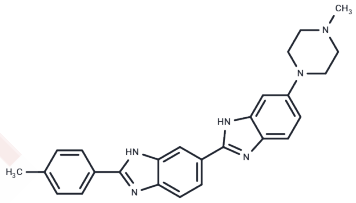
Data Sheet (Cat.No.T19005)

TargetMol

Hoechst 33258 analog 3

Chemical Properties



CAS No. : 23554-98-5

Formula: C26H26N6

Molecular Weight: 422.52

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Hoechst 33258 analog 3 is part of a family of blue fluorescent dyes used to stain DNA.
Targets(IC50)	Others,Autophagy
In vitro	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 dimethylformamide 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. 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.
Cell Research	Instructions 1. Dissolution and dilution: Hoechst 33258 Analog 3 is usually dissolved in DMSO (if applicable) or PBS. Before use, the dye can be diluted according to the concentration recommended by the manufacturer. The generally recommended staining concentration is 10ug/ml, and the specific concentration needs to be optimized according to the experimental requirements. 2. Staining steps: a. Fixation: If cells need to be fixed (for example, with formaldehyde or ice-cold methanol), fix them first. b. Staining: Add an appropriate amount of Hoechst 33258 Analog 3 solution to the cell culture plate and stain for about 15-30 minutes at room temperature. c. Rinse: Gently wash the cells with PBS or an appropriate buffer to remove unbound dye. 3. Fluorescence microscopy: The stained cells can be observed under ultraviolet light. Hoechst 33258 Analog 3 emits blue fluorescence, usually with an excitation light of 360-380 nm and an emission light in the range of 450-470 nm.

Cell Research	The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 3.57 mg/mL (8.45 mM),Sonication and heating to 70℃ are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3668 mL	11.8338 mL	23.6675 mL
5 mM	0.4734 mL	2.3668 mL	4.7335 mL
10 mM	0.2367 mL	1.1834 mL	2.3668 mL
50 mM	0.0473 mL	0.2367 mL	0.4734 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Arutyunyan AF,et al. [Synthesis of a Bisbenzoxazole Analogue of Hoechst 33258 as a Potential GC-Selective DNA Ligand]. Mol Biol (Mosk). 2024 May-Jun;58(3):482-492. Russian. PMID: 39707858.

Yang L, et al. Hypocrellin A exerts antitumor effects by inhibiting the FGFR1 signaling pathway in non-small cell lung cancer. Phytomedicine. 2022 Mar;97:153924. doi: 10.1016/j.phymed.2022.153924. Epub 2022 Jan 4. Erratum in: Phytomedicine. 2022 Jun;100:154042.

Wang Z, et al. Helichrysetin and TNF-α synergistically promote apoptosis by inhibiting overactivation of the NF-κB and EGFR signaling pathways in HeLa and T98G cells. Int J Mol Med. 2021 Apr;47(4):49.