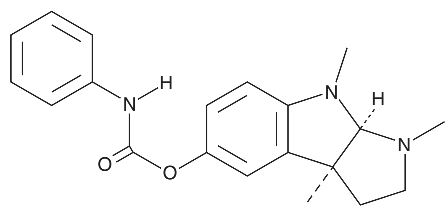
PRODUCT INFORMATION

Cayman
CHEMICAL

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: $C_{20}H_{23}N_3O_2$
FW: 337.4
Purity: ≥95%
UV/Vis.: λ_{max}: 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_{50} value of 24 nM.[1,2] It is reported to prevent amyloid-β production by diminishing the expression of amyloid-β precursor protein.[3]

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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM