

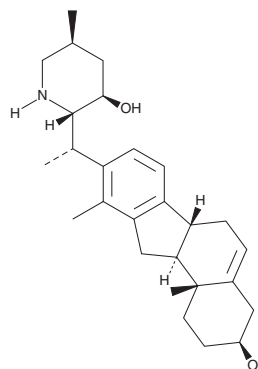
PRODUCT INFORMATION



Veratramine

Item No. 11724

CAS Registry No.: 60-70-8
Formal Name: 5S-methyl-2S-[1S-[2,3S,4,6,6aR,11,11aS,11bR]-octahydro-3R-hydroxy-10,11b-dimethyl-1H-benzo[a]fluoren-9-yl]ethyl]-3-piperidinol
Synonyms: NSC 17821, NSC 23880
MF: C₂₇H₃₉NO₂
FW: 409.6
Purity: ≥95%
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

Veratramine is supplied as a crystalline solid. A stock solution may be made by dissolving the veratramine in the solvent of choice. Veratramine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of veratramine in these solvents is approximately 5, 10, and 0.3 mg/ml, respectively.

Veratramine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, veratramine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Veratramine has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The hedgehog (Hh) signaling pathway, which is blocked by cyclopamine (Item No. 11321), plays a key role in morphogenesis and has potential applications in the treatment of cancer.¹⁻³ Veratramine, a teratogenic steroidal alkaloid isolated from the corn lily (*Veratrum* sp.), is an analog of cyclopamine that can inhibit the Hh signaling-dependent proliferation of NIH/3T3 cells at 8 μM.⁴ Additionally, veratramine has anti-thrombotic activity as it dose dependently inhibits platelet aggregation in rabbits *ex vivo*. While it may be most useful as a signal transduction inhibitor for treating tumors, veratramine also induces serotonin release and inhibits its re-uptake in the CNS.^{5,6}

References

1. Heretsch, P., Tzagkaroulaki, L., and Giannis, A. Cyclopamine and hedgehog signaling: Chemistry, biology, medical perspectives. *Angew. Chem. Int. Ed.* **49**, 3418-3427 (2010).
2. Xu, F.-G., Ma, Q.-Y., and Wang, Z. Blockade of hedgehog signaling pathway as a therapeutic strategy for pancreatic cancer. *Cancer Lett.* **283**, 119-124 (2009).
3. Mahindroo, N., PUNCHIHewa, C., and Fujii, N. Hedgehog-Gli signaling pathway inhibitors as anticancer agents. *J. Med. Chem.* **52(13)**, 3829-3845 (2009).
4. Tang, J., Li, H.-L., Shen, Y.-H., *et al.* Antitumor and antiplatelet activity of alkaloids from *Veratrum dahuricum*. *Phytother. Res.* **24**, 821-826 (2010).
5. Nagata, R., Izumi, K., Iwata, S., *et al.* Mechanisms of veratramine-induced 5-HT syndrome in mice. *Jpn. J. Pharmacol.* **55**, 139-146 (1991).
6. Fukuma, K. Actions of veratramine on the central nervous system. *Jpn. J. Pharmacol.* **5**, 102-114 (1956).

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.

Copyright Cayman Chemical Company, 11/11/2022

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