Natural Products

ChemFaces

Tetrahydropalmatine Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Tetrahydropalmatine

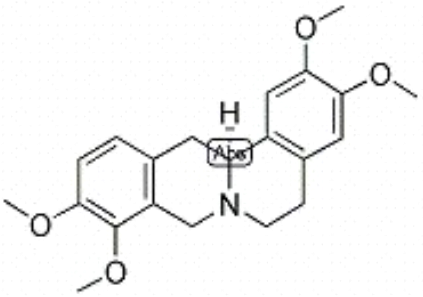
Catalog No.: CFN99553

Cas No.: 2934-97-6

Purity: >=98%

M.F: $C_{21}H_{25}NO_4$

M.W: 355.43



Physical Description: Powder

Synonyms: Rotundine; Rotundinum;

5,8,13,13a-Tetrahydro-2,3,9,10-tetramethoxy-6h-dibenzo[a,g]-quinolizine;

2,3,9,10-Tetramethoxy-5,8,13,13a-tetrahydro-6H-isoquino[3,2-a]-isoquinoline;

(13aS)-2,3,9,10-Tetramethoxy-5,8,13,13a-tetrahydro-6H-isoquino[3,2-a]-isoquinoline.

[Intended Use]

1. Reference standards;

2. Pharmacological research;

3. Synthetic precursor compounds;

4. Intermediates & Fine Chemicals;

5. Others.

[Source]

The tubers of *Corydalis yanhusuo* W. T. Wang ex Z. Y. Su et C. Y. Wu.

[Biological Activity or Inhibitors]

Levo-tetrahydropalmatine (L-THP), a dopamine (DA) D(1) and D(2) receptor antagonist purified from the Chinese herb *Stephanie*, appears to be effective in attenuating cocaine self-administration, cocaine-triggered reinstatement and cocaine-induced conditioned place preference in preclinical animal models; L-THP slightly elevates extracellular nucleus accumbens DA by itself, but dose-dependently potentiates cocaine-augmented DA, suggesting that a postsynaptic, rather than presynaptic, DA receptor antagonism underlies L-THP's actions on cocaine reward; together, the present data support the potential use ofLl-THP for treatment of cocaine addiction.[1]

dl-Tetrahydropalmatine (dl-THP) has been intensively studied for its sedative and hypnotic effects,dl-THP at defined low dosages acts as anxiolytics in mice, and the benzodiazepine site (BDS) mediates, at least in part, such anxiolytic effect of dl-THP.[2]

Tetrahydropalmatine can effectively protect endothelial cells against γ-irradiation injury, which can potentially be applied to the prevention of endothelial cell dysfunctions associated with ionizing irradiation-induced lung injury. [3]

DL-Tetrahydropalmatine possesses analgesic effects, it may act through inhibition of amygdaloid dopamine release to inhibit an epileptic attack.[4]

DL-tetrahydropalmatine acts through the 5-HT2 and/or D2-receptor antagonism in the hypothalamus to induce hypotension and bradycardia in rats.[5]

Levo-tetrahydropalmatine attenuates oxycodone-induced conditioned place preference in rats.[6]

[Solvent]

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

[HPLC Method][7]

Mobile phase: Methanol- H2O=75:25 ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 281 nm.

[Storage]

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

[References]

[1] Xi Z, Yang Z S, Li X, *et al. Neuropharmacology, 2007, 53(6):771-82.*

[2]Leung W C, Hui Z, Huen M, *et al. P. Neuro-Psychoph., 2003, 27(5):775-9.*

[3] Jing Y, Piao B K, Pei Y X, *et al. Life Sci., 2010, 87(1-2):55-63.*

[4] Chang C K, Lin M T. *Neurosci. Lett., 2001, 307(3):163-6.*

[5]Lin M T, Chueh F Y, Hsieh M T, *et al. Clin. Exp. Pharmacol. P. 1996, 23(8):738-42.*

[6] Liu Y L, Yan L D, Zhou P L, *et al. Eur. J. Pharmacol., 2009, 602(2-3):321-7.*

[7] Chao-Wu L, Shuo Z, Hai-Qing G, *et al. Eur. J. Drug Metab. Ph., 2011, 36(4):257-62.*

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