

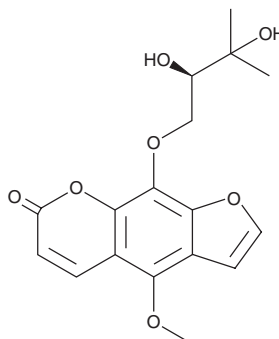
PRODUCT INFORMATION



Byakangelicin

Item No. 34600

CAS Registry No.: 482-25-7
Formal Name: 9-[(2R)-2,3-dihydroxy-3-methylbutoxy]-4-methoxy-7H-furo[3,2-g][1]benzopyran-7-one
MF: C₁₇H₁₈O₇
FW: 334.3
Purity: ≥98%
UV/Vis.: λ_{max}: 223, 249, 270, 273, 314 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Angelica dahurica*



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

Laboratory Procedures

Byakangelicin is supplied as a solid. A stock solution may be made by dissolving the byakangelicin in the solvent of choice, which should be purged with an inert gas. Byakangelicin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of byakangelicin in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Byakangelicin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, byakangelicin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Byakangelicin 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

Byakangelicin is a coumarin that has been found in *A. dahurica* and has diverse biological activities.^{1,2} It inhibits the activity of aldose reductase (IC₅₀ = 6.2 μM for the bovine lens enzyme) and reduces cataract formation in a rat model of galactosemia when administered at a dose of 50 mg/kg per day.¹ Byakangelicin (30 μM) decreases LPS-induced production of prostaglandin E₂ (PGE₂; Item No. 14010) in isolated rat peritoneal macrophages.² It reduces cartilage erosion and loss of proteoglycan in the inflamed joints in a mouse model of surgically induced osteoarthritis when administered at a dose of 10 mg/kg.³

References

1. Shin, K.H., Chung, M.S., and Cho, T.S. Effects of furanocoumarins from *Angelica dahurica* on aldose reductase and galactosemic cataract formation in rats. *Arch. Pharm. Res.* **17(5)**, 331-336 (1994).
2. Ban, H.S., Lim, S.S., Suzuki, K., et al. Inhibitory effects of furanocoumarins isolated from the roots of *Angelica dahurica* on prostaglandin E₂ production. *Planta Med.* **69(5)**, 408-412 (2003).
3. Zhang, T., He, L., Yang, W., et al. Byakangelicin inhibits IL-1β-induced mouse chondrocyte inflammation *in vitro* and ameliorates murine osteoarthritis *in vivo*. *Int. Immunopharmacol.* **85**, 106605 (2020).

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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