

PRODUCT INFORMATION



Bergenin

Item No. 26406

CAS Registry No.: 477-90-7
Formal Name: (2R,3S,4S,4aR,10bS)-3,4,4a,10b-tetrahydro-3,4,8,10-tetrahydroxy-2-(hydroxymethyl)-9-methoxy-pyrano[3,2-c][2]benzopyran-6(2H)-one

Synonyms: (-)-Bergenin, Cuscutin, NSC 661749

MF: C₁₄H₁₆O₉

FW: 328.3

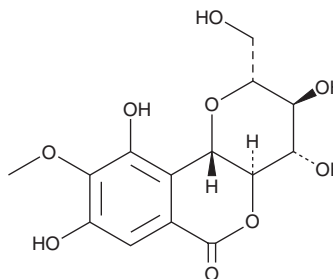
Purity: ≥98%

UV/Vis.: λ_{max}: 275 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Bergenin is supplied as a crystalline solid. A stock solution may be made by dissolving the bergenin in the solvent of choice, which should be purged with an inert gas. Bergenin is soluble in the organic solvent DMSO at a concentration of approximately 100 mg/ml.

Description

Bergenin is a glycoside and a major constituent of *Peltophorum* plants and has diverse biological activities.¹⁻⁴ It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) and ABTS radicals and inhibits nitrite production *in vitro* when used at concentrations ranging from 0.1 to 3 mM.¹ Bergenin induces production of TNF-α, nitric oxide (NO), and IL-12 in *M. tuberculosis*-infected macrophages.² *In vivo*, bergenin reduces pulmonary lesion formation and bacterial load in mice infected with *M. tuberculosis* H37Rv. Bergenin (10 mg/kg, i.p) restores activity of mitochondrial complex I, II, and IV and reduces renal lipid peroxidation, IL-1β production, and shrinkage of glomeruli in a rat model of ethylene glycol-induced renal injury.³ It also prevents arrhythmias induced by coronary artery ligation and reperfusion and BaCl₂ in mice.⁴

References

1. de Oliveira, G.A.L., de Silva Oliveira, G.L., Nicolau, L.A.D., *et al.* Bergenin from *Peltophorum dubium*: Isolation, characterization, and antioxidant activities in non-biological systems and erythrocytes. *Med. Chem.* **13(6)**, 592-603 (2017).
2. Dwivedi, V.P., Bhattacharya, D., Yadav, V., *et al.* The phytochemical bergenin enhances T helper 1 responses and anti-mycobacterial immunity by activating the MAP kinase pathway in macrophages. *Front Cell. Infect. Microbiol.* **7:149**, (2017).
3. Aggarwal, D., Gautam, D., Sharma, M., *et al.* Bergenin attenuates renal injury by reversing mitochondrial dysfunction in ethylene glycol induced hyperoxaluric rat model. *Eur. J. Pharmacol.* **791**, 611-621 (2016).
4. Pu, H.L., Huang, X., Zhao, J.H., *et al.* Bergenin is the antiarrhythmic principle of *Fluggea virosa*. *Planta Med.* **68(4)**, 372-374 (2002).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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