[ Product Information ]

Name: Punicalagin
Catalog No.: CFN99938
Cas No.: 65995-63-3
Purity: >=98%
M.F: C_{48}H_{28}O_{30}
M.W: 1084.72

Physical Description: Powder
Synonyms: Pulchinenoside B4(RG).

[ Intended Use ]

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

[ Source ]

The peel of *Punica granatum* L.

[ Biological Activity or Inhibitors ]

Punicalagin is the major antioxidant polyphenol ingredient in Pomegranate juice, has in
vitro antiproliferative, apoptotic and anti-atherosclerotic activities. Punicalagin can suppress the generation of bleomycin-induced intracellular free radicals, identified as superoxides and hydrogen peroxides, it has protection against bleomycin-induced genotoxicity could be, at least in part, due to its antioxidative potentials. Punicalagin and punicalin have hepatoprotective effects on acetaminophen-induced liver damage in rats. Punicalagin is a potent immune suppressant, based on its inhibitory action on the activation of the nuclear factor of activated T cells (NFAT).

Punicalagin has chemopreventive effect against H-ras induced transformation could result from inhibition of the intracellular redox status and JNK-1/p38 activation. Punicalagin has potently inhibiting the activity of fatty acid synthase with half-inhibitory concentration values (IC 50 ) of 4.50μM, FAS has been recognized as a potential therapeutic target for obesity, suggests that it has potential in the prevention and treatment of obesity.

Punicalagin can suppress the phosphorylation of mitogen-activated protein kinase including p38, c-Jun N-terminal kinase, and extracellular signal-regulated kinase, it can inhibit LPS-induced inflammation, and it may be a potential choice for the treatment of inflammation diseases.

Punicalagin can reduce the viral cytopathic effect on rhabdomyosarcoma cells with an IC50) value of 15 μg/ml, moreover, punicalagin treatment of mice challenges with a lethal dose of enterovirus 71 resulted in a reduction of mortality and relieves clinical symptoms by inhibiting viral replication; suggests that punicalagin has the potential for further development as antiviral agents against enterovirus 71.

Punicalagin has neuroprotective effect against cerebral ischemia reperfusion-induced oxidative brain injury in rats by virtue of its antioxidant potential.

Punicalagin has a greater antifungal activity against T. rubrum, indicating that the pomegranate is a good target for study to obtain a new antidermatophyte medicine.
[Solvent]
Pyridine, Methanol, Ethanol, etc.

[HPLC Method][11]
Mobile phase: Acetonitrile- 0.2% H3PO4 Aqueous solution, gradient elution;
Flow rate: 1.0 ml/min;
Column temperature: 30 °C;
The wavelength of determination: 256 nm.

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

[References]
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