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DATASHEET

Hoechst 33258

Product overview

| | |
|-------------------------------|---------------------------------------|
| Name | Hoechst 33258 |
| Cat No | HB0786 |
| Alternative names | bisBenzimide; HO 33258; Hoechst-33258 |
| Biological description | Overview |

Blue fluorescent DNA stain that is commonly used in immunofluorescent work. It is frequently used as a nuclear stain to stain nuclei. Excited by UV light.

It is less cell permeable but slightly more water soluble than the similar DNA stain [Hoechst 33342](#). Unlike Hoechst 33342, Hoechst 33258 is not an apoptotic inducer.

The stain is used as a substitute to [DAPI](#) and can be used on both live and fixed cells.

As with other Hoechst stains, Hoechst 33258 binds to the AT-rich regions of the minor groove in DNA.

Uses and applications

Hoechst 33258 has similar applications of use to Hoechst 33342 and is suitable for a variety of applications as there is little fluorescent overlap with other used fluorophores/fluorescent proteins that emit in the green/red range.

The stain is frequently used as a nuclear counterstain, for cell cycle analysis and to distinguish apoptotic cells.

As this stain does not induce apoptosis, it may be preferential to Hoechst 33342 for identification and isolation of the stem cell side population.

| | |
|--------------------------|---|
| Biological action | Dyes & stains |
| Purity | >95% |
| Description | Blue fluorescent nuclear DNA stain. Cell permeable. |

Images



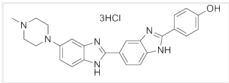
Solubility & Handling

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|-----------------------------|-------------------|
| Storage instructions | +4 °C (desiccate) |
|-----------------------------|-------------------|

Solubility overview
Important

Soluble in water (100 mM), and in DMSO (20 mM)
This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

| | |
|---------------------------|---|
| Chemical name | Bisbenzimidazole trihydrochloride |
| Molecular Weight | 533.88 |
| Chemical structure |  |
| Molecular Formula | C ₂₅ H ₂₄ N ₆ O 3HCl |
| CAS Number | 23491-45-4 |
| PubChem identifier | 31953 |
| SMILES | <chem>CN1CCN(CC1)C2=CC3=C(C=C2)N=C(N3)C4=CC5=C(C=C4)NC(=C6C=CC(=O)C=C6)N5.Cl.Cl.Cl</chem> |
| InChiKey | SMNPLAKEGAEPJD-UHFFFAOYSA-N |
| MDL number | MFCD00012679 |

References

Recognition of RNA duplex by a neomycin-Hoechst 33258 conjugate.

Willis B *et al* (2014) Bioorg Med Chem 22(7)

PubMedID [24630691](#)

Minor-groove binding drugs: where is the second Hoechst 33258 molecule?

Fornander LH *et al* (2013) J Phys Chem B 117(19)

PubMedID [23607615](#)

Interaction of DNA minor groove binder Hoechst 33258 with bovine serum albumin.

Ojha H *et al* (2009) Chem Pharm Bull (Tokyo) 57(5)

PubMedID [19420779](#)
