Natural Products

ChemFaces

Rhynchophylline Datasheet

5th Edition (Revised in January, 2017)

[Product Information]

Name: Rhynchophylline

Catalog No.: CFN98131

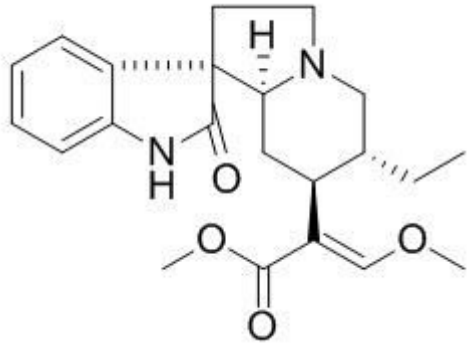
Cas No.: 76-66-4

Purity: >=98%

M.F: $C_{22}H_{28}N_2O_4$

M.W: 384.47

Physical Description: White cryst.



Synonyms: Methyl (16Z)-16-(methoxymethylidene)-2-oxocorynoxan-17-oate.

[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Synthetic precursor compounds;
4. Intermediates & Fine Chemicals;
5. Others.

[Source]

The herbs of *Uncaria rhynchophylla.*

[Biological Activity or Inhibitors]

Rhynchophylline and isorhynchophylline act as noncompetitive antagonists of the NMDA

receptor and that this property may contribute to the neuroprotective and anticonvulsant activity of the Uncaira species plant extracts.[1]

Rrhynchophylline suppresses inflammatory responses of microglia and may act as a potential therapeutic agent for various neurodegenerative diseases involving neuroinflammation.[2]

Rhynchophylline and uncaria rhynchophylla have antiepileptic effects in KA-induced seizures and are associated with the regulation of the innate immune system via a reduction in the level of superoxide anions, JNK phosphorylation, and NF-kappaB activation.[3]

Rhynchophylline can reduce cardiac dysfunction and improve survival via suppression of macrophage I-κBα phosphorylation in LPS-challenged mice, and suggest that it may be a potential agent for the treatment of septic cardiac dysfunction.[4]

Rhynchophylline can markedly inhibit rabbit platelet aggregation induced by ADP or thrombin possibly by depressing the inflow of Ca^{2+} and the rise of the cytoplasmic free calcium level in platelet.[5]

Rhynchophylline can reduce the systolic blood pressure (SBP) of spontaneously hypertensive rats (SHR) significantly, decrease plasma Ang II, ADMA, and AT1R levels, and promote serum NO and NOS levels, which has the protection of vascular endothelial function.[6]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method][7]

Mobile phase:0.01 M Triehthylamine in methanol- 0.01 M Triehthylamine in water =55:45 (adjusted with acetic acid to pH 7.5);

Flow rate:1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination:254 nm.

[Storage]

2-8℃, Protected from air and light, refrigerate or freeze.

[References]

[1] Kang T H, Murakami Y, Matsumoto K, *et al. Eur. J. Pharmacol.,2002 Nov 22;455(1): 27-34.*

[2] Song Y, Qu R, Zhu S, *et al. Phytother. Res.,2012 Oct;26(10):1528-33.*

[3] Chingliang H, Tinyun H, Su S Y, *et al. Am. J. Chin. Med.,2009;37(2):351-60.*

[4] Cao W, Wang Y, Lv X, *et al. Int. Immunopharmacol.,2012 Nov;14(3):243-51.*

[5] Xie X L, Gong Q H, Lu Y F, e*t al. Chinese Journal of Pharmacology & Toxicology, 2011, 25(1):68-71.*

[6] Tian L N, Gao H W, Long Z J, *et al. Chinese Traditional & Herbal Drugs, 2014, 45(15): 2210-3.*

[7] Wang J, Liu Z H, Long Y, *et al. Zhong Yao Cai, 2009 Jul;32(7):1134-7.*

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