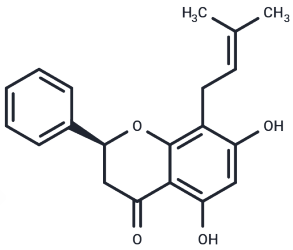
Data Sheet (Cat.No.TN1689)

TargetMol

Glabranine

Chemical Properties



CAS No. : 41983-91-9

Formula: C20H20O4

Molecular Weight: 324.37

Storage: Keep away from direct sunlight
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	Glabranine is a natural prenylated flavonoid isolated from Tephrosia species that exhibits potent inhibitory activity against the Dengue virus (DENV) in vitro. Its primary mechanism involves interacting with the soluble ectodomain of the DENV type 2 (DENV2) Envelope (E protein), potentially blocking viral entry or membrane fusion. The presence of the prenyl group is considered essential for its biological potency, making it a valuable scaffold for flavivirus-targeted drug discovery.
Targets(IC50)	Virus Protease
In vitro	The ethyl acetate and methanol bark extracts of Melicope glabra were evaluated for their antioxidant capacities by 1,1-diphenyl-2-picrylhydrazyl (DPPH) free radical scavenging activity and β-carotene bleaching/linoleic acid system. Both extracts exhibited strong inhibition against the DPPH radical (IC50 values of 24.81 and 13.01 μg ml(-1), respectively) and strong antioxidant activity in β-carotene bleaching assay. Both samples were found to have high phenolic content with values of 39 and 44 mg GAE/g as indicated by Follin-Ciocalteau's reagent. Antioxidant TLC assay-guided isolation on the methanol extract led to the isolation of a new pyranocoumarin, Glabranin (1), umbelliferone (2), scopoletin (3) and sesamin (4), and their structures were determined by spectroscopy[1]

Solubility Information

Solubility	DMSO: 80 mg/mL (246.63 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0829 mL	15.4145 mL	30.829 mL
5 mM	0.6166 mL	3.0829 mL	6.1658 mL
10 mM	0.3083 mL	1.5414 mL	3.0829 mL
50 mM	0.0617 mL	0.3083 mL	0.6166 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

Sánchez I, et al. Antiviral effect of flavonoids on the dengue virus. Phytother Res. 2000 Mar;14(2):89-92.
Ismail NA, et al. Molecular Docking and Molecular Dynamics Simulation Studies to Predict Flavonoid Binding on the Surface of DENV2 E Protein. Interdiscip Sci. 2017 Dec;9(4):499-511.