



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

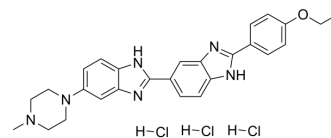
[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

## Hoechst 33342 trihydrochloride

<b>Cat. No.:</b>	HY-15559A
<b>CAS No.:</b>	875756-97-1
<b>Molecular Formula:</b>	C <sub>27</sub> H <sub>31</sub> Cl <sub>3</sub> N <sub>6</sub> O
<b>Molecular Weight:</b>	561.93
<b>Target:</b>	Autophagy
<b>Pathway:</b>	Autophagy
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * The compound is unstable in solutions, freshly prepared is recommended.



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : ≥ 46 mg/mL (81.86 mM)																				
	H <sub>2</sub> O : ≥ 5.6 mg/mL (9.97 mM)																				
	* "≥" means soluble, but saturation unknown.																				
<b>Preparing Stock Solutions</b>	<table border="1"> <thead> <tr> <th rowspan="2">Solvent Concentration</th> <th rowspan="2">Mass</th> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> <tr> <th>1 mM</th> <th>5 mM</th> <th>10 mM</th> </tr> </thead> <tbody> <tr> <td>1 mM</td> <td>1.7796 mL</td> <td>8.8979 mL</td> <td>17.7958 mL</td> </tr> <tr> <td>5 mM</td> <td>0.3559 mL</td> <td>1.7796 mL</td> <td>3.5592 mL</td> </tr> <tr> <td>10 mM</td> <td>0.1780 mL</td> <td>0.8898 mL</td> <td>1.7796 mL</td> </tr> </tbody> </table>	Solvent Concentration	Mass	1 mg	5 mg	10 mg	1 mM	5 mM	10 mM	1 mM	1.7796 mL	8.8979 mL	17.7958 mL	5 mM	0.3559 mL	1.7796 mL	3.5592 mL	10 mM	0.1780 mL	0.8898 mL	1.7796 mL
	Solvent Concentration			Mass	1 mg	5 mg	10 mg														
		1 mM	5 mM		10 mM																
	1 mM	1.7796 mL	8.8979 mL	17.7958 mL																	
5 mM	0.3559 mL	1.7796 mL	3.5592 mL																		
10 mM	0.1780 mL	0.8898 mL	1.7796 mL																		
Please refer to the solubility information to select the appropriate solvent.																					
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 3.33 mg/mL (5.93 mM); Clear solution; Need ultrasonic and warming and heat to 60°C																				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Hoechst 33342 trihydrochloride is a marker dye in Hoechst series. Hoechst is A live nuclear marker dye. Hoechst binds to the grooves in the DNA double strand, which tends to be A/ T-rich DNA strand. Although it binds to all nucleic acids, the A/ T-rich double strand DNA significantly enhances fluorescence intensity Therefore,Hoechst dye can be used for living cell labeling. The fluorescence intensity of Hoechst dye increases with the increase of pH of solution <sup>[1]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	Dye reagent <sup>[1]</sup> DNA Stain <sup>[1]</sup>
<b>In Vitro</b>	General Protocol Preparation of Hoechst working solution 1.1 Preparation of the stock solution Dissolve 10 mg of in 5 mL ddH <sub>2</sub> O

Note: It is recommended to store the stock solution at 4°C or -20°C away from light and avoid repetitive freeze-thaw cycles.

#### 1.2 Preparation of Hoechst working solution

Dilute the stock solution in serum-free cell culture medium or PBS to obtain final concentration 10 µg/mL Hoechst working solution.

Note: Please adjust the concentration of Hoechst working solution according to the actual situation.

##### 1. Cell staining

###### 2.1 Suspension cells 6-well plate

a. Centrifuge at 1000 g at 4°C for 3-5 minutes and then discard the supernatant. Wash twice with PBS, 5 minutes each time. The cell density is  $1 \times 10^6$ /mL.

b. Add 1 mL of working solution, and then incubate at room temperature for 3-10 minutes.

c. Centrifuge at 400 g at 4°C for 3-4 minutes and then discard the supernatant.

d. Wash twice with PBS, 5 minutes each time.

e. Resuspend cells with serum-free cell culture medium or PBS. Observation by fluorescence microscopy or flow cytometry.

###### 2.2 Adherent cells

a. Culture adherent cells on sterile coverslips.

b. Remove the coverslip from the medium and aspirate excess medium.

c. Add 100 µL of working solution, gently shake it to completely cover the cells, and then incubate at room temperature for 3-10 minutes.

d. Wash twice with medium, 5 minutes each time. Observation by fluorescence microscopy or flow cytometry.

#### Storage

4°C, 1 year. Protect from light

#### Precautions

1. Please adjust the concentration of Hoechst working solution according to the actual situation.

2. This product is for R&D use only, not for drug, household, or other uses.

3. For your safety and health, please wear a lab coat and disposable gloves to operate.

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

## PROTOCOL

### Cell Assay<sup>[1]</sup>

Labeling Nuclear DNA with Hoechst 33342<sup>[1]</sup> Step 1, Dilute the Hoechst stock solution 1:100 in H<sub>2</sub>O for use in labeling. Step 2, Aspirate the cell medium from cells grown on coverslips. Rinse the cells three times with PBS<sup>+</sup>. 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<sup>+</sup>. Step 5, Mount the coverslips. Step 6, Image the cells ( $\lambda_{ex}$  ~353 nm,  $\lambda_{em}$  ~483 nm for Hoechst 33342)<sup>[1]</sup>.

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

## CUSTOMER VALIDATION

- Science. 2022 Nov 18;378(6621):eabq7361.
- Cell Host Microbe. 2023 Nov 8;31(11):1820-1836.e10.
- Bioact Mater. 2022 Mar 17;18:91-103.
- ACS Nano. 2023 Jul 23.
- Chem Eng J. 2023 Dec 2, 147850.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

---

## REFERENCES

---

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

---

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA