Product Information

CFDA SE Cell Proliferation and Tracking Kit

Catalog Number: C6034

Product Size: 100 T, 500 T

Contents:

Components	100T	500T
A. CFDA SE	1 vial	1 vial × 5
B. CFDA SE Solvent	100 μL	500 μL
C. 10 × CFDA SE Buffer	10 mL	50 mL

Storage

Store at -20℃ and protect from light. When stored as directed, product is stable for at least 12 months.

Description

CFDA SE is a cell-permeable reagent that is useful in measuring and tracking cell divisions. Upon entering a live cell, the acetate groups of CFDA SE are cleaved by intracellular esterase to create the fluorescent carboxyfluorescein succinimidyl ester (CFSE) compound. CFSE reacts with free primary amines to create a stable, covalent bond and is retained in the cytosol of cells. As a cell divides, the fluorescence intensity of CFSE is successively halved with each division, which allows distinguishing each cell generation.

Protocol

1. Reagent preparation

1.1 Prepare a stock solution (1000 ×) by adding 100 μL CFDA SE solvent to a CFDA SE vial and mix by wortexing. The prepared CFDA SE stock solution is stored at -20℃ and protect from light, and stock solution should be used for no more than 2 months.

1.2 Dilute 10 × CFDA SE Buffer to 1 × with cell culture grade sterile water. The 1 × CFDA SE Buffer can be stored at 4℃ or stored at -20℃ if it is not used for a long time.

2. Labeling and detection

2.1 Collect the cells by centrifugation, resuspend the cells in a 15 mL centrifuge tube with 1 mL 1 × CFDA SE, Buffer. Cell concentrations can range widely from 1 × 10^6 cells/mL to 5 × 10^6 cells/mL.

2.2 Prepare a solution of CFDA SE from your stock solution (1000 ×) in 1 × CFDA SE, Buffer at 2 × the final labeling concentration.

2.3 Add an equal volume of CFDA SE solution to your cell suspension. Mix gently and incubate for 10 minutes at 37°C.

2.4 5 times volume of pre-warmed complete medium (including serum) is immediately added to the centrifuge tube and mixed upside down to terminate the labeled reaction

2.5 Centrifugation at room temperature (1000 rpm, 5min) to remove the supernatant, and then washed once with 5-10 mL complete medium.

2.6 Add 5-10 mL of complete medium and incubate at 37°C for 5 minutes to promote the intracellular retention of CFDA SE and the unreacted CFDA SE into the complete cell culture solution. Centrifuge at 1000 rpm for 5 min to remove the supernatant and complete the last wash.

2.7 Proceed with cell stimulation, incubation, or analysis.

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Notes

1. CFDA SE are easily hydrolyzed and deteriorates rapidly in aqueous solution. Please avoid contact with water during use. In the process of labeling cells, contact with water is within limits.

2. CFDA SE solvent will solidify and stick to the bottom, wall or cap of the centrifuge tube at 4ºC, ice bath and other lower temperatures. It can be used after 20-25ºC water bath incubation for a while until it has completely melted.

3. The kit optimizes the CFDA SE staining system, but it is recommended that users explore the optimal working concentration and staining time according to cell type, culture conditions and application direction.

4. There are quenching problems with fluorescent dyes. Please avoid light to slow down the fluorescence quenching.

5. For your safety and health, please wear lab coats and disposable gloves.

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