

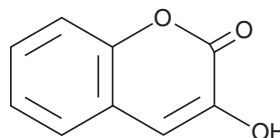
PRODUCT INFORMATION



3-Hydroxycoumarin

Item No. 34815

CAS Registry No.: 939-19-5
Formal Name: 3-hydroxy-2H-1-benzopyran-2-one
Synonyms: 3-Coumarinol, NSC 74691
MF: C₉H₆O₃
FW: 162.1
Purity: ≥95%
UV/Vis.: λ_{max}: 230, 309 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

3-Hydroxycoumarin is supplied as a solid. A stock solution may be made by dissolving the 3-hydroxycoumarin in the solvent of choice, which should be purged with an inert gas. 3-Hydroxycoumarin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 3-hydroxycoumarin in these solvents is approximately 1, 10, and 15 mg/ml, respectively.

3-Hydroxycoumarin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 3-hydroxycoumarin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 3-Hydroxycoumarin has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

3-Hydroxycoumarin is a coumarin that has been found in *A. reinwardtii* and has diverse biological activities.¹⁻³ It inhibits 15-lipoxygenase-1 (15-LO-1; IC₅₀ = 9.5 μM).¹ 3-hydroxycoumarin scavenges DPPH (Item No. 14805) radicals in a cell-free assay (IC₅₀ = 0.61 mM) and inhibits lipid peroxidation *in vitro* (IC₅₀ = 69.07 mM).² It is protective against UVB-induced embryotoxicity in sea urchins (*E. lucunter*).³

References

1. Alavi, S.J., Sadeghian, H., Seyedi, S.M., *et al.* A novel class of human 15-LOX-1 inhibitors based on 3-hydroxycoumarin. *Chem. Biol. Drug Des.* **91**(6), 1125-1132 (2017).
2. Rattanapan, J., Sichaem, J., and Tip-pyang, S. Chemical constituents and antioxidant activity from the stems of *Alyxia reinwardtii*. *Rec. Nat. Prod.* **6**(3), 288-291 (2012).
3. de Araujo Leite, J.C., de Castro, T.M.X., Barbosa-Filho, J.M., *et al.* Photoprotective effect of coumarin and 3-hydroxycoumarin in sea urchin gametes and embryonic cells. *J. Photochem. Photobiol. B Biol.* **146**, 44-51 (2015).

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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