

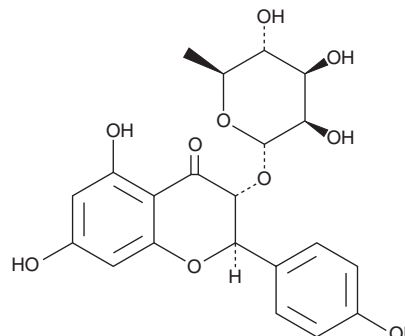
PRODUCT INFORMATION



Engeletin

Item No. 34657

CAS Registry No.: 572-31-6
Formal Name: (2R,3R)-3-[(6-deoxy- α -L-mannopyranosyl)oxy]-2,3-dihydro-5,7-dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonyms: Dihydrokaempferol 3-O- α -L-rhamnopyranoside, (+)-(2R,3R)-Dihydrokaempferol 3-O- α -L-rhamnoside, Dihydrokaempferol 3-rhamnoside
MF: C₂₁H₂₂O₁₀
FW: 434.4
Purity: \geq 98%
UV/Vis.: λ_{max} : 216, 293 nm
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years
Item Origin: Plant/*Engelhardia roxburghiana*



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

Laboratory Procedures

Engeletin is supplied as a solid. A stock solution may be made by dissolving the engeletin in the solvent of choice, which should be purged with an inert gas. Engeletin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of engeletin in ethanol is approximately 25 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Engeletin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, engeletin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Engeletin has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Engeletin is a flavonoid glycoside that has been found in *S. glabra* and has diverse biological activities.¹⁻³ It scavenges ABTS (Item No. 27317) radicals in a cell-free assay ($IC_{50} = 18.13 \mu\text{g/ml}$).¹ Engeletin (2 $\mu\text{g/ml}$) induces apoptosis in MCF-7 and MDA-MB-231 human breast cancer cells.² It inhibits LPS-induced production of IL-1 β , IL-6, and nitric oxide (NO) in RAW 264.7 cells when used at a concentration of 100 μM .¹ Engeletin inhibits TNF- α -induced NF- κ B activation and apoptosis in isolated rat chondrocytes, as well as reduces cartilage erosion and the loss of proteoglycan in the inflamed joints in a rat model of surgically induced osteoarthritis.³

References

1. Zhao, X., Chen, R., Shi, Y., *et al.* Antioxidant and anti-inflammatory activities of six flavonoids from *Smilax glabra* Roxb. *Molecules* **25(22)**, 5295 (2020).
2. Wu, L.-S., Wang, X.-J., Wang, H., *et al.* Cytotoxic polyphenols against breast tumor cell in *Smilax china* L. *J. Ethnopharmacol.* **130(3)**, 460-464 (2010).
3. Wang, H., Jiang, Z., Pang, Z., *et al.* Engeletin protects against TNF- α -induced apoptosis and reactive oxygen species generation in chondrocytes and alleviates osteoarthritis in vivo. *J. Inflamm. Res.* **14**, 745-760 (2021).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM