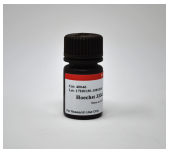
Hoechst

Hoechst dyes are cell membrane-permeant, minor groove-binding blue fluorescent DNA stains. Hoechst dyes are widely used in cell cycle and apoptosis studies as nuclear counterstains.



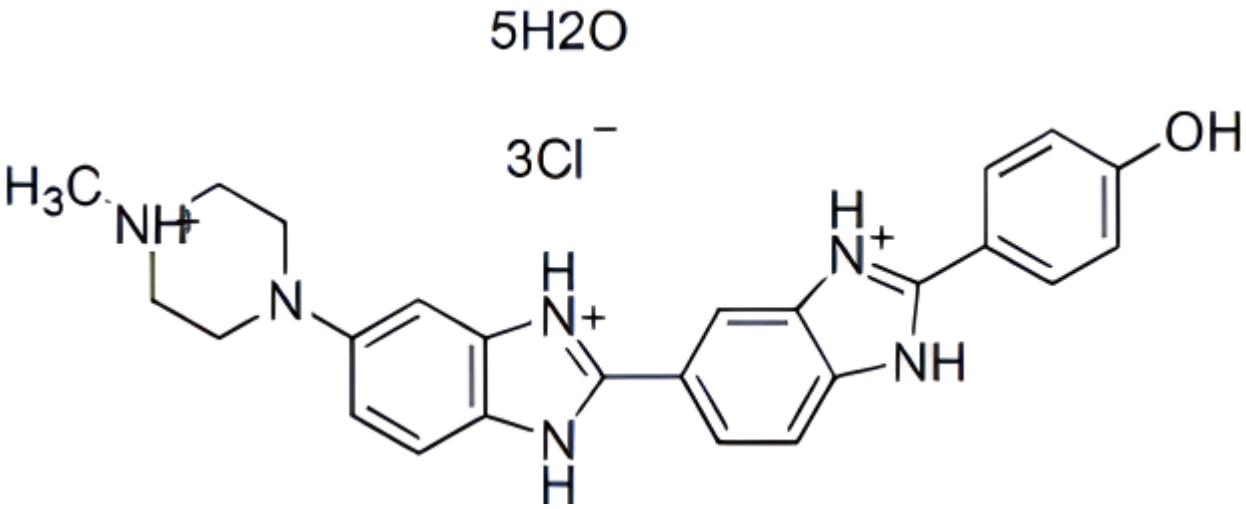
Product attributes

CAS number	23491-45-4, 23491-5
Detection method/readout	Fluorescence microsc
Probe cellular localization	Nucleus
For live or fixed cells	For fixed cells, For liv
Assay type/options	DNA content/cell cyc staining (24-72h), No staining
Cell permeability	Membrane permeant
Apoptosis/viability marker	All cell stain
Fixation options	Fix before staining (fo (formaldehyde), Fix b (methanol), Permeab
Colors	Blue
Excitation/Emission	352/458 nm (with DN

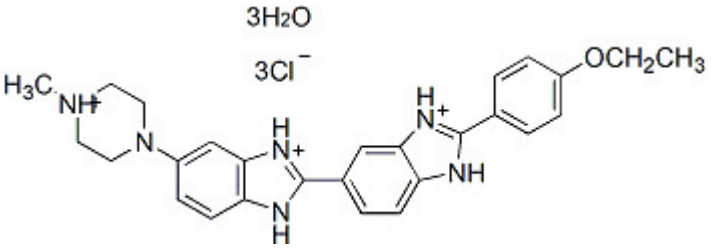
Product Description

Hoechst dyes are cell membrane-permeant, minor groove-binding blue fluorescent DNA stains. These dyes are widely used in cell cycle and apoptosis studies as nuclear counterstains. Biotium offers Hoechst 33258 and Hoechst 33342 dyes in both solution or powder forms. Both dyes are spectrally similar but Hoechst 33258 is slightly more water soluble than Hoechst 33342. The dyes can be used to stain live or fixed cells in buffer or medium at 1 ug/mL, with no wash step required.

Hoechst can also be used to stain live bacteria (gram-positive and gram-negative), but in live yeast the staining is weak and not nuclear. Check out our tech tip on Hoechst & DAPI Staining, which includes helpful tips and detailed protocols for staining live and fixed cells and tissues. Also see our Cellular Stains Table for more information on how our dyes stain various organisms.



Hoechst 33258, pentahydrate



Hoechst 33342, trihydrochloride trihydrate

Biotium also offers unique NucSpot® Nuclear Stains for bright and specific nuclear staining in dead or fixed cells. The stains are available in a wide range of colors from green to near-IR. We also offer DAPI nuclear stains in powder or solution.

Hoechst Products

Product	Catalog Number	MW	Unit Size	λEx/λEm	Format
Hoechst 33258, 10 mg/mL in Water	40044	533.88	10 mL	352/458 nm	Yellow solution
Hoechst 33258, pentahydrate	40045	623.96	100 mg	352/458 nm	Yellow solid
Hoechst 33342, 10 mg/mL in Water	40046	561.93	10 mL	350/461 nm	Yellow solution
Hoechst 33342, trihydrochloride trihydrate	40047	615.98	100 mg	350/461 nm	Yellow solid

Having trouble with your experiment? See our section on troubleshooting tips for fluorescent staining.