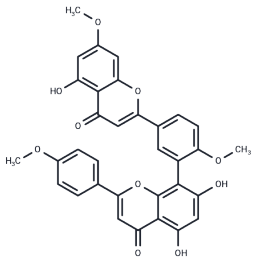
Data Sheet (Cat.No.T5S2129)

TargetMol

Sciadopitysin

Chemical Properties



CAS No. : 521-34-6

Formula: C33H24O10

Molecular Weight: 580.54

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Sciadopitysin may prevent the development of diabetic osteopathy, it exerts its therapeutic effects via upregulation of mitochondrial biogenesis.Sciadopitysin shows protective effects on antimycin A-induced toxicity in osteoblastic MC3T3-E1 cells, it may reduce or prevent osteoblasts degeneration.Sciadopitysin can inhibit the Aβ aggregation and reduce Aβ-induced toxicity in the primary cortical neurons.
Targets(IC50)	NF-κB,TNF
Cell Research	Pretreatment of MC3T3-E1 cells with Sciadopitysin prevented the MG-induced cell death and protein adducts formation. Sciadopitysin restored the MG-induced change in glyoxalase activity almost to the control level and increased glutathione levels. In addition, Sciadopitysin decreased MG-induced formation of intracellular reactive oxygen species (ROS), mitochondrial superoxide, and cardiolipin peroxidation. These findings suggest that Sciadopitysin provides a protective action against MG-induced glycation by increasing MG detoxification system and by reducing oxidative stress. Pretreatment with Sciadopitysin prior to MG exposure reduced MG-induced mitochondrial dysfunction by preventing mitochondrial membrane potential (MMP) dissipation and adenosine triphosphate (ATP) loss.

Solubility Information

Solubility	DMSO: 65 mg/mL (111.96 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7225 mL	8.6127 mL	17.2253 mL
5 mM	0.3445 mL	1.7225 mL	3.4451 mL
10 mM	0.1723 mL	0.8613 mL	1.7225 mL
50 mM	0.0345 mL	0.1723 mL	0.3445 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.

Reference

Choi EM, et al.Sciadopitysin alleviates methylglyoxal-mediated glycation in osteoblastic MC3T3-E1 cells by enhancing glyoxalase system and mitochondrial biogenesis.Free Radic Res. 2014 Jul;48(7):729-39.
Xiao Y, Cai G P, Feng X, et al.Splicing factor YBX1 regulates bone marrow stromal cell fate during aging.The EMBO Journal.2023: e111762.
Suh KS, et al.Sciadopitysin protects osteoblast function via its antioxidant activity in MC3T3-E1 cells.Sciadopitysin protects osteoblast function via its antioxidant activity in MC3T3-E1 cells.
Chen Z, Shi Y, Zhong F, et al.Discovery of amentoflavone as a natural PDE4 inhibitor with anti-fibrotic effects. Chinese Chemical Letters.2024: 109956.
Gu Q, et al.Sciadopitysin: active component from Taxus chinensis for anti-Alzheimer's disease.Nat Prod Res. 2013; 27(22):2157-60.