

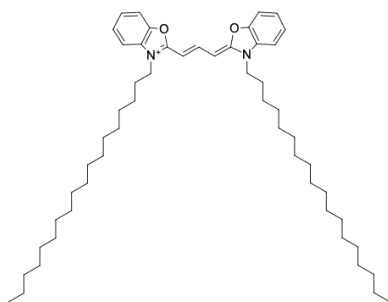
## DiO, lipophilic tracer

<http://www.lumiprobe.com/p/di-o-lipophilic-tracer>

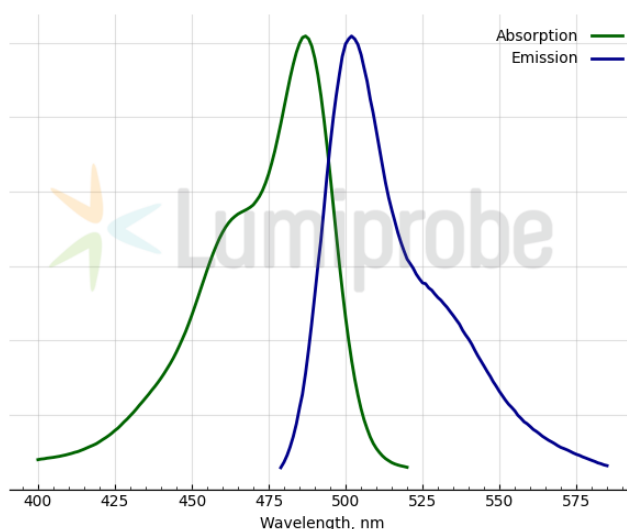
DiO, also called DiOC18(3), is a green fluorescent, lipophilic carbocyanine dye. DiO's excitation max. at 487 nm, and emission max. at 501 nm.

DiO is widely used as an anterograde and retrograde neuronal tracer in living and fixed tissues and cells. DiO uniformly labels neurons via diffusion in the plasma membrane. In intact tissue, the dye does not transfer from labeled to unlabeled cells but some transfer may occur when the membrane is disrupted, for example after sectioning.

DiO and [Dil](#) are often used together in dual-color studies. But DiO has a slower lateral diffusion rate on the membranes than that of [Dil](#).



**Structure of DiO, lipophilic tracer**



**Absorption and emission spectra of DiO**

### General properties

Appearance:	orange solid
Molecular weight:	782.27
CAS number:	28462-56-8
Molecular formula:	$C_{53}H_{85}N_2O_2+$
Solubility:	DMSO
Quality control:	NMR $^1H$ and HPLC-MS (95+%)
Storage conditions:	24 months after receipt at $-20^\circ C$ in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	Product is offered and sold for research purposes only. Product is not tested for safety and efficacy in food, drug, medical device, cosmetic, no express or implied authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, for humans or animals or for commercial purposes.

### Spectral properties

Excitation/absorption maximum, nm:	487
$\epsilon$ , $L \cdot mol^{-1} \cdot cm^{-1}$ :	102000
Emission maximum, nm:	501
Fluorescence quantum yield:	0.51