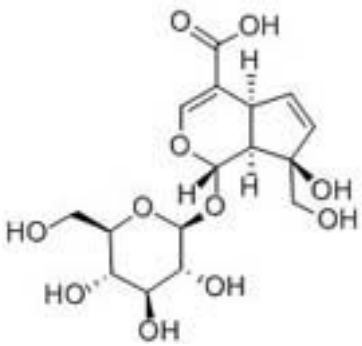
Natural Products

ChemFaces

Monotropein Datasheet

5th Edition (Revised in January, 2017)

[Product Information]



Name: Monotropein

Catalog No.: CFN99523

Cas No.: 5945-50-6

Purity: >=98%

M.F: $C_{16}H_{22}O_{11}$

M.W: 390.34

Physical Description: Powder

Synonyms:(1S,2S,6S,9R)-9-Hydroxy-9-(hydroxymethyl)-2-[(2S,3R,4S,5R,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]oxy-3-oxabicyclo[4.3.0]nona-4,7-diene-5-carboxylic acid.

[Intended Use]

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

[Source]

The root of *Morinda officinalis How.*

[Biological Activity or Inhibitors]

Monotropein has anti-inflammatory activity, it exerts protective effects against IL-1β-induced apoptosis and catabolic responses on osteoarthritis chondrocytes.[1]

Monotropein contributes to the antinociceptive and anti-inflammatory action of Morinda officinalis root, monotropein (at 20, 30 mg/kg/d, p.o.) can significantly reduce stretching episodes and prolong action time in mice, it also can significantly reduce acute paw edema by carrageenan in rats.[2]

Monotropein can increase osteoblastic bone formation and prevent bone loss in ovariectomized mice, it may serve as a new candidate or a leading compound for antiosteoporosis. [3]

[Solvent]

Pyridine, Methanol, Ethanol, etc.

[HPLC Method][4]

Mobile phase: Methanol -0.4% Phosphoric acid H2O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 25 ℃;

The wave length of determination: 210 nm.

[Storage]

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

[References]

[1] Wang F, Wu L, Li L, *et al. Int. Immunopharmacol., 2014, 23(2):575-80.*

[2] Choi J, Lee K T, Choi M Y, *et al. Biol. Pharm. Bull.,2005, 28(10):1915-8.*

[3] Zhang Z, Zhang Q, Yang H, *et al. Fitoterapia, 2016, 110:166-72.*

[4] Xu J Y, Liang Y J, Ding P. *Journal of Chinese Medicinal Materials, 2007, 30(1):20-2.*

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