

DiO

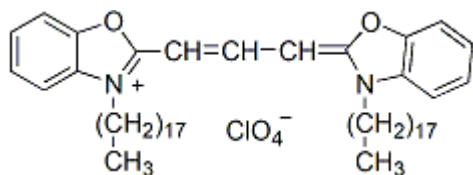
DiO, also called DiOC₁₈(3), is a green fluorescent, lipophilic carbocyanine dye that is widely used as a lipophilic tracer.



Product Description

DiO, also called DiOC₁₈(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 Dil ([#60010](#)). However, DiO has green fluorescent emission and the lateral diffusion rate on the membranes is generally slower than that of Dil. DiO and Dil are often used together in dual color studies.

- λ_{Ex}/λ_{Em} (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
- C₅₃H₈₅ClN₂O₆
- MW: 882
- Cas number: 34215-57-1
- Cas name: Benzoxazolium, 3-octadecyl-2-[3-(3-octadecyl-2(3H)-benzoxazolyliene)-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)

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Product link: <https://biotium.com/product/dio-33-diocadecyloxacarbocyanine-perchlorate/>

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 |