Natural Products

ChemFaces

Esculentoside A Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Esculentoside A

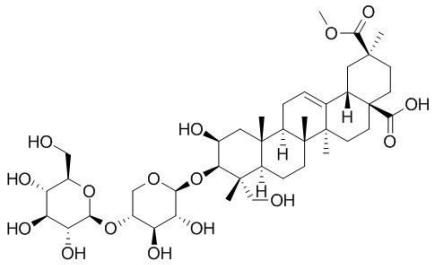
Catalog No.: CFN98162

Cas No.: 65497-07-6

Purity: >=98%

M.F: $C_{42}H_{66}O_{16}$

M.W: 826.96



Physical Description: White powder

Synonyms: Esculentoside;(2b,3b,4a,20b)-3-((4-O-beta-D-Glucopyranosyl-beta-D-xylopyranosyl)oxy)-2,23-dihydroxyolean-12-ene-28,29-dioic acid 29-methyl ester; Phytolaccasaponin E.

[Intended Use]

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

[Source]

The roots of *Phytolacca acinosa Roxb.*

[Biological Activity or Inhibitors]

Esculentoside A (EsA) is a saponin isolated from the Chinese herb Phytolacca esculenta, it can suppress inflammatory responses in lipopolysaccharide (LPS)-induced acute lung injury (ALI) through inhibition of the nuclear factor kappa B and mitogen activated protein kinase signaling pathways, EsA may be a promising potential preventive agent for ALI treatment.[1]

Esculentoside A protects soft tissues against radiation toxicity through inhibiting the production of several proinflammatory cytokines and inflammatory mediators in epithelial cells, macrophages, fibroblasts, and skin tissue.[2]

Esculentoside A possesses selective inhibitory activity towards cyclooxygenase-2 and haemolytic activity. [3]

Esculentoside A has the positive curative effect on autoimmunity in a mouse model, which may function through inhibition of expression of ICAM-1 mRNA in ECV304 and acceleration of thymocyte apoptosis.[4]

Esculentoside A treatment can attenuate CCl4 and GalN/LPS-induced acute liver injury in mice and its protective effects might be involved in inhibiting inflammatory response and oxidative stress, but not apoptosis with its underlying mechanism associated with PPAR-0206, NF-0202B and ERK signal pathways.[5]

[Solvent]

Pyridine, Methanol, Ethanol, etc.

[HPLC Method][6]

Mobile phase:Acetonitrile-0.1%Phosphoric acid H2O=40:60 ;

Flow rate: 0.8 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] Zhong W T, Jiang L X, Wei J Y, *et al. J. Surg.Res., 2013, 185(1):364-72.*

[2] Xiao Z, Su Y, Yang S, *et al. International Journal of Radiation Oncologybiologyphysics, 2006, 65(3):882-9.*

[3] Wu F, Yi Y, Sun P, *et al. Bioorg. Med. Chem. Lett., 2007, 17(23):6430-3.*

[4] Xiao Z Y, Zheng Q Y, Zhang J P, *et al. Acta Pharmacol. Sin., 2002, 23(7):638-44.*

[5] Zhang F, Wang X, Qiu X, *et al. Plos One, 2014, 9(11):e113107-e113107.*

[6] Gao L X. *Chinese Journal of Clinical Pharmacology,2015,31(20):2052-4.*

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