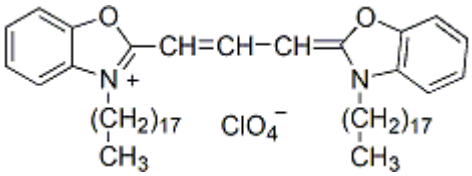
Product attributes

CAS number	34215-57-1
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	Green
Excitation/Emission	484/501 nm

Product Description

DiO, also called $DiOC_{18}(3)$, is a green fluorescent, lipophilic carbocyanine dye that is widely used as a lipophilic tracer. This membrane dye has applications similar to those of DiI (#60010). However, DiO has green fluorescent emission and the lateral diffusion rate on the membranes is generally slower than that of DiI. DiO and DiI are often used together in dual color studies.

- λEx/λEm (MeOH) = 484/501 nm
- ε (MeOH) = 150,000
- Yellow orange solid soluble (with heating) at 2 mM in DMF, 1 mM in DMSO, or 2 mM in 1:1 DMSO:ethanol
- Store at 4 °C and protect from light, especially in solution
- $C_{53}H_{85}ClN_2O_6$
- MW: 882
- Cas number: 34215-57-1
- Cas name: Benzoxazolium, 3-octadecyl-2-[3-(3-octadecyl-2(3H)-benzoxazolylidene)-1-propenyl]-, perchlorate



Note: DiO has low solubility, a tendency to form aggregates and slow lateral diffusion rate. See our DiO alternative Neuro-DiO (60015), which is more soluble in membranes and does not form non-fluorescent aggregates. We also offer CellBrite™ Green (30021), a ready-to-use Neuro-DiO solution for cell membrane labeling, and Neuro-DiO in Vegetable Oil (60019) for microinjection studies.

References

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