Datasheet: 1351202

Description:	CYTOTRACK™ BLUE 403/454 CELL PROLIFERATION ASSAY KIT
Name:	CYTOTRACK™
Format:	403/454
Product Type:	Accessory Reagent
Quantity:	200 TESTS

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/500

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Product Information

CytoTrack cell proliferation assay kits are available in three distinct dyes for easy multicolor cell analysis: blue, green 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. As the cells divide, the fluorescence intensity is successively halved and each cell divison can be identified.

Reagents In The Kit

CytoTrack Dye (4 vials, 50 assays/vial)
DMSO (1 vial, 250 µl)

Instructions For Use

Important: Thaw all components prior to use.

1. Prepare a 500x stock solution. Add 50 µl of DMSO and mix.

2. **Protocol for use in culture medium (for product 1351203)** - Add 1 µl of stock solution into 500 µl of media containing 1 x 10^6 cells of interest.

Protocol for use with buffer (for products 1351202, 1351203 and 1351205) - Prepare a 1x working solution. Add 1 µl of stock solution into 500 µl of buffer, pH 7. Add 500 µl of 1x solution to 1 x 10^6cells.

3. Incubate at room temperature for 15 mins. 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 cell in 500 µl of culture media.

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

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

9. Analyze or sort the cells using a flow cytometer or S3e cell sorter with the appropriate excitation and emission filters.

References

1. Perrotta, C. *et al.* (2018) Nitric Oxide Generated by Tumor-Associated Macrophages Is Responsible for Cancer Resistance to Cisplatin and Correlated With Syntaxin 4 and Acid Sphingomyelinase Inhibition. Front Immunol. 9: 1186.
2. Perrotta, C. *et al.* (2016) Climacostol reduces tumour progression in a mouse model of melanoma via the p53-dependent intrinsic apoptotic programme. Sci Rep. 6: 27281.
3. Zecchini, S. *et al.* (2019) Autophagy controls neonatal myogenesis by regulating the GH-IGF1 system through a NFE2L2- and DDIT3-mediated mechanism. Autophagy. 15 (1): 58-77.
4. Saito, Y. *et al.* (2020) Exercise enhances skeletal muscle regeneration by promoting senescence in fibro-adipogenic progenitors. Nat Commun. 11 (1): 889.
5. Cappello, P. *et al.* (2016) Anti-α-enolase antibody limits the invasion of myeloid-derived suppressor cells and attenuates their restraining effector T cell response. Oncoimmunology. 5 (5): e1112940.
6. Tario, J.J. *et al.* (2018) Monitoring Cell Proliferation by Dye Dilution: Considerations for Probe Selection. Methods Mol Biol. 1678: 249-99.
7. Loef, E.J. *et al.* (2021) Live-Cell Microscopy Reveals That Human T Cells Primarily Respond Chemokinetically Within a CCL19 Gradient That Induces Chemotaxis in Dendritic Cells. Front Immunol. 12: 628090.
8. Wang, X. *et al.* (2021) Activatable Biomineralized Nanoplatform Remodels the Intracellular Environment of Multidrug-Resistant Tumors for Enhanced Ferroptosis/Apoptosis Therapy. Small. : e2102269.

Storage

Store at -20°C only

This product is photosensitive and should be protected from light

Guarantee	Guaranteed until date of expiry. Please see product label.
Health And Safety Information	Material Safety Datasheet documentation #1351202 available at: https://www.bio-rad-antibodies.com/SDS/1351202 1351202
Regulatory	For research purposes only

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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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