

Punicalagin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Punicalagin

Catalog No.: CFN99938

Cas No.: 65995-63-3

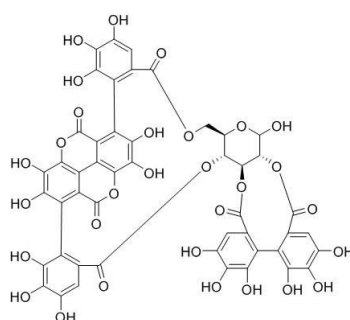
Purity: >=98%

M.F: C₄₈H₂₈O₃₀

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 .^[1]

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.^[2]

Punicalagin and punicalin have hepatoprotective effects on acetaminophen-induced liver damage in rats. ^[3]

Punicalagin is a potent immune suppressant, based on its inhibitory action on the activation of the nuclear factor of activated T cells (NFAT).^[4]

Punicalagin has chemopreventive effect against H- ras induced transformation could result from inhibition of the intracellular redox status and JNK-1/p38 activation.^[5]

Punicalagin has potently inhibiting the activity of fatty acid synthase with half-inhibitory concentration values (IC₅₀) 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.^[6]

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.^[7]

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.^[8]

Punicalagin has neuroprotective effect against cerebral ischemia reperfusion-induced oxidative brain injury in rats by virtue of its antioxidant potential.^[9]

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.^[10]

[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 wave length of determination: 256 nm.

[Storage]

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

[References]

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- [11] Zhao H, Yang Y, Liu T, et al. *Chinese Journal of Food Hygiene*, 2012, 371:174-7.

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