

PRODUCT INFORMATION



CytoTrace™ Red CMTPX

Item No. 20698

CAS Registry No.: 942416-35-5
Formal Name: 6-[2-carboxy-4(or 5)-[[4-(chloromethyl)benzoyl]amino]phenyl]-1,2,10,11-tetrahydro-1,2,2,4,8,10,10,11-octamethyl-pyrano[3,2-g:5,6-g']diquinoln-13-ium, inner salt

MF: C₄₂H₄₀ClN₃O₄
FW: 686.2

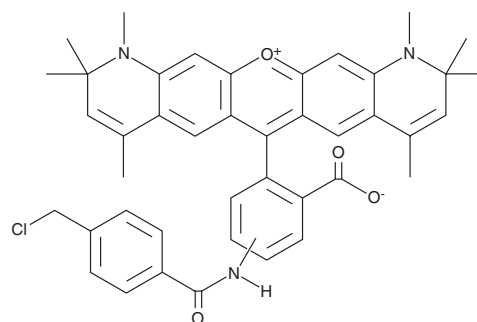
Ex./Em. Max: 577/602 nm

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Special Conditions: Light sensitive



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

Description

CytoTrace™ Red CMTPX is a fluorogenic dye used as a long-term cell tracer. It is nonfluorescent but cell-permeant and, upon entering the cell, is converted to a fluorescent compound in the cytosol. CytoTrace™ Red CMTPX is retained by living cells and displays excitation/emission spectra of 577/602 nm, respectively. It remains fluorescent for at least 72 hours and is retained through cell division for several cycles.

Assay Protocol

NOTE: The following is a recommended protocol and only provides a guideline. It should be modified according to specific lab needs.

1. Prepare a 2-10 mM DMSO stock solution.
NOTE: The stock solution should be used promptly; any remaining solution should be aliquoted and frozen at -20°C. Avoid repeated freeze-thaw cycles and protect from light.
2. Prepare a dye working solution.
Prepare a 1-20 μM dye working solution immediately before use by diluting the DMSO stock solution from Step 1 with Hanks' and 20 mM HEPES buffer (HHBS), or the buffer of your choice, at pH 7.0. Mix well by vortexing.
3. Analyze cells with a flow cytometer or a fluorescence microscope:
 - a. Treat cells with test compounds for a desired period of time.
 - b. Centrifuge cells to obtain 2-10 × 10⁵ cells per tube.
 - c. Resuspend cells in 500 μl of the dye working solution (from Step 2).
 - d. Incubate cells with dye solution at room temperature or 37°C for 15 to 30 minutes, *protected from light.*
 - e. Remove the dye working solution from the cells and wash the cells with HHBS or buffer of your choice.
 - f. Resuspend cells in 500 μl pre-warmed HHBS or medium to get 2-10 × 10⁵ cells per tube.
 - g. Monitor the fluorescence at excitation and emission wavelengths of 577 and 602 nm, respectively, with a flow cytometer (FL1 channel) or a fluorescence microscope.

NOTE for bacterial cell staining: Staining is most efficient when the stock dye solution is diluted 1:800 in nutrient broth preconditioned by overnight growth of the test bacteria, but fresh nutrient broth or PBS may also be used. Bacterial suspensions should be diluted with PBS to 10⁵-10⁷ organisms per ml. Bacteria may be stained by applying one ml of solution to a 0.45 μm filter (25 mm), vacuum filtering to remove the solution, then adding 1 ml of dye solution and incubating 5 to 10 minutes at room temperature.

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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