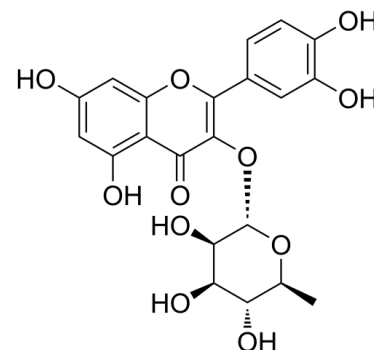


Data Sheet

Product Name:	Quercitrin
Cat. No.:	CS-5408
CAS No.:	522-12-3
Molecular Formula:	C ₂₁ H ₂₀ O ₁₁
Molecular Weight:	448.38
Target:	Apoptosis; Autophagy; Reactive Oxygen Species; Ribosomal S6 Kinase (RSK)
Pathway:	Apoptosis; Autophagy; Immunology/Inflammation; MAPK/ERK Pathway; Metabolic Enzyme/Protease; NF-κB
Solubility:	DMSO : 125 mg/mL (ultrasonic)



BIOLOGICAL ACTIVITY:

Quercitrin (Quercetin 3-rhamnoside) is a bioflavonoid compound with potential anti-inflammation, antioxidative and neuroprotective effect. Quercitrin induces **apoptosis** of colon cancer cells. Quercitrin can be used for the research of cardiovascular and neurological disease research^{[1][2]}. *In Vitro*: Quercitrin (5-50 μM; 24-72 h) time- and dose-dependently inhibits cell proliferation and increases cytotoxic effects to colorectal carcinoma cells^[1].

Quercitrin (5-50 μM; 24-72 h) time- and dose-dependently increases nucleosomal enrichment factor (EF) of DLD-1 cells^[1].

Quercitrin (50 μM; 48-72 h) induces cell apoptosis and the loss of mitochondrial membrane potential, and causes translocation of phosphatidylserine (PS) from the inner to outer Leaflet of DLD-1 cells^[1]. *In Vivo*: Quercitrin (50 and 100 mg/kg; oral gavage, once) shows effective protection against brain injury in mice by inhibiting oxidative stress and inflammation induced by carbon tetrachloride [2].

PROTOCOL (Extracted from published papers and Only for reference)

Cell assay [1] dependent experiments. Cytotoxic effects of quercitrin in the dose and time dependent manner were colorimetrically determined with a "CytoTox 96R Non-Radioactive Cytotoxicity Assay" kit from Promega (Madison, WI). Cell treatment to prepare for cytotoxicity test was done as described for the WST-1 assay. Culture medium (10 μl) was then transferred to a 96- well microtiter plate. The levels of lactate dehydrogenase (LDH) were determined by adding 50 μl fresh substrate mix, incubating in a dark at room temperature for 30 min, then adding 50 μl stop solution, and measuring optical density (OD) at 490 nm with a microplate reader (BioRad, Hercules, CA). The natural color of chemicals a 490 nm was corrected by subtracting the OD values of the corresponding chemical×concentration medium that were treated and measured in triplicates in the same manner as with the cells. Data was confirmed by three other independent experiments.

References:

[1]. Cincin ZB, et al. Apoptotic Effects of Quercitrin on DLD-1 Colon Cancer Cell Line. Pathol Oncol Res. 2015 Apr;21(2):333-8.

[2]. Cincin ZB, et al. Apoptotic Effects of Quercitrin on DLD-1 Colon Cancer Cell Line. Pathol Oncol Res. 2015 Apr;21(2):333-8.

CAIndexNames:

4H-1-Benzopyran-4-one, 3-[(6-deoxy-α-L-mannopyranosyl)oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-

SMILES:

OC1=CC(O)=C(C(C(O[C@H]2[C@H](O)[C@H](O)[C@@H](O)[C@H](C)O2)=C(C3=CC(O)=C(O)C=C3)O4)=O)C4=C1

Caution: Product has not been fully validated for medical applications. For research use only.

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