Product Name: **6-CDCFDA SE Live Cell Fluorescent Probe**

Catalog Number: **RA20017**

Basic Information

Product Name	6-CDCFDA SE Live Cell Fluorescent Probe
Size	5mg
Storage	-20 ℃, protected from light
Shipping	Shipped with ice pack
Validity	12 months
Ex/Em	504/529 nm

Product Introduction

6-CDCFDA is a fluorescent cell tracker that can enter cells by passive diffusion and covalently bind to intracellular proteins. It is a long-acting cell tracing dye. Once inside the cell, the non-fluorescent 6-CDCFDA is hydrolyzed by intracellular esterases to produce green fluorescence. These fluorescent products can only accumulate in cells with intact cell membranes, so dead cells with damaged membranes cannot be stained. 6-CDCFDA is not sensitive to pH changes and can be fixed with formaldehyde or glutaraldehyde.

Product Parameters

Appearance: White solid soluble in DMSO or DMF

Molecular formula: C29H17Cl2NO11

Molecular weight: 626.4 Da

Preparation for the Experiment

1.Consumables

- Centrifuge tube

2.Reagents

(1) Anhydrous DMSO

(2) Serum - free cell culture medium or PBS

3.Instruments

- Fluorescence microscope or flow cytometer

Operating Procedures

Note: The following are the recommended steps for live - cell staining, which can be appropriately adjusted according to the actual situation.

1.Preparation of the Working Solution

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(1) Preparation of 10 mM 6 - CDCFDA SE Stock Solution

Allow it to come to room temperature before opening the cap. Dissolve 1 mg of 6 - CDCFDA SE in 159.6 μL of DMSO to obtain a 10 mM stock solution. Please store the stock solution in a - 20℃ or - 80℃ freezer in the dark. Also, please note that it should not be frozen.

(2) Preparation of 6 - CDCFDA SE Working Solution (prepare fresh for immediate use)

Dilute with PBS or serum - free cell culture medium to obtain a 0.5 - 25 μM 6 - CDCFDA SE working solution (the diluted working solution should be used promptly).

Note: If the staining is to be carried out for a longer period of time or the cells are dividing rapidly, it is recommended to use a working concentration of 5 - 10 μM. Otherwise, a working concentration of 0.5 - 5 μM is suggested. The optimal working concentration varies with different cells, so it is recommended to optimize within a certain range.

2.Cell Staining

(1) Cell Preparation

Suspended cells: Centrifuge the cell suspension in a 4℃ centrifuge at 1000 g for 3 - 5 min. Discard the supernatant. Wash the cells twice with 1×PBS, each time for 5 min.

Adherent cells: Remove the culture medium and wash the cells with 1×PBS. Digest the cells with trypsin to form a single - cell suspension. Centrifuge the cell suspension in a 4℃ centrifuge at 1000 g for 3 - 5 min. Discard the supernatant. Wash the cells twice with 1×PBS, each time for 5 min.

(2) Resuspend the cells with 6 - CDCFDA SE working solution pre - warmed at 37℃. Incubate the cells at 37℃ for 15 - 30 min.

(3) Centrifuge at 400 g for 3 - 4 min in a 4℃ centrifuge. Remove the supernatant.

(4) Wash the cells twice with 1×PBS, each time for 5 min.

(5) Resuspend in serum - free culture medium or PBS. Detect or observe the cells with a flow cytometer (FL1/BL1 channel) or fluorescence microscope (FITC filter).

Note: The following are optional steps (if antibody labeling is to be carried out subsequently, fixation and permeabilization can be performed).

(6) Fixation. The cells can be fixed with 3.7% paraformaldehyde at room temperature for 15 min.

(7) Permeabilization. Permeabilize in ice - cold acetone for 10 min. After fixation and permeabilization, the cells need to be washed with PBS.

Note: This reagent is for scientific research use only!