

Bisbenzimidazole (Hoechst 33342)

Cell culture tested

Product Code: TC266

Product Description :

Molecular Formula: $C_{27}H_{28}N_6O \cdot 3HCl \cdot xH_2O$

Molecular Weight: 561.93

CAS: 23491-52-3

Bisbenzimidazole dyes (Hoechst 33342 and Hoechst 33258) are specific fluorescent DNA stains that specifically bind to ssDNA and dsDNA in AT rich regions of the minor groove. They do not bind RNA. Hence, presence of RNA does not affect DNA staining in cell preparation, eliminating the need of pre-treatment with RNase. H33342 is more cell permeant than H33258. Hoechst dyes are less toxic than DAPI, which ensures a higher viability of stained cells. Unlike other fluorescent stains such as DAPI and propidium iodide, Hoechst stains can permeate live cells and are, therefore, known as vital stains. Hoechst 33342 can also be used to stain fixed cells.

Applications of Hoechst 33342 are:

1. Chromosome banding
2. Nuclear counterstain for in situ hybridization and *in vivo* immunostaining
3. Viable cell staining
4. Cell cycle analysis by flow cytometry
5. Detection of apoptosis
6. Immunostaining of fixed cells

Directions :

TC266 can be dissolved in water to make concentrated stock solutions upto 10 mg/ml yielding a clear yellow solution. For standard fluorescence based assays, stock solutions should be diluted in phosphate-buffered saline or mounting medium to a final working concentration of 1 μ g/ml. Incubation time varies from 5 to 30 minutes and needs to be standardized for bacterial, live and fixed cells.

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ Publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.

Quality Control:

Appearance

Dull yellow to yellow powder or solid

Solubility

33.3 mg soluble in 1 mL of water

Assay (HPLC)

NLT 98.00%

Cell Culture Test

Passes

Storage and Shelf Life:

Store Hoechst 33258 powder at 2°-8°C away from bright light.

Stock solutions of Hoechst should be sterile filtered and stored at 2°-8°C away from bright light. They remain stable for up to 2 months at this temperature. For long term storage, store the solutions at -20°C.

Use before expiry date given on the product label.