

# PRODUCT INFORMATION

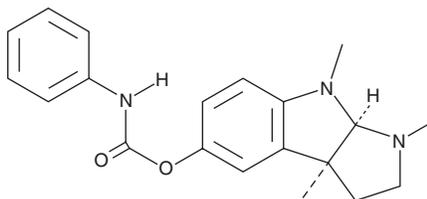


## Phenserine

Item No. 21060

**CAS Registry No.:** 101246-66-6  
**Formal Name:** (3aS,8aR)-5-(N-phenylcarbamate)  
1,2,3,3a,8,8a-hexahydro-1,3a,8-  
trimethyl-pyrrolo[2,3-b]indol-5-ol  
**Synonyms:** (-)-Eseroline phenylcarbamate,  
(-)-N-Phenylcarbamoyleseroline,  
(-)-Phenserine

**MF:** C<sub>20</sub>H<sub>23</sub>N<sub>3</sub>O<sub>2</sub>  
**FW:** 337.4  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 238, 252, 310 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Phenserine is supplied as a crystalline solid. A stock solution may be made by dissolving the phenserine in the solvent of choice, which should be purged with an inert gas. Phenserine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of phenserine in ethanol and DMF is approximately 25 mg/ml and approximately 30 mg/ml in DMSO.

Phenserine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, phenserine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Phenserine has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Phenserine is an analog of physostigmine that inhibits acetylcholinesterase with an IC<sub>50</sub> value of 24 nM.<sup>1,2</sup> It is reported to prevent amyloid-β production by diminishing the expression of amyloid-β precursor protein.<sup>3</sup>

### References

1. Yu, Q.S., Zhu, X., Holloway, H.W., *et al.* Anticholinesterase activity of compounds related to geneserine tautomers. *N*-oxides and 1,2-oxazines. *J. Med. Chem.* **45**(17), 3684-3691 (2002).
2. Luo, W., Yu, Q.S., Kulkarni, S.S., *et al.* Inhibition of human acetyl- and butyrylcholinesterase by novel carbamates of (-)- and (+)-tetrahydrofurobenzofuran and methanobenzodioxepine. *J. Med. Chem.* **49**(7), 2174-2185 (2006).
3. Utsuki, T., Yu, Q.-s., Davidson, D., *et al.* Identification of novel small molecule inhibitors of amyloid precursor protein synthesis as a route to lower Alzheimer's disease amyloid-β peptide. *J. Pharmacol. Exp. Ther.* **318**(2), 855-862 (2006).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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