Natural Products

ChemFaces

Chikusetsusaponin IVa Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Chikusetsusaponin IVa

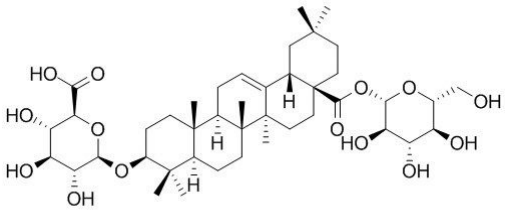
Catalog No.: CFN92516

Cas No.: 51415-02-2

Purity: >98%

M.F: $C_{42}H_{66}O_{14}$

M.W: 386.40



Physical Description: Powder

Synonyms:28-(β -D-Glucopyranosyloxy)-28-oxoolean-12-en-3 β -yl β -D-glucopyranosiduronic acid;Calenduloside F;Glycoside D2;Momordin IIb; SilphiosideG;b-D-Glucopyranosiduronic acid,(3b)-28-(b-D-glucopyranosyloxy)-28-oxoolean-12-en-3-yl.

[Intended Use]

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

[Source]

The herbs of *Hemsleya amabilis Diels.*

[Biological Activity or Inhibitors]

Chikusetsusaponin IVa, isolated from the whole plant of Alternanthera philoxeroides (Mart.) Griseb (Amaranthaceae), it shows antiviral activities against HSV-1, HSV-2, human cytomegalovirus, measles virus, and mumps virus with selectivity indices (CC (50)/IC (50)) of 29, 30, 73, 25, and 25, respectively; it also provides in vivo efficacy in a mouse model of genital herpes caused by HSV-2; demonstrate that chikusetsusaponin IVa may be a candidate of antiherpetic agents.[1]

Chikusetsusaponin IVa can inhibit thrombus formation in a stasis model of venous thrombosis, although it does not induce a significant bleeding effect; it also prolongs the ex vivo activated partial thromboplastin time, suggests that chikusetsusaponin IVa exerts antithrombotic effects, including minor hemorrhagic events..[2]

Chikusetsusaponin IVa has anti-inflammatory effects, it suppresses the production of inducible nitric oxide synthase (iNOS), cyclooxygenase-2 (COX-2), interleukin-1 beta (IL-1β), interleukin-6 (IL-6), and tumor necrosis factor-α (TNF-α) in LPS-stimulated THP-1 cells likely by inhibiting NF-κB activation and ERK, JNK, and p38 signal pathway phosphorylation. [3]

Chikusetsusaponin IVa has immunomodulating activity, it increases splenocyte proliferation in dose-dependent manner and at a concentration of 25 μg/ml the compound significantly increases splenocyte proliferation.[4]

Chikusetsusaponin IVa has hepatoprotective activity.[5]

[Solvent]

Pyridine, Methanol, Ethanol, etc.

[HPLC Method][6]

Mobile phase: Acetonitrile-0.2%Phosphoric acid H2O=35:65 ;

Flow rate: 1.0 ml/min;

Column temperature: 30 ℃;

The wave length of determination: 203 nm.

[Storage]

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

[References]

[1] Rattanathongkom A, Lee J B, Hayashi K, *et al. Planta Med., 2009, 75(8):829-35.*

[2] Dahmer T, Berger M, Barlette A G, *et al. J. Med.Food, 2012, 15(12):1073-80.*

[3] Wang H, Qi J, Li L, *et al. Int. J.Immunopath. Ph., 2015, 28(3).*

[4] Ariya Rattanathongkom, Bung-orn Sripanidkulchai, Tripetch Kanchanapoom.

Isan Journal of Pharmaceutical Sciences , 2008,4(2):113-20.

[5] Kinjo J, Okawa M, Udayama M, *et al. Chem. Pharmaceut. Bull., 1999, 47(2):290-2.*

[6] Song X, Li L, Yang G, *et al. China Journal of Chinese Materia Medica, 2010, 35(7):885-7.*

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