



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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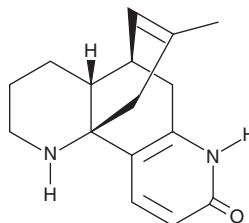
# PRODUCT INFORMATION



## Huperzine B

Item No. 35629

**CAS Registry No.:** 103548-82-9  
**Formal Name:** 2,3,4,4aR,5R,6-hexahydro-12-methyl-1H-5,10bR-propeno-1,7-phenanthroline-8(7H)-one  
**Synonyms:** Fordimine, (-)-Huperzine B  
**MF:** C<sub>16</sub>H<sub>20</sub>N<sub>2</sub>O  
**FW:** 256.3  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 231, 313 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Plant/*Lycopodium serratum*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Huperzine B is supplied as a solid. A stock solution may be made by dissolving the huperzine B in the solvent of choice, which should be purged with an inert gas. Huperzine B is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of huperzine B in ethanol is approximately 2 mg/ml and approximately 1 mg/ml in DMSO and DMF.

### Description

Huperzine B is an alkaloid originally isolated from *H. serrata* with neuroprotective activity.<sup>1</sup> It selectively binds to acetylcholinesterase (AChE) over butyrylcholinesterase (BChE; IC<sub>50</sub>s = 8.2 and 157 μM, respectively).<sup>2</sup> It is also an antagonist at the NMDA receptor (IC<sub>50</sub> = 316.6 μM).<sup>3</sup> Huperzine B (0.1-100 μM) increases the viability of PC12 cells in a model of hydrogen peroxide-induced cell injury.<sup>1</sup> It increases glutathione peroxidase (GPX) and catalase (CAT) activities, and decreases malondialdehyde (MDA) levels, in PC12 cells in a model of hydrogen peroxide-induced cell injury when used at concentrations ranging from 10 to 100 μM.

### References

1. Zhang, H.Y. and Tang, X.C. Huperzine B, a novel acetylcholinesterase inhibitor, attenuates hydrogen peroxide induced injury in PC12 cells. *Neurosci. Lett.* **292(1)**, 41-44 (2000).
2. Feng, S., Xia, Y., Han, D., et al. Synthesis and acetylcholinesterase inhibition of derivatives of huperzine B. *Bioorg. Med. Chem. Lett.* **15(3)**, 523-526 (2005).
3. Wang, X.-D., Chen, X.-Q., Yang, H.-H., et al. Comparison of the effects of cholinesterase inhibitors on [<sup>3</sup>H]MK-801 binding in rat cerebral cortex. *Neurosci. Lett.* **272(1)**, 21-24 (1999).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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