

CytoTrack™ Cell Proliferation Assay Kit

Catalog #	Description
135-1202	CytoTrack Blue 403/454 Cell Proliferation Assay Kit , includes 4 x 50 assay vials and 250 µl of DMSO, for running 200 assays
135-1203	CytoTrack Green 511/525 Cell Proliferation Assay Kit
135-1204	CytoTrack Yellow 542/556 Cell Proliferation Assay Kit
135-1205	CytoTrack Red 628/643 Cell Proliferation Assay Kit

For research purposes only.

Description

CytoTrack cell proliferation assay kits are available in four distinct dyes for easy multicolor cell analysis: blue, green, yellow, and red. Easily incorporate a cell tracking stain into your multicolor panel.

The proprietary chemistry of CytoTrack dyes enables the resolution of up to ten cell divisions. Each dye is cell permeable and comprises a fluorophore, a fluorescence blocker, and a cell-retaining group. Upon entering a live cell, the fluorescence blocker is cleaved by intracellular esterases and the cell-retaining group of the fluorophore reacts with intracellular proteins to create a stable, covalent bond (Figure 1). As the cells divide, the fluorescence intensity is successively halved and each cell division can be identified.

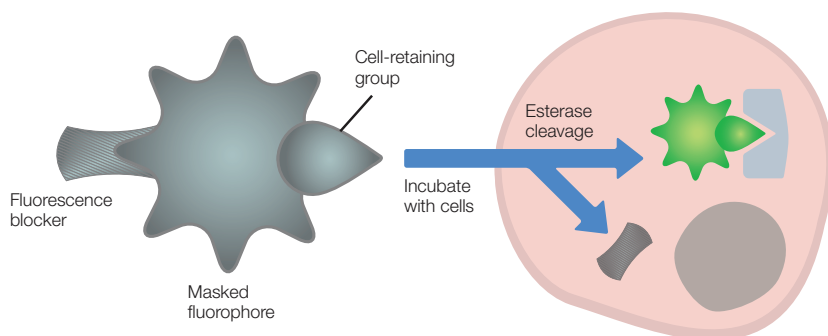


Fig. 1. Consisting of three components, CytoTrack dyes efficiently label live cells for visualizing up to ten cell divisions.

Assay Protocol

Important:

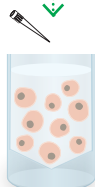
Thaw all components prior to use.

- 1 Prepare a 500x stock solution.
Add 50 μ l of DMSO and mix.



- 2 **Protocol for use in culture medium**

Add 1 μ l of stock solution into 500 μ l of media containing 1×10^6 cells of interest.



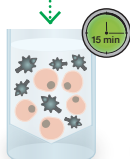
- 2 **Protocol for use with buffer**

Prepare a 1x working solution.
Add 1 μ l of stock solution into 500 μ l of buffer, pH 7.

Add 500 μ l of 1x solution to 1×10^6 cells.



- 3 Incubate at room temperature.
Protect from light.



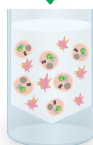
- 4 Pellet the cells by centrifugation.



- 5 Remove the supernatant and wash the cells using 3 ml of fresh, prewarmed culture media.



- 6 Resuspend the cells in 500 μ l of culture media.



- 7 Place the cells in the appropriate conditions for cell proliferation.

- 8 Harvest the cells and stain them for other markers if appropriate.

- 9 Analyze or sort the cells using a flow cytometer or S3™ cell sorter with the appropriate excitation and emission filters.

Kit Contents and Storage

Follow the guidelines in Table 1 for storing kit components.

Table 1. Kit components and storage.

Kit Component	Quantity	Storage, °C
CytoTrack dye	4 vials	-20
	50 assays/vial	Protect from light
DMSO	1 vial (250 µl)	-20

CytoTrack Cell Proliferation Assay Kits

Use Table 2 to select the appropriate CytoTrack kit to label cells.

Table 2. Optimal excitation laser specifications.

Catalog Number	Labeling Dye Description	Optimal Excitation Laser, nm
135-1202	CytoTrack Blue 403/454	405
135-1203	CytoTrack Green 511/525	488
135-1204	CytoTrack Yellow 542/556	532
135-1205	CytoTrack Red 628/643	632, 640

For more information, visit www.bio-rad.com/cytotrack.

