

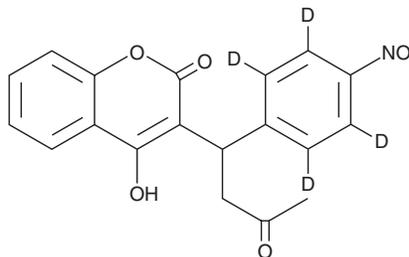
PRODUCT INFORMATION



Acenocoumarol-d₄

Item No. 35477

CAS Registry No.: 2937878-24-3
Formal Name: 4-hydroxy-3-[1-(4-nitrophenyl)-2,3,5,6-d₄]-3-oxobutyl]-2H-1-benzopyran-2-one
Synonyms: (±)-Acenocoumarin-d₄,
(±)-Nicoumalone-d₄
MF: C₁₉H₁₁D₄NO₆
FW: 357.4
Chemical Purity: ≥98% (Acenocoumarol)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
Supplied as: A 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-d₄ is intended for use as an internal standard for the quantification of acenocoumarol (Item No. 10010569) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Acenocoumarol-d₄ is supplied as a solid. A stock solution may be made by dissolving the acenocoumarol-d₄ in the solvent of choice, which should be purged with an inert gas. Acenocoumarol-d₄ is soluble in acetonitrile and DMSO.

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 03/29/2024

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM