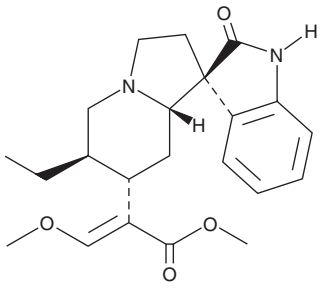
PRODUCT INFORMATION

Isorhynchophylline

Item No. 29650

CAS Registry No.:	6859-01-4
Formal Name:	(αE,1′S,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
Synonym:	(+)-Isorhynchophylline
MF:	$C_{22}H_{28}N_2O_4$
FW:	384.5
Purity:	≥95%
UV/Vis.:	λ_{max}: 242 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Uncaria rhynchophylla*



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

Laboratory Procedures

Isorhynchophylline is supplied as a solid. A stock solution may be made by dissolving the isorhynchophylline in the solvent of choice, which should be purged with an inert gas. Isorhynchophylline is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of isorhynchophylline in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Isorhynchophylline is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, isorhynchophylline should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Isorhynchophylline 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

Isorhynchophylline is an oxindole alkaloid that has been found in *Uncaria* and has diverse biological activities, including neuroprotective, anticancer, and antihypertensive properties.[1-4] It inhibits decreases in cell viability and increases in intracellular levels of reactive oxygen species (ROS) and malondialdehyde (MDA) induced by amyloid-β (25-35) (Aβ (25-35); Item No. 24155) in PC12 cells in a concentration-dependent manner.[1] Isorhynchophylline (30 and 100 µM) attenuates decreases in population spike amplitudes in the CA1 region of a rat hippocampal slice model of ischemia induced by oxygen and D-glucose deprivation.[2] It decreases the viability of HepG2, A549, BxPC-3, Caki-1, RPMI-8226, and 786-O cells (IC_{50}s = 130-292 µM).[3] In HepG2 cells, isorhynchophylline induces apoptosis, inhibits cell migration in a wound healing assay, and decreases invasion in a Matrigel™ assay. Isorhynchophylline (0.1% in the diet) decreases right ventricular end systolic pressure, hypertrophy, and fibrosis in a rat model of pulmonary arterial hypertension induced by monocrotaline (Item No. 16666).[4]

References

1. Xian, Y.-F., Lin, Z.-X., Mao, Q.-Q., *et al. Cell Mol. Neurobiol.* **32(3)**, 353-360 (2012).
2. Kang, T.-H., Murakami, Y., Takayama, H., *et al. Life Sci.* **76(3)**, 331-343 (2004).
3. Lee, H., Baek, S.H., Lee, J.H., *et al. Int. J. Mol. Sci.* **18(5)**, E1095 (2017).
4. Guo, H., Zhang, H., Cui, Y., *et al. Biochem. Biophys. Res. Commun.* **450(1)**, 729-734 (2014).

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