

Quercetin-D3

Chemical Properties

CAS No. :

Formula: C₁₅H₉D₃O₈

Molecular Weight: 323.27

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	Quercetin-D3 hydrate, a deuterated form of Quercetin (T2174) hydrate, acts as a flavonoid that stimulates recombinant SIRT1 and serves as a PI3K inhibitor. The compound specifically exhibits IC ₅₀ values of 2.4 μM, 3.0 μM, and 5.4 μM against PI3Kγ, PI3Kδ, and PI3Kβ, respectively.
Targets(IC ₅₀)	Apoptosis, Mitophagy, Reactive Oxygen Species, Autophagy, PI3K
In vitro	Quercetin hydrate is a phytochemical used as an ingredient in supplements, beverages, or foods. It exhibits anti-inflammatory and antioxidant properties and is currently under investigation for its wide-ranging potential health benefits. As a PI3K inhibitor, quercetin hydrate has an IC ₅₀ range of 2.4-5.4 μM, strongly inhibits PI3K and Src kinases, moderately inhibits Akt1/2, and has minor effects on PKC, p38, and ERK1/2. Additionally, it inhibits the TNF-induced release of LDH%, EC-dependent adhesion of neutrophils to bovine pulmonary artery endothelial cells (BPAEC), and the synthesis and proliferation of BPAEC DNA.
In vivo	The combination of quercetin hydrate (75 mg/kg) and 2-methoxyestradiol enhances the inhibition of tumor growth in xenografts of human prostate cancer LNCaP and PC-3 cells.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0934 mL	15.4669 mL	30.9339 mL
5 mM	0.6187 mL	3.0934 mL	6.1868 mL
10 mM	0.3093 mL	1.5467 mL	3.0934 mL
50 mM	0.0619 mL	0.3093 mL	0.6187 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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