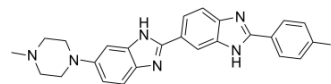


## para-iodoHoechst 33258

Cat. No.:	HY-15632
CAS No.:	158013-43-5
Molecular Formula:	C <sub>25</sub> H <sub>23</sub> IN <sub>6</sub>
Molecular Weight:	534.39
Target:	Others
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 20.5 mg/mL (38.36 mM; Need ultrasonic and warming)

Concentration	Mass			
	1 mg	5 mg	10 mg	
1 mM	1.8713 mL	9.3565 mL	18.7129 mL	
5 mM	0.3743 mL	1.8713 mL	3.7426 mL	
10 mM	0.1871 mL	0.9356 mL	1.8713 mL	

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

para-iodoHoechst 33258 is part of a family of blue fluorescent dyes used to stain DNA. Hoechst 33258 is a cell dye for DNA quantitation. IC50 Value: These Bis-benzimides were originally developed by Hoechst AG, which numbered all their compounds so that the dye Hoechst 33342 is the 33342nd compound made by the company. There are three related Hoechst stains: Hoechst 33258, Hoechst 33342, and Hoechst 34580. The dyes Hoechst 33258 and Hoechst 33342 are the ones most commonly used and they have similar excitation/emission spectra. Both dyes are excited by ultraviolet light at around 350 nm, and both emit blue/cyan fluorescent light around an emission maximum at 461 nm. Unbound dye has its maximum fluorescence emission in the 510-540 nm range. Hoechst dyes are soluble in water and in organic solvents such as dimethyl formamide or dimethyl sulfoxide. Concentrations can be achieved of up to 10 mg/mL. Aqueous solutions are stable at 2-6 °C for at least six months when protected from light. For long-term storage the solutions are instead frozen at ≤-20 °C. The dyes bind to the minor groove of double-stranded DNA with a preference for sequences rich in adenine and thymine. Although the dyes can bind to all nucleic acids, AT-rich double-stranded DNA strands enhance fluorescence considerably. Hoechst dyes are cell-permeable and can bind to DNA in live or fixed cells. Therefore, these stains are often called supravital, which means that cells survive a treatment with these compounds. Cells that express specific ATP-binding cassette transporter proteins can also actively transport these stains out of their cytoplasm.

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## REFERENCES

- [1]. Portugal J, Waring MJ. Assignment of DNA binding sites for 4',6-diamidine-2-phenylindole and bisbenzimidazole (Hoechst 33258). A comparative footprinting study. *Biochimica et Biophysica Acta* 949 (2): 158-68.
- [2]. a b c "Hoechst Stains". Invitrogen (Molecular Probes).
- [3]. Portugal J, Waring MJ. Assignment of DNA binding sites for 4',6-diamidine-2-phenylindole and bisbenzimidazole (Hoechst 33258). A comparative footprinting study. *Biochimica et Biophysica Acta* 949 (2): 158-68.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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