

PRODUCT INFORMATION



(S)-Reticuline

Item No. 42219

CAS Registry No.: 485-19-8

Formal Name: (1S)-1,2,3,4-tetrahydro-1-[(3-hydroxy-4-methoxyphenyl)methyl]-6-methoxy-2-methyl-7-isoquinolinol

Synonyms: Reticuline, (+)-Reticuline, D-Reticuline

MF: $C_{19}H_{23}NO_4$

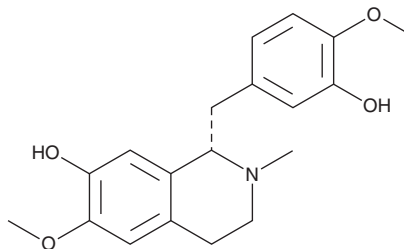
FW: 329.4

Purity: $\geq 98\%$

Supplied as: A 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

(S)-Reticuline is supplied as a solid. A stock solution may be made by dissolving the (S)-reticuline in the solvent of choice, which should be purged with an inert gas. (S)-Reticuline is slightly soluble (0.1-1 mg/ml) in DMSO.

Description

(S)-Reticuline is a benzyltetrahydroisoquinoline alkaloid that has been found in *P. somniferum* and has diverse biological activities.¹⁻⁵ It inhibits acetylcholinesterase (AChE) and butyrylcholinesterase (BChE; IC_{50} s = 301.01 and 65.04 μM , respectively).² (S)-Reticuline (100 μM) inhibits the aggregation of washed isolated rabbit platelets induced by platelet-activating factor (PAF), collagen, or arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607).³ It also inhibits barium currents (I_{Ba}) in A7r5 rat embryonic thoracic aorta cells (IC_{50} = 39.6 μM) and prevents calcium chloride-induced contractions in isolated rat aortic rings.⁴ (S)-Reticuline (0.25 mg/kg) decreases airway resistance and bronchoalveolar lavage fluid (BALF) neutrophil, eosinophil, and lymphocyte infiltration in a mouse model of obesity-associated asthma induced by a high-fat diet and house dust mite (*D. farinae*) extracts.⁵

References

1. Brochmann-Hanssen, E. and Nielsen, B. (+)-Reticuline--a new opium alkaloid. *Tetrahedron Lett.* **18**, 1271-1274 (1965).
2. Wan Othman, W.N.N., Liew, S.Y., Khaw, K.Y., et al. Cholinesterase inhibitory activity of isoquinoline alkaloids from three *Cryptocarya* species (Lauraceae). *Bioorg. Med. Chem.* **(18)**, 4464-4469 (2016).
3. Chen, J.-J., Chang, Y.-L., Teng, C.-M., et al. Anti-platelet aggregation alkaloids and lignans from *Hernandia nymphaeifolia*. *Planta Med.* **66(3)**, 251-256 (1999).
4. Medeiros, M.A., Nunes, X.P., Barbosa-Filho, J.M., et al. (S)-reticuline induces vasorelaxation through the blockade of L-type Ca^{2+} channels. *Naunyn Schmiedeberg's Arch Pharmacol.* **379(2)**, 115-125 (2008).
5. Lyu, X., Liu, J., Liu, Z., et al. Anti-inflammatory effects of reticuline on the JAK2/STAT3/SOCS3 and p38 MAPK/NF- κB signaling pathway in a mouse model of obesity-associated asthma. *Clin. Respir. J.* **18(1)**, (2024).

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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