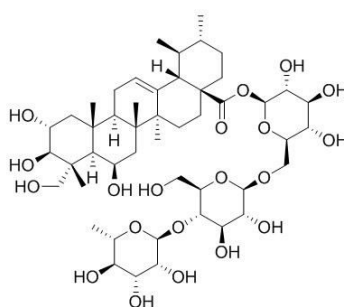


Madecassoside Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Madecassoside**Catalog No.:** CFN99913**Cas No.:** 34540-22-2**Purity:** >=98%**M.F:** C₄₈H₇₈O₂₀**M.W:** 975.12**Physical Description:** White powder**Synonyms:** 6-Deoxyhexopyranosyl-(1->4)hexopyranosyl-(1->6)-1-O-(2,3,6,2,3-tetrahydroxy-28-oxours-12-en-28-yl)hexopyranose.

[Intended Use]

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

[Source]

The herbs of *Centella asiatica* (L.) Urban.

[Biological Activity or Inhibitors]

Madecassoside (MA), a triterpenoid product isolated from *Centella asiatica*, has antioxidant and anti-inflammatory activities, MA can effectively alleviate inflammatory response on CIA, and anti-inflammatory effects of MA can be attributed, at least partially, to the inhibition of pro-inflammatory mediators, including COX-2 expression, PGE2 production, TNF- α and IL-6 levels and the up-regulation anti-inflammatory molecule IL-10.^[1]

Madecassoside is a mechanism-based inhibitor of CYP2C19 and CYP3A4, suggests that madecassoside can cause drug-drug interactions via inhibition of CYP2C19 and CYP3A4.^[2]

Madecassoside has significant wound-healing activity and is one of the major reasons for the use of *C. ASIATICA* herbs in the successful treatment of burn injury; moreover, the results from the present study indicate that the effect of madecassoside on wound healing may involve several mechanisms including antioxidative activity, collagen synthesis and angiogenesis.^[3]

Madecassoside has the protective effect on myocardial ischemia-reperfusion injury, this protection ability possibly due to its anti-lipid peroxidation, anti-inflammation and anti-apoptosis function and the enhancement of SOD activity.^[4]

Madecassoside can suppress LPS-induced TNF- α production in cardiomyocytes through inhibition of ERK, p38, and NF- κ B activity, it may have cardioprotective effects in LPS-mediated.^[5]

Madecassoside can significantly reduce brain infarct area, resolve neurological deficit, and ameliorate neuronal apoptosis; it also can significantly reduce the levels of malondialdehyde and nitric oxide, and augment the antioxidant activity in rats subjected to cerebral I/R; indicates that madecassoside is neuroprotective and may be useful in reducing the damage caused by stroke.^[6]

[Solvent]

Pyridine, Methanol, Ethanol, etc.

[HPLC Method]^[7]

Mobile phase: Acetonitrile-2 m M β - cyclodextrin H₂O=24: 76 ;

Flow rate: 1.0 ml/min;

Column temperature: 25 °C;

The wave length of determination: 205 nm.

[Storage]

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

[References]

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[5] Cao W, Li X Q, Zhang X N, *et al. Int. Immunopharmacol.*, 2010, 10(7):723-9.

[6] Luo Y, Yang Y P, Liu J, *et al. Brain Res.*, 2014, 1565(20):37-47.

[7] Zhu X Y, Lin Y X. *China Pharmaceuticals*, 2014, 23(2):50-1.

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