

PRODUCT INFORMATION



Hoechst 33258

Item No. 16756

CAS Registry No.: 23491-45-4
Formal Name: 4-[6-(4-methyl-1-piperazinyl)-2,6'-bi-1H-benzimidazol]-2'-yl]-phenol, trihydrochloride

Synonyms: Bisbenzimidazole, HOE 33258, NSC 322921, Pibenzimol

MF: $C_{25}H_{24}N_6O \cdot 3HCl$
FW: 533.9

Purity: $\geq 95\%$

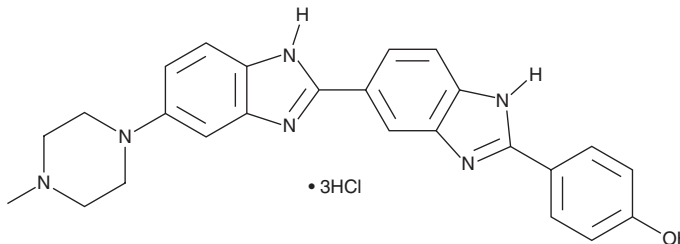
UV/Vis.: λ_{max} : 236, 270, 351 nm

Ex./Em. Max: 352/461 nm

Supplied as: A crystalline solid

Storage: $-20^{\circ}C$

Stability: ≥ 2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Hoechst 33258 is supplied as a crystalline solid. A stock solution may be made by dissolving the Hoechst 33258 in the solvent of choice. Hoechst 33258 is soluble in DMSO at a concentration of approximately 20 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of Hoechst 33258 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of Hoechst 33258 in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Hoechst 33258 is a cell-permeable, benzimidazole dye that binds to the minor groove of double stranded DNA with preference for adenine and thymine-rich sequences.¹ It emits blue fluorescence (excitation 352 nm/emission maximum 461 nm) when bound to DNA in either live or fixed cells and is useful as a marker of nuclei for cell cycle studies and to distinguish nuclear morphology in apoptotic cells.^{2,3}

References

1. Sabnis, R.W. Handbook of biological dyes and stains: Synthesis and industrial applications. John Wiley & Sons, Inc., Hoboken, NJ, USA (2010).
2. Latt, S.A. and Stetten, G. Spectral studies on 33258 Hoechst and related bisbenzimidazole dyes useful for fluorescent detection of deoxyribonucleic acid synthesis. *J. Histochem. Cytochem.* **24(1)**, 24-33 (1976).
3. Zurek-Biesiada, D., Waligórski, P., and Dobrucki, J.W. UV-induced Spectral Shift and Protonation of DNA Fluorescent Dye Hoechst 33258. *J. Fluoresc.* **24(6)**, 1791-1801 (2014).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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