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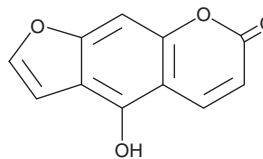
PRODUCT INFORMATION



Bergaptol

Item No. 38742

CAS Registry No.: 486-60-2
Formal Name: 4-hydroxy-7H-furo[3,2-g][1]benzopyran-7-one
Synonyms: 4-Hydroxybergapten, 5-Hydroxyfuranocoumarin, 5-Hydroxy psoralen, NSC 341958
MF: C₁₁H₆O₄
FW: 202.2
Purity: ≥95%
UV/Vis.: λ_{max}: 222, 251, 270, 315 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Bergaptol is supplied as a solid. A stock solution may be made by dissolving the bergaptol in the solvent of choice, which should be purged with an inert gas. Bergaptol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of bergaptol in ethanol is approximately 2 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Description

Bergaptol is a furanocoumarin that has been found in *A. dahurica* and has diverse biological activities.¹⁻⁴ It inhibits the cytochrome P450 (CYP) isoform CYP3A4 (IC₅₀ = 24.92 μM).² It scavenges DPPH (Item No. 14805) and ABTS (Item No. 27317) radicals in cell-free assays (EC₅₀s = 26.66 and 13.55 μg/ml, respectively).¹ Bergaptol reduces the replication of *L. donovani*, *T. b. brucei*, and *T. cruzi* in L6 myoblasts (IC₅₀s = 2.5, 22.1, and 68 μg/ml, respectively).³ It induces cell cycle arrest at the S phase and apoptosis in MCF-7 breast cancer cells in a concentration-dependent manner.⁴ Bergaptol also decreases the proliferation of HeLa cervical carcinoma and HepG2 liver cancer cells (IC₅₀s = 58.57 and 68.42 μM, respectively).¹

References

1. Bai, Y., Li, D., Zhou, T., *et al.* Coumarins from the roots of *Angelica dahurica* with antioxidant and antiproliferative activities. *J. Funct. Foods* **20**, 453-462 (2016).
2. Girenavar, B., Jayaprakasha, G.K., Jadegoud, Y., *et al.* Radical scavenging and cytochrome P450 3A4 inhibitory activity of bergaptol and geranylcoumarin from grapefruit. *Bioorg. Med. Chem.* **15(11)**, 3684-3691 (2007).
3. Tasdemir, D., Kaiser, M., Brun, R., *et al.* Antitrypanosomal and antileishmanial activities of flavonoids and their analogues: In vitro, in vivo, structure-activity relationship, and quantitative structure-activity relationship studies. *Antimicrob. Agents Chemother.* **50(4)**, 1352-1364 (2006).
4. Ge, Z.-C., Qu, X., Yu, H.-F., *et al.* Antitumor and apoptotic effects of bergaptol are mediated via mitochondrial death pathway and cell cycle arrest in human breast carcinoma cells. *Bangladesh J. Pharmacol.* **11(2)**, 489-494 (2016).

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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