

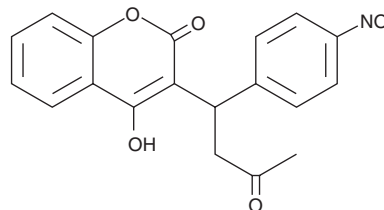
PRODUCT INFORMATION



Acenocoumarol

Item No. 10010569

CAS Registry No.: 152-72-7
Formal Name: 4-hydroxy-3-[1-(4-nitrophenyl)-3-oxobutyl]-2H-1-benzopyran-2-one
Synonyms: (±)-Acenocoumarin, (±)-Nicoumalone, G-23350
MF: C₁₉H₁₅NO₆
FW: 353.3
Purity: ≥98%
UV/Vis.: λ_{max}: 283 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Acenocoumarol is supplied as a crystalline solid. A stock solution may be made by dissolving the acenocoumarol in the solvent of choice, which should be purged with an inert gas. Acenocoumarol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of acenocoumarol in these solvents is approximately 0.2, 10, and 20 mg/ml, respectively.

Acenocoumarol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, acenocoumarol should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Acenocoumarol has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Acenocoumarol is an anticoagulant and vitamin K antagonist.¹ It inhibits the reduction of vitamin K₁ epoxide to vitamin K₁ by vitamin K₁ epoxide reductase (VKOR) (IC₅₀ = 1.5 and 5.8 nM for VKORC1 and VKORC1L1, respectively).¹ Acenocoumarol also inhibits a variety of VKOR mutants in cell-based reporter assays (IC₅₀s = 0.54-11.21 nM).² It prolongs prothrombin time in rat blood when administered at a dose of 1.5 mg/kg.³

References

1. Czogalla, K.J., Liphardt, K., Höning, K., *et al.* VKORC1 and VKORC1L1 have distinctly different oral anticoagulant dose-response characteristics and binding sites. *Blood Adv.* **2(6)**, 691-702 (2018).
2. Chen, X., Jin, D.-Y., Stafford, D.W., *et al.* Evaluation of oral anticoagulants with vitamin K epoxide reductase in its native milieu. *Blood* **132(18)**, 1974-1984 (2018).
3. Meinertz, T., Kasper, W., Kahl, C., *et al.* Anticoagulant activity of the enantiomers of acenocoumarol. *Br. J. Clin. Pharmacol.* **5(2)**, 187-188 (1978).

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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