Data Sheet (Cat.No.TN1011)

TargetMol
A DRUG SCREENING EXPERT

Rhodionin

Chemical Properties

CAS No.:	85571-15-9
Formula:	C21H20O11
Molecular Weight:	448.38
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Rhodionin and rhodionin can inhibit cytochrome P450 2D6 non-competitively with high specificity which could have implications for interactions with co-administered drugs; they can significantly suppress the elevation of the postprandial blood triglyceride level, suggests that they may be to the treatment of lifestyle-related diseases such as hyperlipidemia and exogeneous obesity and to health foods.
Targets(IC_{50})	DPPH: 19.49 ± 0.21 uM. CYP450: None
In vitro	Quantification of these compounds was performed by high-performance liquid chromatography (HPLC). To investigate the antioxidant and anti-inflammatory effects of the compounds, DPPH radical scavenging, NBT superoxide scavenging and nitric oxide production inhibitory activities were examined in LPS-stimulated Raw 264.7 cells. We suggest that the major active components of RRS are herbacetin glycosides, exhibiting antioxidant activity, and kaempferol, exhibiting anti-inflammatory activity.In this study, 1,1-diphenyl-2-picryl-hydrazyl (DPPH) radical scavenging activity and nitrotetrazolium blue chloride (NBT) superoxide scavenging activity were measured to assess the antioxidant activity of the components from RRS. DPPH has the ability to easily accept hydrogen atoms because it contains an unstable element, the hydrazyl nitrogen, therefore, antioxidant activity can be measured because DPPH loses its violet color when it receives hydrogens from antioxidants. Additionally, NBT has the ability to easily receive superoxide because it contains unstable anions. Therefore, antioxidant activity may be measured when NBT loses its yellow color upon reaction with abundant superoxide. Among the compounds from RRS, 7(Rhodionin) and 8 exhibited the most potent DPPH free radical scavenging activities, with IC50 values of 19.49 ± 0.21 and 27.77 ± 0.61 μM, respectively, compared to the positive control, L-ascorbic acid (IC50 = 32.89 ± 0.70 μM). The other compounds did not exhibit activities in this assay up to 100 μM (Table 2).

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.23 mL	11.151 mL	22.303 mL
5 mM	0.446 mL	2.23 mL	4.461 mL
10 mM	0.223 mL	1.115 mL	2.23 mL
50 mM	0.045 mL	0.223 mL	0.446 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. The antioxidant and anti-inflammatory effects of phenolic compounds isolated from the root of Rhodiola sachalinensis A. BOR.Molecules. 2012 Sep 27;17(10):11484-94.

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