Hoechst 33342

Cat: IH0070

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

Introduction

Hoechst 33342 is a blue fluorescent dye that can penetrate the cell membrane. It releases strong blue fluorescence after embedding double-stranded DNA, and has low toxicity to cells.Hoechst 33342 staining is often used to detect apoptosis, which is observed by fluorescence microscopy or flow cytometry after staining. Hoechst 33342 is also commonly used in ordinary nuclear staining, or conventional DNA staining.The maximum excitation wavelength of Hoechst 33342 is 346 nm, and the maximum emission wavelength is 460 nm. After Hoechst 33342 binds to double-stranded DNA, the maximum excitation wavelength is 350 nm and the maximum emission wavelength is 461 nm.

Parameter

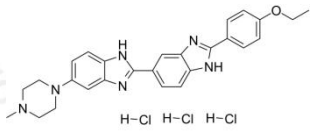
CAS: 875756-97-1

Molecular Formula: $C_{27}H_{28}N_6O \cdot 3HCl$

Molecular Weight: 561.9

Appearance: Light yellow to green yellow Solid

Solubility: Soluble in Water/DMSO ≥ 1mg/mL



Protocols (*only for reference*)

Preparation of storage solution

The stock solution of 1 mg / mL was prepared with ultrapure water. For example, 1 mg Hoechst 33342 powder was dissolved in 1 mL ultrapure water.

Note: Unused storage solution is recommended to be stored at -20°C to avoid repeated freezing and thawing.

Preparation of working fluid

The storage solution was diluted with appropriate buffer (such as serum-free medium or PBS, etc.) to prepare a Hoechst working solution of 10 μg / mL.

Note :

a. The final concentration of the working solution is recommended to be optimized according to different cell lines and experimental systems.
b. When it is found that it is difficult to dissolve, appropriate ultrasonic treatment can be used to promote dissolution.
c. Please adjust the concentration of the working fluid according to the actual situation, and use it now.

Coloring

For fixed cells or tissues

1. For cell or tissue samples, after fixation, appropriate washing to remove the fixative. Subsequently, if immunofluorescence staining is required, immunofluorescence staining is performed first, and then Hoechst 33342 staining is performed according to the subsequent

steps. If no additional staining is required, the subsequent Hoechst 33342 staining is performed directly.

2. For adherent cells or tissue sections, a small amount of Hoechst 33342 working solution was added to cover the sample. For suspension cells, at least 3 times the volume of the working solution of the sample to be stained was added and mixed. Store at room temperature for 3-5 min.
3. Hoechst 33342 staining solution was removed and washed with TBST, PBS or normal saline 2-3 times, 3-5 min each time.
4. Observe directly under a fluorescence microscope or observe under a fluorescence microscope after sealing. When apoptosis occurs, the nucleus of apoptotic cells will be seen to be densely stained, or fragmented and densely stained.

For living cells or tissues

1. Adding an appropriate amount of Hoechst 33342 working fluid, the sample to be dyed must be fully covered. Usually, 1mL working fluid is added to one hole of the six-hole plate, and 100 μL working fluid is added to one hole of the 96-hole plate.
2. Incubate for 20-30 min at a temperature suitable for cell culture. The staining solution was discarded and washed with PBS or culture medium for 2-3 times to perform fluorescence detection.

Note

1. Fluorescent dyes all have quenching problems, please try to avoid light to slow down the fluorescence quenching.
2. For your safety and health, please wear experimental clothes and wear disposable gloves.
3. This product is for scientific research only. Do not use in medicine, clinical diagnosis or treatment, food and cosmetics. Do not store in ordinary residential areas.

Related Literature

[1]. Zhang B, Zhang J, Li Y, Li N, Wang Y, Jang R, Xu X, Li R, Chen Z, Duan S, Wang Y, Zhang L. In Situ STING-Activating Nanovaccination with TIGIT Blockade for Enhanced Immunotherapy of Anti-PD-1-Resistant Tumors. Adv Mater. 2023 Jun;35(24):e2300171. doi: 10.1002/adma.202300171. Epub 2023 Apr 28. PMID: 37053496.（IF: 32.08）

Note : For more literature, please visit Solarbio 's official website.

Related Products

IH0060 Hoechst 33258
IH0070 Hoechst 33342
IH1750 Hoechst 34580
IH1760 Hoechst 34580 tetrahydrochloride