[Product Information]

Name: 1,2,3,4,6-O-Pentagalloylglucose
Catalog No.: CFN90192
Cas No.: 14937-32-7
Purity: >=98%
M.F: C_{41}H_{32}O_{26}
M.W: 940.68

Physical Description: Powder
Synonyms: 1,2,3,4,6-Penta-O-galloyl-beta-D-glucopyranose;
Beta-penta-O-galloyl-glucose.

[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]
1,2,3,4,6-Pentagalloylglucose and gallic acid from Pistacia lentiscus have antimuagenic and antioxidant activities.[1]

1,2,3,4,6-Penta-O-galloyl-beta-D-glucose (PGG) possesses potent anti-proliferative and anti-invasive effects, it also has inhibition of inducible nitric oxide synthase and cyclooxygenase-2 activity; suggests that PGG might be a candidate for developing anti-inflammatory and cancer chemopreventive agents.[2]

1,2,3,4,6-Penta-O-galloyl-beta-D-glucopyranose (beta-PGG), one of the components of tannic acid, as well as its natural anomer alpha-PGG possess activity; alpha-PGG, the more potent of the two anomers, reveal that inhibitors that block the insulin-mediated glucose transport, including one that inhibits the insulin receptor (IR), also completely abolish the glucose transport activated by alpha-PGG, alpha-PGG induces phosphorylation of the IR and Akt, activates PI 3-kinase, and stimulates membrane translocation of GLUT 4; suggest that PGG may serve as a model for the development of new types of anti-diabetic and anti-metabolic syndrome therapeutics. [3]

1,2,3,4,6-Penta- O -galloyl-β - d -glucose has vasodilatory and anti-inflammatory effects, it dilates vascular smooth muscle and suppresses the vascular inflammatory process via endothelium-dependent nitric oxide (NO)/cGMP signaling.[4]

1,2,3,4,6-Penta-O-galloyl-beta-D-glucose can decrease the level of extracellular hepatitis B virus (HBV) (IC50, 1.0 microg/ml) in a dose-dependent manner, it also can reduce the HBsAg level by 25% at a concentration of 4 microg/ml; the gallate structure of PGG may play a critical role in the inhibition of anti-HBV activity, suggests that PGG could be a candidate for developing an anti-HBV agent.[5]

1,2,3,4,6-Penta-O-galloyl-β-D-glucose has anti-parasitic activity, displays an EC50 value of 67 µM, at least 6.6-fold more effective than the standard drug benznidazole against trypomastigote forms of T. cruzi.[6]

[ Solvent ]

Pyridine, Methanol, Ethanol, etc.
[HPLC Method][7]

Mobile phase: Acetonitrile -0.1% Phosphoric acid H2O, gradient elution;
Flow rate: 1.0 ml/min;
Column temperature: 30°C;
The wavelength of determination: 274 nm.

[Storage]

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

[References]


[Contact]

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