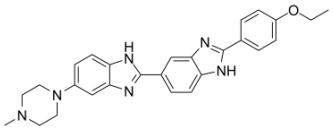
Hoechst 33342

Cat. No.:	HY-15559
CAS No.:	23491-52-3
Molecular Formula:	$C_{27}H_{28}N_6O$
Molecular Weight:	452.55
Target:	Autophagy
Pathway:	Autophagy
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 10 mg/mL (22.10 mM; Need ultrasonic)

H_2O : 1 mg/mL (2.21 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions

Mass / Solvent / Concentration	1 mg	5 mg	10 mg
1 mM	2.2097 mL	11.0485 mL	22.0970 mL
5 mM	0.4419 mL	2.2097 mL	4.4194 mL
10 mM	0.2210 mL	1.1049 mL	2.2097 mL

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

BIOLOGICAL ACTIVITY

Description

Hoechst 33342 is a DNA minor groove binder used fluorochrome for visualizing cellular DNA.

IC_{50} & Target

Dye reagent[1]

DNA Stain[1]

In Vitro

Hoechst 33342 binds to adenine-thymine-rich regions of DNA in the minor groove. On binding to DNA, the fluorescence greatly increases. This protocol describes the use of Hoechst 33342 to label nuclear DNA of cells grown in culture. Hoechst 33342 can also be used to stain fixed cells by substituting Hoechst 33342 for DAPI[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]

Labeling Nuclear DNA with Hoechst 33342[1]Step 1, Dilute the Hoechst stock solution 1:100 in H_2O for use in labeling. Step 2, Aspirate the cell medium from cells grown on coverslips. Rinse the cells three times with PBS^+. Step 3, Incubate the cells in

the Hoechst labeling solution (from Step 1) for 10-30 min at room temperature. Step 4, Aspirate the labeling solution. Rinse the cells three times in PBS^+.Step 5, Mount the coverslips.Step 6, Image the cells (λex ~353 nm, λem ~483 nm for Hoechst 33342)[1].

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CUSTOMER VALIDATION

- ACS Appl Mater Interfaces. 2018 Sep 12;10(36):30081-30091.
- Environ Sci Technol. 2017 Sep 19;51(18):10834-10842.
- Acta Biomater. 2020 Sep 1;113:289-304.
- Drug Deliv. 2017 Nov;24(1):1453-1459.
- Cancer Biol Ther. 2018;19(12):1193-1203.

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REFERENCES

[1]. Chazotte B. Labeling nuclear DNA with hoechst 33342. Cold Spring Harb Protoc. 2011 Jan 1;2011(1):pdb.prot5557.

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