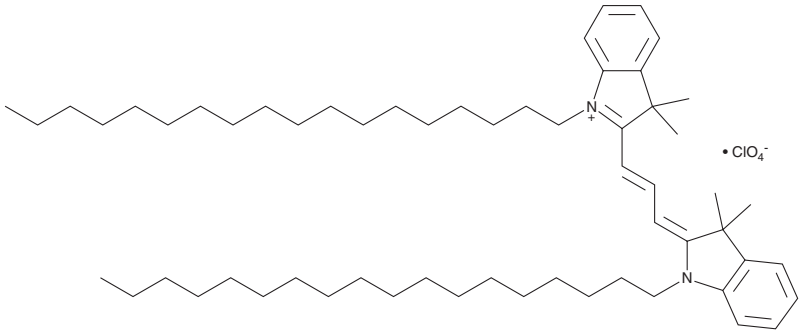
PRODUCT INFORMATION

DiI

Item No. 30423

CAS Registry No.:	41085-99-8
Formal Name:	2-[3-(1,3-dihydro-3,3-dimethyl-1-octadecyl-2H-indol-2-ylidene)-1-propen-1-yl]-3,3-dimethyl-1-octadecyl-3H-indolium, monoperchlorate
MF:	$C_{59}H_{97}N_2 \bullet ClO_4$
FW:	933.9
Purity:	≥98%
Ex./Em. Max.:	549/565nm
UV/Vis.:	λ_{max}: 519, 551 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

DiI is supplied as a crystalline solid. A stock solution may be made by dissolving the dil in the solvent of choice, which should be purged with an inert gas. DiI is soluble in the organic solvent dimethyl formamide (DMF) at a concentration of approximately 5 mg/ml.

DiI is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, dil should first be dissolved in DMF and then diluted with the aqueous buffer of choice. DiI has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

DiI is a fluorescent neuronal tracer that labels cell bodies, axons, dendrites, and dendritic spines.[1] It has been used as an anterograde tracer to study neuronal development *in vivo* and as a retrograde tracer to label hippocampal neuronal connections in fixed postmortem brain tissue.[1,2] DiI has also been used as a long-term plasma membrane label in live cells.[2] It displays excitation/emission maxima of 549/565 nm, respectively.[3]

References

1. Mufson, E.J., Brady, D.R., and Kordower, J.H. Tracing neuronal connections in postmortem human hippocampal complex with the carbocyanine dye DiI. *Neurobiol. Aging* **11(6)**, 649-653 (1990).
2. Honig, M.G. and Hume, R.I. DiI and diO: Versatile fluorescent dyes for neuronal labelling and pathway tracing. *Trends Neurosci.* **12(9)**, 333-335 (1989).
3. Francia, V., Yang, K., Deville, S., *et al.* Corona composition can affect the mechanisms cells use to internalize nanoparticles. *ACS Nano* **13(10)**, 11107-11121 (2019).

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