

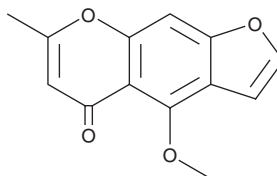
PRODUCT INFORMATION



Visnagin

Item No. 34140

CAS Registry No.: 82-57-5
Formal Name: 4-methoxy-7-methyl-5H-furo[3,2-g][1]benzopyran-5-one
Synonym: NSC 100593
MF: C₁₃H₁₀O₄
FW: 230.2
Purity: ≥98%
UV/Vis.: λ_{max}: 244 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



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

Laboratory Procedures

Visnagin is supplied as a solid. A stock solution may be made by dissolving the visnagin in the solvent of choice, which should be purged with an inert gas. Visnagin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of visnagin in ethanol, DMSO, and DMF is approximately 1, 5, and 10 mg/ml, respectively.

Visnagin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, visnagin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Visnagin has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Visnagin is a polyketide synthase-derived furanochromone originally isolated from *A. visnaga* that has diverse biological activities.¹⁻⁵ It inhibits the germination and growth of ryegrass (IC₅₀s = 502 and 214 μM, respectively).² Visnagin (100 μg/ml) is cytotoxic to, and induces apoptosis in, HT-144 melanoma cells.³ It reduces LPS-stimulated increases in the secretion of TNF-α, IL-1β, and IFN-γ in BV-2 microglial cells when used at concentrations of 50 and 100 μM.⁴ Visnagin (25 mg/kg) protects against cardiomyopathy induced by doxorubicin (Item No. 15007) in mice.⁵

References

1. Abe, I. Engineering of plant polyketide biosynthesis. *Chem. Pharm. Bull. (Tokyo)* **56(11)**, 1505-1514 (2008).
2. Travaini, M.L., Sosa, G.M., Ceccarelli, E.A., et al. Khellin and visnagin, furanochromones from *Ammi visnaga* (L.) Lam., as potential bioherbicides. *J. Agric. Food Chem.* **64(50)**, 9475-9487 (2016).
3. Aydoğmuş-Öztürk, F., Jahan, H., Beyazit, N., et al. The anticancer activity of visnagin, isolated from *Ammi visnaga* L., against the human malignant melanoma cell lines, HT 144. *Mol. Biol. Rep.* **46(2)**, 1709-1714 (2019).
4. Lee, J.-K., Jung, J.-S., Park, S.-H., et al. Anti-inflammatory effect of visnagin in lipopolysaccharide-stimulated BV-2 microglial cells. *Arch. Pharm. Res.* **33(11)**, 1843-1850 (2010).
5. Liu, Y., Asnani, A., Zou, L., et al. Visnagin protects against doxorubicin-induced cardiomyopathy through modulation of mitochondrial malate dehydrogenase. *Sci. Transl. Med.* **6(266)**, 266ra170 (2014).

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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