

PRODUCT INFORMATION



Dil

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: C₅₉H₉₇N₂ • ClO₄

FW: 933.9

Purity: ≥98%

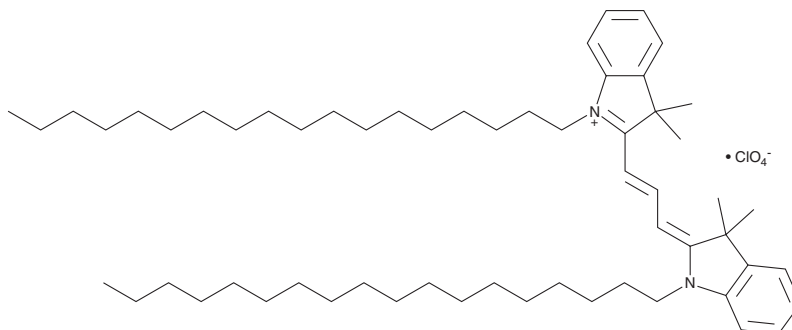
Ex./Em. Max.: 549/565 nm

UV/Vis.: λ_{max}: 519, 551 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

Dil 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. Dil is soluble in the organic solvent dimethyl formamide (DMF) at a concentration of approximately 5 mg/ml.

Dil 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. Dil 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

Dil 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} Dil 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 Dil. *Neurobiol. Aging* **11**(6), 649-653 (1990).
2. Honig, M.G. and Hume, R.I. Dil 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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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