



# SZABO SCANDIC

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## 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

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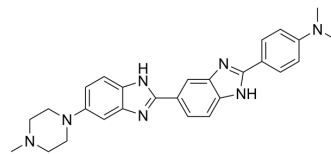
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## Hoechst 34580

Cat. No.:	HY-15560
CAS No.:	23555-00-2
Molecular Formula:	C <sub>27</sub> H <sub>29</sub> N <sub>7</sub>
Molecular Weight:	451.57
Target:	Amyloid-β
Pathway:	Neuronal Signaling
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 47 mg/mL (104.08 mM)

\* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		Concentration	1 mg	5 mg	10 mg
	1 mM		2.2145 mL	11.0725 mL	22.1450 mL
	5 mM		0.4429 mL	2.2145 mL	4.4290 mL
	10 mM		0.2214 mL	1.1072 mL	2.2145 mL

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

### BIOLOGICAL ACTIVITY

#### Description

Hoechst 34580 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>.

#### IC<sub>50</sub> & Target

Amyloid-β<sup>[1]</sup>

#### In Vitro

General Protocol

Preparation of Hoechst working solution

1.1 Preparation of the stock solution

Dissolve 10 mg of in 5 mL DMSO

Note: It is recommended to store the stock solution at 4° or -20° 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  $\mu$ L 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.

#### 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.

## CUSTOMER VALIDATION

- J Lipid Res. 2023 Jan 31;100338.
- PLoS One. 2019 Mar 18;14(3):e0213794.

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

## REFERENCES

[1]. Thai NQ, et al. Discovery of DNA dyes Hoechst 34580 and 33342 as good candidates for inhibiting amyloid beta formation: in silico and in vitro study. J Comput Aided Mol Des. 2016 Aug;30(8):639-50.

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

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