Natural Products

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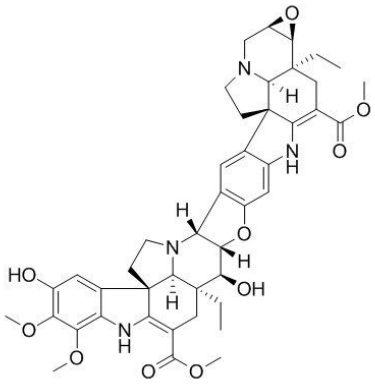
Conophylline Datasheet

4th Edition (Revised in July, 2016)

[Product Information]



Name: Conophylline

Catalog No.: CFN99473

Cas No.: 142741-24-0

Purity: > 98%

M.F: $C_{44}H_{50}N_4O_{10}$

M.W: 794.9

Physical Description: Yellow powder.

Synonyms: Polyervine;[8,15'-Biaspidospermidine]-3,3'-dicarboxylicacid,2,2',3,3'-tetradehydro-6',7':7,16'-diepoxy-6,15-dihydroxy-16,17-dimethoxy-,dimethyl-ester,(5a,6b,7a,8a,12b,19a)-(5'a,6'b,7'b,12'b,19'a)-;2H,22H-Indolo[2'',3'':7',8']pyrrolo[1'',2'',3'':1',8']quino[2',3':4,5]furo[2,3-b]oxireno[6,7]indolizino[1,8-fg]carbazole,[8,15'-biaspidospermidine]-3,3'-dicarboxylic acid deriv.

[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food and cosmetic research;
4. Synthetic precursor compounds;
5. Others.

[Source]

The leaves of *Tabernaemontana divaricata.*

[Biological Activity or Inhibitors]

Conophylline, is a bis (indole) alkaloid consisting of two pentacyclic aspidosperma skeletons, plays a key role in the regulation of cell mass proliferation, maintenance of the undifferentiated state of iPMSCs and also promotes iPMSCs differentiated into insulin-producing cells.[1]

Conophylline down-regulates the expression of the TNF-α receptors on the cell surface.

Conophylline is a novel differentiation inducer for pancreatic β cells, can increase the numbers of ductal cells positive for pancreatic-duodenal-homeobox protein-1 and islet-like cell clusters. [2,3]

Conophylline has been shown to induce differentiation of pancreatic AR42J cells and increases the formation of beta-cells.[4]

Conophylline suppresses pancreatic stellate cells and improves islet fibrosis in Goto-Kakizaki rats.[5]

Conophylline decreases the fasting blood glucose level inGoto-Kakizaki rats in a dose-dependent manner after repetitive administration for 42 days, suggests that the extract from conophylline-containing leaves may be useful as a functional food for the treatment of type 2 diabetes mellitus.[6]

Conophylline protects cells in cellular models of neurodegenerative diseases by inducing mTOR-independent autophagy.[7]

Conophylline suppresses hepatic stellate cells and attenuates thioacetamide-induced liver fibrosis in rats.[8]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO.

[HPLC Method]

Not data available.

[Storage]

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

[References]

[1] Zhang H R, Li D, Hui C, *et al. J. Integr. Agr., 2013, 12(4):678-86.*

[2] Gohda, Inoue, Umezawa. *Int. J. Oncoly, 2003, 23(5):1373-9.*

[3] Kojima I, Umezawa K. *Int. J. Biochem. Cell Biol., 2006, 38(5-6):923-30.*

[4] Ogata T, Li L, Yamada S, *et al. Diabetes, 2004, 53(10):2596-602.*

[5] Saito R, Yamada S, Yamamoto Y, *et al. Endocrinology, 2012, 153(2):621-30.*

[6] M Fujii，I Takei，K Umezawa. *Biomed. Pharmacother., 2009, 63(10):710-6.*

[7] Sasazawa Y, Sato N, Umezawa K, *et al. J. Biol. Chem., 2015,1(10):290.*

[8] Kubo N, Saito R, Hamano K, *et al. Liver Int. Official J. Int. Associat Study Liver, 2014, 34(7):1057-67.*

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