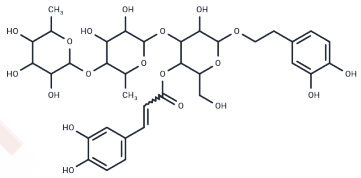
Data Sheet (Cat.No.TN1868)

TargetMol

Ligupurpuroside A

Chemical Properties



CAS No. : 147396-01-8

Formula: C35H46O19

Molecular Weight: 770.73

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	Ligupurpuroside A is a naturally occurring bioactive compound isolated from Ligustrum robustum. Ligupurpuroside A acts as a competitive inhibitor of lipase, thereby reducing lipid breakdown. This natural lipase inhibitor has potential applications in metabolic research, particularly in the study of obesity and lipid metabolism regulation.
Targets(IC50)	Lipid,Lipase
In vitro	The present study was carried out to characterize the antioxidants present in the bitter tea brewed from the leaves of LP. It was found that the crude glycoside fraction possessed strong protection against oxidation of human low-density lipoprotein (LDL). The column chromatographic separation led to the isolatation of five phenylethanoid glycosides, namely, acteoside, Ligupurpuroside A, cis-ligupurpuroside B, trans-ligupurpuroside B, and osmanthuside B. When acteoside was heated in the boiling water, it was isomerized to form isoacteoside. Acteoside, isoacteoside, and Ligupurpuroside A purified from LP were protective, whereas cis-ligupurpuroside B, trans-ligupurpuroside B, and osmanthuside B exhibited no protection to human LDL from Cu(2+)-medicated oxidation. Acteoside, isoacteoside, and Ligupurpuroside A were also effective in preventing the peroxyl free radical-induced oxidation of alpha-tocopherol in human LDL. The antioxidant activities of acteoside, isoacteoside, and Ligupurpuroside A were comparable to that observed for a green tea antioxidant, (-)-epicatechin gallate. The inhibitory effect of these three phenylethanoid glycosides on oxidation of human LDL and alpha-tocopherol was dose-dependent at concentrations of 5-40 μM.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.2975 mL	6.4874 mL	12.9747 mL
5 mM	0.2595 mL	1.2975 mL	2.5949 mL
10 mM	0.1297 mL	0.6487 mL	1.2975 mL
50 mM	0.0259 mL	0.1297 mL	0.2595 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

Antioxidative activities of phenylethanoid glycosides from Ligustrum purpurascens.J Agric Food Chem. 2001 Jun;49 (6):3113-9.
Runmei Yang, et al. Hypolipidemic activity and mechanisms of the total phenylpropanoid glycosides from Ligustrum robustum (Roxb.) Blume by AMPK-SREBP-1c pathway in hamsters fed a high-fat diet. Phytother Res . 2018 Apr;32(4):715-722.
Yu Fan, et al. Exploring inhibition mechanism and nature of lipase by Ligupurpuroside A extracted from Ku-Ding tea. Med Chem Res 27, 1822–1833 (2018).