[ Product Information ]

Name: Liriodendrin
Catalog No.: CFN98964
Cas No.: 573-44-4
Purity: >95%
M.F: C_{34}H_{46}O_{18}
M.W: 742.7

Physical Description: Powder

Synonyms: (+)-Syringaresinol-di-O-β-D-glucoside;(1S,3aβ,6aβ)-1β,4β-Bis[4-((β-D-glucopyranosyloxy)-3,5-dimethoxyphenyl]tetrahydro-1H,3H-furo[3,4-c]furan;[(3S)-3α,4,6,6α-Tetrahydro-1H,3H-furo[3,4-c]furan]-3α,6α-diyl]bis(2,6-dimethoxy-4,1-phenylene)bis(β-D-glucopyranoside).

[ Intended Use ]

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

[ Source ]

The herbs of *Linaria vulgaris*. 
Liriodendrin, isolated by activity-guided fractionation from the ethyl acetate extracts of the stem bark of Acanthopanax senticosus, has anti-inflammatory and antinociceptive activities; it (5, 10 mg/kg/day, p. o.) significantly inhibits the increase of vascular permeability induced by acetic acid in mice and reduced an acute paw edema induced by carrageenan in rats; it shows analgesic activity in a dose-dependent inhibition in animal models.[1]

Liriodendrin has protective effects on dopamine-induced cytotoxicity via its anti-oxidative properties by reducing ROS level and anti-apoptotic effect via protection of mitochondrion membrane potential (ΔΨm), the effect of liriodendrin may involve the P53 pathway in apoptosis, suggests that it may provide a useful therapeutic strategy for the treatment of neurodegenerative diseases such as Parkinson’s disease (PD).[2]

Liriodendrin may be a potent suppressor of CaCl(2)-induced arrhythmias, the prophylactic administration of liriodendrin is effective in prolonging latency of arrhythmia and reducing the occurrence of ventricular fibrillation from 75% to 25%, the antiarrhythmic effect of liriodendrin (5.0 mg/kg) is similar to that of verapamil (1.05 mg/kg). [3]

Liriodendrin has inhibitory activities on gastritis and gastric ulcer, it can inhibit colonization of Helicobacter pylori effectively, it could be utilized for the treatment and/or protection of gastritis and gastric ulcer.[4]

Liriodendrin regulates lung inflammation, the phosphorylation of the NF-κB (p65) and expression of vascular endothelial growth factor (VEGF), liriodendrin treatment significantly improved the survival rate of mice with cecal ligation and puncture (CLP)-induced sepsis, liriodendrin prevents the generation of reactive oxygen species (ROS) by upregulating the expression of SIRT1 in RAW 264.7 cells, suggests that liriodendrin plays protective role in sepsis-induced acute lung injury.[5]

Liriodendrin is thought to be found firstly in this plant, and the fraction extracted from Kalopanax septemlobus (Thunb.) Koidz. in Guangxi showes an excellent hypoglycemic activity. [6]
[Solvent]
Pyridine, Methanol, Ethanol, etc.

[HPLC Method][7]
Mobile phase: 0.1% Phosphoric acid in water-0.1% Phosphoric acid in acetonitrile, gradient elution;
Flow rate: 1.0 ml/min;
Column temperature: Room Temperature;
The wavelength of determination: 230 nm.

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

[References]

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