

## Product Data Sheet

Product Name: (R)-Acenocoumarol

Cat. No.: GC40552

### Chemical Properties

Cas. No. 66556-77-2

SMILES O=C1C([C@@](CC(C)=O)([H])C2=CC=C([N+]([O-])=O)C=C2)=C(O)C3=CC=CC=C3O1

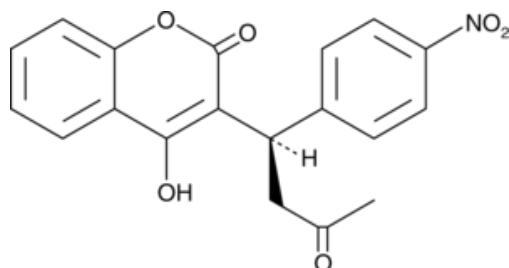
Formula C<sub>19</sub>H<sub>15</sub>NO<sub>6</sub> M.Wt 353.3

Solubility DMF: 20 mg/ml, DMF:PBS (pH 7.2) Storage Store at -20°C  
(1:3): 0.25 mg/ml, DMSO: 10 mg/ml, Ethanol: 0.2 mg/ml

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



### Background

Acenocoumarol is a short-lived oral anti-coagulant, which, like warfarin, functions by inhibiting vitamin K epoxide reductase. It has higher intrinsic anticoagulant potency than warfarin and phenprocoumon, when evaluated in vitro. Acenocoumarol has a single chiral center that gives rise to two different enantiomeric forms. (R)-Acenocoumarol has a longer plasma elimination half-life (6.6 hours) and slower plasma clearance (1.9 L/hour), compared to the (S)-enantiomer (1.8 hours, 28.5 L/hour). The R-enantiomer is rapidly absorbed from the gastrointestinal tract with essentially complete oral bioavailability, whereas (S)-acenocoumarol undergoes extensive first-pass metabolism. Perhaps related to these pharmacokinetic characteristics, (R)-acenocoumarol is more potent in vivo as an anti-coagulant than the (S)-enantiomer. As the clearance of acenocoumarol is ~20-fold faster than

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that for warfarin, the plasma concentrations of acenocoumarol are substantially lower than those for warfarin in patients receiving long-term treatment.

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