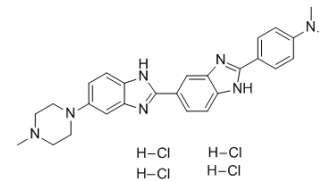


## Hoechst 34580 tetrahydrochloride

Cat. No.:	HY-15560B
Molecular Formula:	C <sub>27</sub> H <sub>33</sub> Cl <sub>4</sub> N <sub>7</sub>
Molecular Weight:	597.41
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

H<sub>2</sub>O : 41.2 mg/mL (68.96 mM; Need ultrasonic and warming)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.6739 mL	8.3695 mL	16.7389 mL
	5 mM	0.3348 mL	1.6739 mL	3.3478 mL
	10 mM	0.1674 mL	0.8369 mL	1.6739 mL

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

### BIOLOGICAL ACTIVITY

#### Description

Hoechst 34580 tetrahydrochloride is a cell-permeable fluorescent dye for staining DNA and nuclei.

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

Amyloid-β<sup>[1]</sup>

#### In Vitro

Hoechst 34580 prefers to locate near hydrophobic regions with binding affinity with the inhibition constant IC<sub>50</sub> of 0.86±0.05 μM for Hoechst 34580. Hoechst 34580 is a good candidate for treating the Alzheimer's disease by inhibiting Aβ formation. 50 μM Aβ<sub>42</sub> solutions co-incubated with 100, 25, 12.5, 3.125, 0.78, and 0.1, 0.01 μM Hoechst 34580 at 37 °C for 70 h. Hoechst 34580 can inhibit the aggregation of Aβ<sub>42</sub> in a dose-dependent manner. And the half-maximal concentration (IC<sub>50</sub>) is examined. The IC<sub>50</sub> is obtained by measuring the concentration of Hoechst 34580 while maintaining the Aβ<sub>42</sub> concentration which gave 0.86±0.05 μM for Hoechst 34580<sup>[1]</sup>.

### CUSTOMER VALIDATION

- PLoS One. 2019 Mar 18;14(3):e0213794.

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

## REFERENCES

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[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.

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

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