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CellTrace™ Violet Cell Proliferation...



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Invitrogen™

CellTrace™ Violet Cell Proliferation Kit, for flow cytometry

CellTrace™ Violet Cell Proliferation Kit is used for in vitro and in vivo labeling of cells to trace multiple [Read more](#)

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Catalog Number	Quantity	dimConjugate
C34557	1 Kit(s)	
C34571	20	

Catalog number C34557 ★

Price (EUR) / 180 assays
489,00

In stock

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CellTrace™ Violet Cell Proliferation Kit is used for in vitro and in vivo labeling of cells to trace multiple generations using dye dilution by flow cytometry.

- Superior performance—bright, single-peak staining enables visualization of multiple generations
- Long-term signal stability—well-retained in cells for several days post stain
- Versatile—multiple colors available to easily combine with antibodies or markers of cell function, such as GFP
- Simple, robust staining protocol

View a [selection guide for all CellTrace™ Cell Proliferation Kits for flow cytometry](#).

Superior fluorescent staining

Successful proliferation analysis by dye dilution (see figure below) requires an extremely bright dye to distinguish fluorescently labeled cells from auto-fluorescence after several cell divisions. The intense fluorescent staining provided by CellTrace™ Violet dye enables the visualization of ten or more generations of proliferating cells before the signal is overwhelmed by intrinsic cellular auto-fluorescence. Consistent, homogeneous staining results in very little fluorescence variation between cells in a population, so distinct generations can be seen without any requirement for complex modeling software.

Long-term signal retention

Unlike stains that label the lipid membrane of cells, CellTrace™ Violet stain easily crosses the plasma membrane and covalently binds inside cells where the stable, well-retained fluorescent dye provides a consistent signal, even after several days in a cell culture environment. CellTrace™ Violet dye binds covalently to all free amines on the surface and inside of cells and shows little cytotoxicity, with minimal observed effect on the proliferative ability or biology of cells.

Easy multiplexing with other fluorophores

The violet excitation and narrow emission of CellTrace™ Violet dye make it ideal for multiplexing due to the limited spectral overlap with other common dyes (Alexa Fluor™ 488, FITC, and RPE) and fluorescent proteins (Green Fluorescent Protein (GFP) and mCherry) (see Fluorescence Spectra for CellTrace™ Violet stain below).

Simple, robust staining protocol

The CellTrace™ Violet Cell Proliferation Kit contains convenient single-use vials of dry dye to permit small-scale experiments without preparing excess quantities of dye. A stock solution is prepared by dissolving the contents of a vial in anhydrous DMSO prior to use. To stain 1 mL of cells in protein-free medium, 1 µL of this stock solution is typically used. Cells should be stained for 20 minutes at room temperature with gentle agitation. A brief wash with complete medium will then quench any dye remaining in solution.

For Research Use Only. Not for use in diagnostic procedures.

Specifications	
Detection Method	Fluorescence
For Use With (Application)	Proliferation Assay
For Use With (Equipment)	Flow Cytometer
Product Type	Cell Proliferation Kit
Dye Type	Other Labels or Dyes
Emission	405/450
Form	Lyophilized
Format	Tube(s)
Product Line	CellTrace™

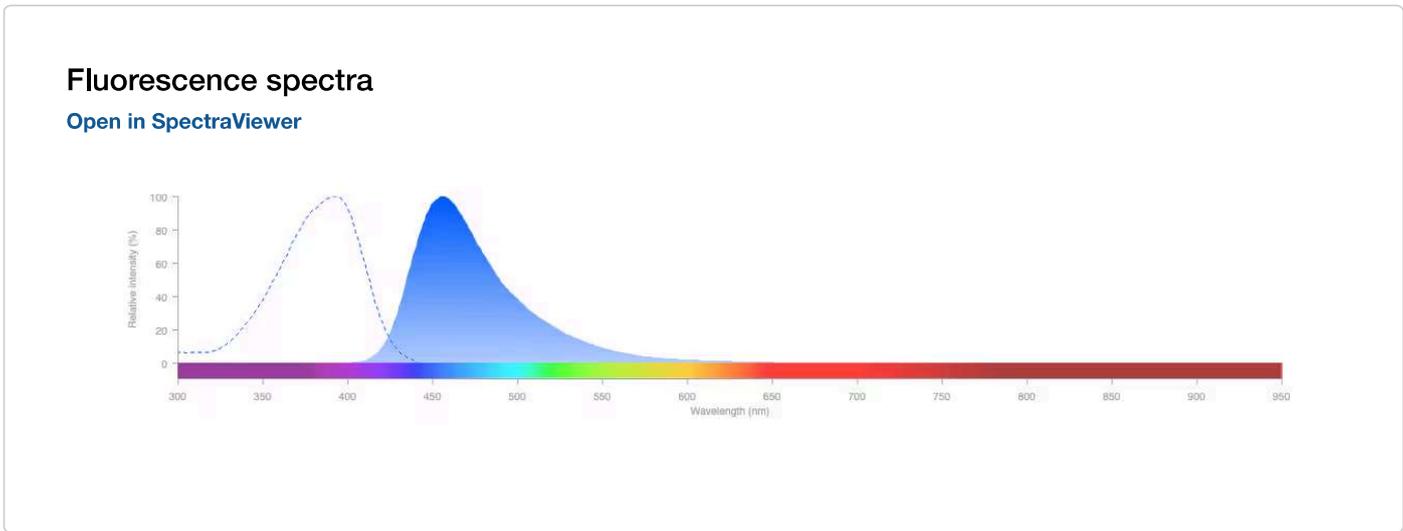
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Solubility	DMSO (Dimethylsulfoxide)
Unit Size	180 assays

Contents & Storage

Contains 9 vials of CellTrace™ Violet (lyophilized powder) and 1 vial of DMSO (500 µL). Store in freezer (-5 to -30°C) and protect from light.



Figures



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Manuals



- [User Guide: CellTrace Cell Proliferation Kits](#)
- [Quick Ref: CellTrace Violet Cell Proliferation Kits](#)

Protocols

- [CellTrace Violet Cell Proliferation Kit](#)

Molecular Probes® Handbook

- [Assays for Cell Enumeration, Cell Proliferation and Cell Cycle—Section 15.4](#)
- [Membrane-Permeant Reactive Tracers—Section 14.2](#)

Frequently asked questions (FAQs)

- I am using the CellTrace Cell Proliferation reagents and am not obtaining good separation of my cell generation peaks. How can I improve the peak separation?
- What kinds of applications can I run on a flow cytometer?
- I want to track my cells over time, and you have a lot of options to choose from. How do I pick the right one?
- What are the advantages of flow cytometry?
- I want to track my cells with a nucleic acid stain, like DAPI or Hoechst dye. Do you recommend this?

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Abstract

[Appraising the suitability of succinimidyl and lipophilic fluorescent dyes to track proliferation in non-quiescent cells by dye dilution.](#)

Authors: Filby A, Begum J, Jalal M, Day W,

al:

Pubmed ID: 25802116

Successful completion of the cell cycle usually results in two identical daughter progeny. This process of generational doubling is termed proliferation and when it occurs in a regulated fashion the benefits range from driving embryonic development to mounting a successful immune response. However when it occurs in a dis-regulated fashion, ... [More](#)

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