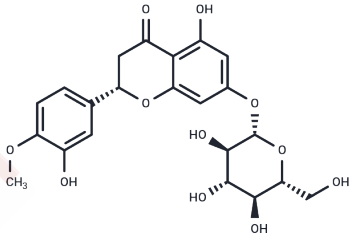
Data Sheet (Cat.No.TN1733)

TargetMol

Hesperetin 7-O-glucoside

Chemical Properties



CAS No. : 31712-49-9

Formula: C22H24O11

Molecular Weight: 464.42

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Hesperetin 7-O-glucoside and prunin are direct precursors of naringin and neohesperidin, respectively, in C. aurantium. Hesperetin 7-O-glucoside shows inhibition of human HMG-CoA reductase, it also exhibits effective inhibition of the growth of Helicobacter pylori. Hesperetin 7-O-glucoside can reduce blood pressure in healthy volunteers.
Targets(IC50)	Anti-infection,Antibacterial,HMG-CoA Reductase,Interleukin
In vitro	Hesperetin 7-O-glucoside (Hes-7-G) was produced by the enzymatic conversion of hesperidin by Aspergillus sojae naringinase due to the removal of the terminal rhamnose.Extracts from orange juice and peel containing the hesperidin were so treated by this enzyme that the hesperidin could also be converted to Hesperetin 7-O-glucoside . The solubility of Hesperetin 7-O-glucoside in 10% ethanol was enhanced 55- and 88-fold over those of hesperidin and hesperetin, respectively, which may make Hesperetin 7-O-glucoside more bioavailable. Hesperetin 7-O-glucoside was 1.7- and 2.4-fold better than hesperidin and hesperetin, respectively, in the inhibition of human intestinal maltase. Hesperetin 7-O-glucoside was more potent by 2- and 4-fold than hesperidin in the inhibition of human HMG-CoA reductase. Additionally, Hesperetin 7-O-glucoside exhibited more effective inhibition of the growth of Helicobacter pylori than hesperetin, while its effectiveness was similar to that of hesperidin.

Solubility Information

Solubility	DMSO: 27.5 mg/mL (59.21 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.31 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1532 mL	10.7661 mL	21.5322 mL
5 mM	0.4306 mL	2.1532 mL	4.3064 mL
10 mM	0.2153 mL	1.0766 mL	2.1532 mL
50 mM	0.0431 mL	0.2153 mL	0.4306 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Enzymatic bioconversion of citrus hesperidin by Aspergillus sojae naringinase: enhanced solubility of hesperetin-7-O-glucoside with in vitro inhibition of human intestinal maltase, HMG-CoA reductase, and growth of Helicobacter pylori.Food Chem. 2012 Dec 15;135(4):2253-9.