ChemFaces

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Seal to avoid light.
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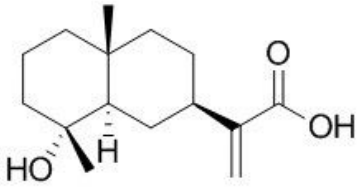
3rd Edition (Revised in January, 2014)

[Product Information]

Name: Ilicic acid

Catalog No.: CFN98687

Cas No.: 4586-68-9



Purity: > 98%

M.F: $C_{15}H_{24}O_3$

M.W: 252.4

Physical Description: Powder

Synonyms:

2-[(4aR,8R)-8-hydroxy-4a,8-dimethyl-1,2,3,4,5,6,7,8a-octahydronaphthalen-2-yl]-2-propenoic acid

[Intended Use]

1. Reference standards;

2. Pharmacological research;

3. Synthetic precursor compounds;

4. Intermediates & Fine Chemicals;

5. Others.

[Source]

The bark of *Laggera pterodonta*

[Aplications]

The present study was designed to examine the anti-inflammatory activity of the sesquiterpenoids ilicic acid and inuviscolide on cell degranulation, leukotriene biosynthesis, neurogenic drive and glucocorticoid-like interactions. Swiss female mice were used to measure the ear oedema induced by phorbol esters or ethyl phenylpropiolate (EPP), and the paw oedema induced by phospholipase A2 (PLA2) or serotonin. Drug treatment consisted of one topically-applied dose in the ear models and a subcutaneous or intraperitoneal injection in the paw models. Quantitative analysis of leukotriene B4 (LTB4) formation was performed on rat peritoneal neutrophils by high performance liquid chromatography (HPLC). The lactone inuviscolide reduced the PLA2-induced oedema (ID50: 98 μmol/kg). The effect on serotonin-induced oedema was not changed by modifiers of the glucocorticoid response. Ilicic acid showed minor in vivo effects, but was slightly more potent than inuviscolide on the 12-O-tetradecanoylphorbol 13-acetate (TPA) acute oedema test (ID50: 0.650 μmol per ear). Inuviscolide reduced LTB4 generation in intact cells, with an IC50 value of 94 μM. On the basis of the reported results, inuviscolide is the main anti-inflammatory sesquiterpenoid from Inula viscosa, and may act by interfering with leukotriene synthesis and PLA2-induced mastocyte release of inflammatory mediators.

[Solvent]

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

[HPLC Method]

Mobile phase: Methanol : 1% Acetic acid H2O gradient elution;

Flow rate: 1.0 ml/min;

The wave length of determination: 210 nm.

[Storage]

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

[References]

1. Fitoterapia, 2003, 74(5), 459-463.

2. Planta Med., 2001, 67(8), 726-731.

3. Acta Botanica Yunnanica, 1997, 19(2), 207-210.