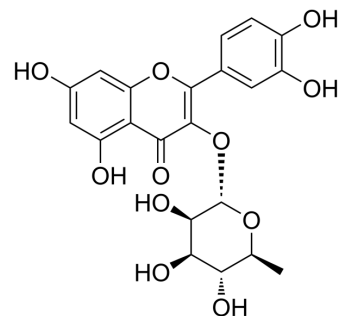


Quercitrin

Cat. No.:	HY-N0418
CAS No.:	522-12-3
Molecular Formula:	C ₂₁ H ₂₀ O ₁₁
Molecular Weight:	448.38
Target:	Ribosomal S6 Kinase (RSK); Autophagy; Reactive Oxygen Species; Apoptosis
Pathway:	MAPK/ERK Pathway; Autophagy; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Apoptosis
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 125 mg/mL (278.78 mM; Need ultrasonic)																					
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent</th> <th rowspan="2">Mass</th> <th colspan="3">Concentration</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Preparing Stock Solutions</td> <td>1 mM</td> <td>2.2303 mL</td> <td>11.1513 mL</td> <td>22.3025 mL</td> </tr> <tr> <td>5 mM</td> <td>0.4461 mL</td> <td>2.2303 mL</td> <td>4.4605 mL</td> </tr> <tr> <td>10 mM</td> <td>0.2230 mL</td> <td>1.1151 mL</td> <td>2.2303 mL</td> </tr> </tbody> </table>	Solvent	Mass	Concentration			1 mg	5 mg	10 mg	Preparing Stock Solutions	1 mM	2.2303 mL	11.1513 mL	22.3025 mL	5 mM	0.4461 mL	2.2303 mL	4.4605 mL	10 mM	0.2230 mL	1.1151 mL	2.2303 mL
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Please refer to the solubility information to select the appropriate solvent.																						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.58 mg/mL (5.75 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.64 mM); Clear solution 																					

BIOLOGICAL ACTIVITY

Description	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	<p>Quercitrin (5-50 μM; 24-72 h) time- and dose-dependently inhibits cell proliferation and increases cytotoxic effects to colorectal carcinoma cells^[1].</p> <p>Quercitrin (5-50 μM; 24-72 h) time- and dose-dependently increases nucleosomal enrichment factor (EF) of DLD-1 cells^[1].</p> <p>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].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay^[1]</p>

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In Vivo	<p>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].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Male ICR mice with carbon tetrachloride (CCl₄) induced brain injury^[2]</td> </tr> <tr> <td>Dosage:</td> <td>50 and 100 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Oral gavage; 50 and 100 mg/kg, once</td> </tr> <tr> <td>Result:</td> <td>Dose-dependently decreased the levels of ROS and malondialdehyde (MDA) concentration in the hippocampus homogenates, and also dose-dependently decreased the CYP2E1 level in the brains. Increased the activities of superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GPx). Inhibited the N-methyl-D-aspartate receptor 2B subunit (NR2B) level and the activities of monoamine oxidase (MAO) and acetylcholine esterase (AChE) in mouse brains.</td> </tr> </table>	Animal Model:	Male ICR mice with carbon tetrachloride (CCl ₄) induced brain injury ^[2]	Dosage:	50 and 100 mg/kg	Administration:	Oral gavage; 50 and 100 mg/kg, once	Result:	Dose-dependently decreased the levels of ROS and malondialdehyde (MDA) concentration in the hippocampus homogenates, and also dose-dependently decreased the CYP2E1 level in the brains. Increased the activities of superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GPx). Inhibited the N-methyl-D-aspartate receptor 2B subunit (NR2B) level and the activities of monoamine oxidase (MAO) and acetylcholine esterase (AChE) in mouse brains.								
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CUSTOMER VALIDATION

- Acta Pharm Sin B. 2021 Jan;11(1):143-155.
- Phytomedicine. 2024 Feb 19, 155467.

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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.

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

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