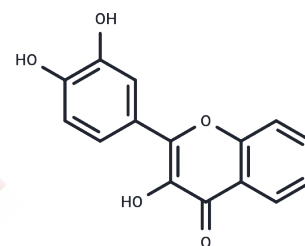


3',4'-Dihydroxyflavonol

Chemical Properties

CAS No. :	6068-78-6
Formula:	C ₁₅ H ₁₀ O ₅
Molecular Weight:	270.24
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	3',4'-Dihydroxyflavonol (DiOHF) is an effective antioxidant that reduces ROS and superoxide production in the mesenteric arteries of diabetic rats, increases total eNOS expression, and improves nitric oxide (NO) activity.
Targets(IC50)	Antioxidant,NO Synthase,ROS
In vitro	3',4'-Dihydroxyflavonol (DiOHF) exhibits significant vascular protective effects under oxidative stress conditions, maintaining the biological activity of nitric oxide (NO) through multiple mechanisms. This compound can effectively alleviate the vasoconstrictive response of the tertiary branches of the rat mesenteric artery through Ca ²⁺ desensitization, thereby reducing vascular permeability. At the same time, DiOHF significantly improves NO activity and endothelial function in pathological conditions such as diabetes by inhibiting Nox2-dependent superoxide production and preventing eNOS uncoupling. These synergistic effects make DiOHF a potential vascular function regulator, especially in pathological conditions with elevated reactive oxygen species levels, showing important therapeutic value. [1]

Solubility Information

Solubility	DMSO: 100 mg/mL (370.04 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7004 mL	18.5021 mL	37.0041 mL
5 mM	0.7401 mL	3.7004 mL	7.4008 mL
10 mM	0.370 mL	1.8502 mL	3.7004 mL
50 mM	0.074 mL	0.370 mL	0.7401 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

Leo CH, et al. 3',4'-Dihydroxyflavonol reduces superoxide and improves nitric oxide function in diabetic rat mesenteric arteries. PLoS One. 2011;6(6):e20813.

Kim HY, et al. 3',4'-Dihydroxyflavonol reduces vascular contraction through Ca²⁺ desensitization in permeabilized rat mesenteric artery. Naunyn Schmiedeberg's Arch Pharmacol. 2012 Feb;385(2):191-202.

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