

PRODUCT INFORMATION



Hoechst 33342 (hydrochloride) (solution)

Item No. 40797

CAS Registry No.: 875756-97-1

Formal Name: 2'-(4-ethoxyphenyl)-5-(4-methyl-1-piperazinyl)-2,5'-bi-1H-benzimidazole, trihydrochloride

Synonyms: Bisbenzimidazole, HOE 33342, NSC 334072

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

FW: 452.6

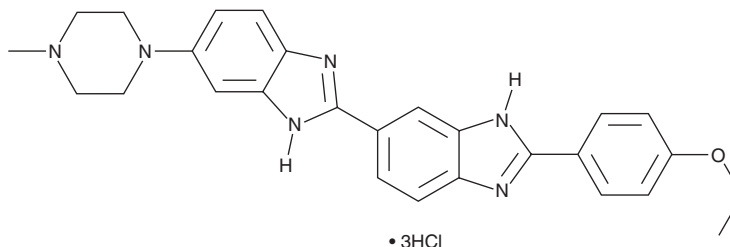
Purity: $\geq 98\%$

Ex./Em. Max: 350/465 nm

Supplied as: A solution in water

Storage: 4°C

Stability: ≥ 2 years



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

Description

Hoechst 33342 is a fluorescent DNA probe.¹ It forms a fluorescent complex by binding to the minor groove of adenine and thymine-rich sequences.¹ Hoechst 33342 displays an emission maximum of 465 when bound to dsDNA upon excitation at 350 nm.² It has been used as a marker of nuclei in cell cycle studies and to distinguish nuclear morphology in apoptotic cells.³⁻⁵

References

1. Sabnis, R.W. *Handbook of biological dyes and stains: Synthesis and industrial applications*. John Wiley & Sons, Inc., Madison, 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. Burres, N.S., Frigo, A., Rasmussen, R.R., *et al.* A colorimetric microassay for the detection of agents that interact with DNA. *J. Nat. Prod.* **55(11)**, 1582-1587 (1992).
4. Lakowicz, J.R., Gryczynski, I., Malak, H., *et al.* Time-resolved fluorescence spectroscopy and imaging of DNA labeled with DAPI and Hoechst 33342 using three-photon excitation. *Biophys. J.* **72(Pt 2)**, 567-578 (1997).
5. Lalande, M.E., Ling, V., and Miller, R.G. Hoechst 33342 dye uptake as a probe of membrane permeability changes in mammalian cells. *Proc. Natl. Acad. Sci. USA* **78(1)**, 363-367 (1981).

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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