BCECF-AM mixture of isomers

Cat: IB1750

Storage: Powder: -20℃,1 year; Insolvent: -20℃, 6 months; -80℃,1 year (protect from light)

Introduction

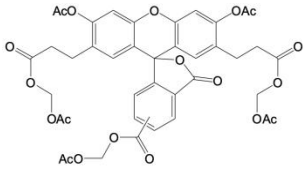
BCECF, AM is a fluorescent dye that can penetrate the cell membrane to detect intracellular pH.BCECF and AM have no fluorescence. After entering the cell, they can be cleaved by intracellular esterase to form BCECF, which is retained in the cell. BCECF can be excited to form green fluorescence at an appropriate pH value. The maximum excitation wavelength and emission wavelength vary with pH. The maximum excitation wavelength is about 503 nm and the maximum emission wavelength is about 520 nm. The recommended excitation wavelength is 488 nm and the emission wavelength is 535 nm.

BCECF, AM is not only widely used in mammalian cell research, but also has been reported for intracellular pH level detection in animal tissues, plant cells, bacteria and yeast. BCECF and AM are widely used in cytotoxicity, apoptosis, cell adhesion, drug resistance, cell chemotaxis and other processes with intracellular pH changes.

When used for intracellular pH detection, the commonly used BCECF, AM concentration is 1 ~ 10 μM.

Parameter

Ex/Em: 488/535nm
CAS: 117464-70-7
Molecular Formula: $C_{39}H_{36}O_{19}$
Molecular Weight: 808.69
Appearance: White to off-white Solid
Solubility: Soluble in DMSO



Protocols (*only for reference*)

Preparation of storage solution

1 mM stock solution was prepared with DMSO. For example : 1 mg BCECF, AM powder was dissolved in 1.218 mL DMSO.

Note:

a. Unused storage liquid is recommended to be stored at-20℃ in batches to avoid repeated freezing and thawing.

b. Moisture-absorbing DMSO has a significant effect on the solubility of the product, please use the newly opened DMSO.

Coloring

***The labeling conditions vary depending on the cell type. Before each experiment, please determine the best conditions. The following methods are for reference only.**

1. Preparation of HEPES buffer : 20 mM HEPES, 153 mM NaCl, 5 mM KCl, 5 mM glucose, pH7.4.
2. HEPES was used to prepare cell suspension with a cell concentration of 4 × 107 cells / mL.

For research use only. Do not use for clinical, diagnostic, food, cosmetic testing and other purposes.

3. The 1mM BCECF, AM solution was added to the cell suspension (1/300 volume of the cell suspension), and the final concentration of BCECF, AM was 3 μM.
4. Incubation at 37 °C for 30 min.
5. The cells were washed three times with HEPES buffer to make a cell suspension of 3 × 106 cells / mL.
6. The fluorescence intensity of the cells was detected using a fluorescence microscope or a laser copolymerization microscope with an image analysis system.

Note

1. BCECF, AM may be harmful to the human body, please pay attention to the appropriate protection. For your safety and health, please wear experimental clothes and disposable gloves.
2. It is found that appropriate ultrasonic treatment can be used to promote dissolution when it is difficult to dissolve.
3. The working concentration is recommended to be optimized according to different cell lines and experimental systems.
4. Fluorescent dyes all have quenching problems, please try to avoid light to slow down the fluorescence quenching.
5. This product is for scientific research only. Do not use for medicine, clinical diagnosis or treatment, food and cosmetics. Do not store in ordinary residential areas.