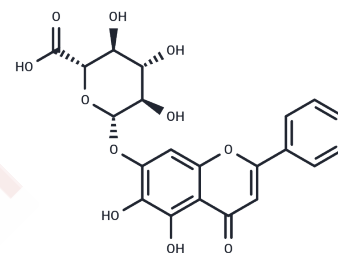


## Baicalin

## Chemical Properties

CAS No. :	21967-41-9
Formula:	C <sub>21</sub> H <sub>18</sub> O <sub>11</sub>
Molecular Weight:	446.36
Storage:	Keep away from direct sunlight, Keep away from moisture Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Baicalin (Baicalein 7-O-β-D-glucuronide) is a prolyl endopeptidase inhibitor isolated from <i>Scutellaria baicalensis</i> that exhibits anti-inflammatory, antioxidant, antitumor, and antiviral activity. Baicalin can be used in research on inflammation, neurodegenerative diseases, tumors, and metabolic syndrome.
Targets(IC50)	NF-κB, HIV Protease, GABA Receptor, Autophagy
In vitro	<b>Methods:</b> RAW264.7 cells were treated with baicalin (12.5, 25, 50 μM) for 24 hours. Surface CD14 and TLR4 proteins were detected by flow cytometry, and CD14 mRNA was detected by RT-qPCR. <b>Results:</b> Baicalin dose-dependently inhibited CD14 protein and mRNA expression without affecting TLR4 expression. [1]
In vivo	<b>Methods:</b> C57BL/6 mice were established with ulcerative colitis (UC) by free access to a 3% DSS solution for 5 days. Following modeling, Baicalin (100 mg/kg) was administered orally via gavage once daily for 5 consecutive days. <b>Results:</b> Baicalin treatment restored colon length, reduced spleen index, alleviated ulcer severity, and significantly suppressed CD14 and IL-6 expression in colonic mucosa. [1] <b>Methods:</b> Adult male SD rats received continuous oral administration of Baicalin (20, 60, 120 mg/kg) once daily for two weeks prior to surgery. Following drug administration, the left anterior descending artery (LAD) was ligated for 45 minutes, followed by reperfusion for 180 minutes to establish an MI/RI model. <b>Results:</b> I/R significantly impaired cardiac function. Baicalin at 60 and 120 mg/kg significantly improved HR, LVSP, LVFS, and LVEF in a dose-dependent manner. [2]

## Solubility Information

Solubility	DMSO: 37 mg/mL (82.89 mM), Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), H <sub>2</sub> O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (8.96 mM), Sonication is recommended.

In vivo Formulation	<i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2403 mL	11.2017 mL	22.4034 mL
5 mM	0.4481 mL	2.2403 mL	4.4807 mL
10 mM	0.224 mL	1.1202 mL	2.2403 mL
50 mM	0.0448 mL	0.224 mL	0.4481 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

- Fu YJ, et al. Baicalin prevents LPS-induced activation of TLR4/NF- $\kappa$ B p65 pathway and inflammation in mice via inhibiting the expression of CD14. *Acta Pharmacol Sin.* 2021 Jan;42(1):88-96.
- Yang X, Liu L, Hao Y, et al. A Bioluminescent Biosensor for Quantifying the Interaction of SARS-CoV-2 and Its Receptor ACE2 in Cells and In Vitro. *Viruses.* 2021, 13(6): 1055.
- Xu M, et al. Baicalin regulates macrophages polarization and alleviates myocardial ischaemia/reperfusion injury via inhibiting JAK/STAT pathway. *Pharm Biol.* 2020 Dec;58(1):655-663.
- Geng W, Guo X, Zhang L, et al. Resveratrol inhibits proliferation, migration and invasion of multiple myeloma cells via NEAT1-mediated Wnt/ $\beta$ -catenin signaling pathway. *Biomedicine & Pharmacotherapy.* 2018 Nov;107:484-494.
- Zhang H, Cai J, Li C, et al. Wogonin inhibits latent HIV-1 reactivation by downregulating histone crotonylation. *Phytomedicine.*2023: 154855.
- Zhang H, Liang B, Sang X, et al. Discovery of Potential Inhibitors of SARS-CoV-2 Main Protease by a Transfer Learning Method. *Viruses.*2023, 15(4): 891.
- Xu Y, Cai Q, Zhao C, et al. Gegen Qinlian Decoction Attenuates Colitis-Associated Colorectal Cancer via Suppressing TLR4 Signaling Pathway Based on Network Pharmacology and In Vivo/In Vitro Experimental Validation. *Pharmaceuticals.*2024, 18(1): 12.

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