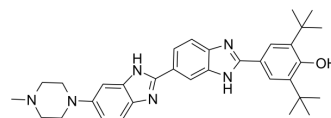


## Hoechst 33258 analog 6

Cat. No.:	HY-15631
CAS No.:	129244-66-2
Molecular Formula:	C <sub>33</sub> H <sub>40</sub> N <sub>6</sub> O
Molecular Weight:	536.71
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 : 25 mg/mL (46.58 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	1.8632 mL	9.3160 mL	18.6320 mL
				5 mM	0.3726 mL	1.8632 mL	3.7264 mL
10 mM				0.1863 mL	0.9316 mL	1.8632 mL	
Please refer to the solubility information to select the appropriate solvent.							
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (4.66 mM); Clear solution						
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (4.66 mM); Suspended solution; Need ultrasonic						

### BIOLOGICAL ACTIVITY

Description	<p>Hoechst 33258 analog 6 is a analog of Hoechst stains(Hoechst 33258), which are part of a family of blue fluorescent dyes used to stain DNA. IC50 Value: Target: These Bis-benzimidides 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</p>
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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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## CUSTOMER VALIDATION

- Redox Biol. 2019 Sep;26:101254.
- Free Radical Bio Med. 2020 May 20;152:632-649.

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## REFERENCES

- [1]. Latt SA, Stetten G, Juergens LA, Recent developments in the detection of deoxyribonucleic acid synthesis by 33258 Hoechst fluorescence. The journal of histochemistry and cytochemistry : official journal of the Histochemistry Society 23 (7): 493-505.
- [2]. a b c "Hoechst Stains". Invitrogen (Molecular Probes).
- [3]. Portugal J, Waring MJ. Assignment of DNA binding sites for 4',6-diamidino-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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