Hoechst 33342 Solution (1 mg/mL)

Introduction

Hoechst 33342 is a commonly used nuclear probe that binds to DNA and emits blue fluorescence. As a cell-permeant probe, it can traverse the membranes of both live and fixed cells. Additionally, due to its lower cytotoxicity, Hoechst 33342 is suitable for nuclear staining in either live or fixed cells. Compared to another commonly used nuclear probe, Hoechst 33258, Hoechst 33342 exhibits higher lipophilicity and better cell permeability.

This product is supplied as a 1 mg/mL solution in H_2O. Dilute to the desired working concentration before use. Stained samples can be analyzed by fluorescence microscopy or flow cytometry.

Storage

Store at -20°C protected from light, stable for one year.

Properties

Physical Appearance	Liquid
M.Wt	561.93
Cas No.	875756-97-1
Formula	$C_{27}H_{31}Cl_3N_6O$
Ex/Em	350/461 nm (after binding DNA)

Protocol

1. For fixed cells or tissue sections

   1) Dilute the stock solution to the desired working concentration (typically 0.5-10 μg/mL) using PBS or an appropriate assay buffer.

   2) After fixation, wash the fixed cell or tissue samples to remove the fixative. If immunofluorescence staining is required, perform the Hoechst 33342 staining after completing immunofluorescence staining. Otherwise, proceed directly to Hoechst 33342 staining.

   3) For adherent cells or tissue sections, cover the sample with sufficient Hoechst 33342 working solution. For suspension cells, resuspend the cell pellet in at least 3 volumes of Hoechst 33342 working solution. Incubate at room temperature, protected from light, for 3-5 min.

4) Remove the Hoechst 33342 solution and wash the sample 2-3 times with PBS or an appropriate buffer. Observe by fluorescence microscopy or flow cytometry (Ex/Em: 350/461 nm).

***Note:** Apoptotic cells may show condensed or fragmented nuclei when stained with Hoechst 33342.

2. For living cells

1) Dilute the stock solution to the desired working concentration (typically 0.5-10 μg/mL) using PBS or an appropriate assay buffer.

2) For adherent cells, cover the sample with sufficient Hoechst 33342 working solution. For suspension cells, resuspend the cell pellet in at least 3 volumes of Hoechst 33342 working solution. Incubate at room temperature, protected from light, for 10-20 min.

3) Remove the Hoechst 33342 solution and wash the sample 2-3 times with PBS or an appropriate buffer. Observe by fluorescence microscopy or flow cytometry (Ex/Em: 350/461 nm).

***Note:** Apoptotic cells may show condensed or fragmented nuclei when stained with Hoechst 33342.

Note

1. This product is a Hoechst 33342 stock solution. For a ready-to-use Hoechst 33342 staining solution, please refer to product Hoechst 33342 Solution (Ready-to-Use) (Cat. No. K2408).
2. This product is light-sensitive. Protect from light during use and storage.
3. For your safety and health, please wear lab coats and gloves during the experiment.
4. For research use only. Not to be used in clinical diagnostic or clinical trials.

APExBIO Technology
www.apexbt.com
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com