

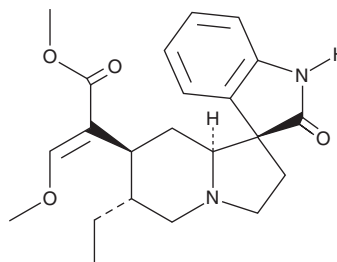
PRODUCT INFORMATION



Rhyncophylline

Item No. 37946

CAS Registry No.: 76-66-4
Formal Name: (αE,1'R,6'R,7'S,8'aS)-6'-ethyl-1,2,2',3',6',7',8',8'a-octahydro-α-(methoxymethylene)-2-oxo-spiro[3H-indole-3,1'(5'H)-indolizine]-7'-acetic acid, methyl ester
Synonyms: NSC 21731, Mitrinermine
MF: C₂₂H₂₈N₂O₄
FW: 384.5
Purity: ≥98%
UV/Vis.: λ_{max}: 244 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Uncaria tomentosa*



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

Laboratory Procedures

Rhyncophylline is supplied as a crystalline solid. A stock solution may be made by dissolving the rhyncophylline in the solvent of choice, which should be purged with an inert gas. Rhyncophylline is soluble in organic solvents such as chloroform and dimethyl formamide. The solubility of rhyncophylline in these solvents is approximately 30 and 1 mg/ml, respectively.

Description

Rhyncophylline is an alkaloid that has been found in *U. rhyncophylla* and has diverse biological activities.¹⁻⁴ It inhibits aggregation of isolated rabbit platelets induced by arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607), collagen, or ADP (IC₅₀s = 0.72, 0.74, and 0.67 mmol/L).¹ *In vivo*, rhyncophylline (0.25 mg/kg) decreases the number of sleep-wake cycles and increases total sleep time and rapid eye movement (REM) sleep in rats.² It reduces infarct volume and reverses sensory-motor and spatial memory defects in a mouse model of stroke induced by middle cerebral artery occlusion (MCAO) when administered at a dose of 40 mg/kg.³ Rhyncophylline (10 and 20 mg/kg) also reduces hippocampal production of reactive oxygen species (ROS) and malondialdehyde (MDA) levels and decreases escape latency in the Morris water maze test in a mouse model of Alzheimer's disease induced by amyloid-β (1-42) (Aβ₄₂).⁴

References

1. Chen, C.X., Jin, R.M., Li, Y.K., *et al.* Inhibitory effect of rhyncophylline on platelet aggregation and thrombosis. *Zhongguo Yao Li Xue Bao* **13**(2), 126-130 (1992).
2. Yoo, J.H., Ha, T.-W., Hong, J.T., *et al.* Rhyncophylline, one of major constituents of *Uncariae Ramulus et Uncus* enhances oentobarbital-induced sleep behaviors and rapid eye movement sleep in rodents. *Nat. Prod. Sci.* **22**(4), 263 (2016).
3. Wang, L., Wang, Y., Chen, Y., *et al.* Rhyncophylline ameliorates cerebral ischemia by improving the synaptic plasticity in a middle cerebral artery occlusion induced stroke model *Eur. J. Pharmacol.* **940**, 175390 (2023).
4. Jiang, P., Chen, L., Xu, J., *et al.* Neuroprotective effects of rhyncophylline against Aβ₁₋₄₂-induced oxidative stress, neurodegeneration, and memory impairment via Nrf2-ARE activation. *Neurochem. Res.* **46**(9), 2439-2450 (2021).

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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