

PRODUCT INFORMATION



Acetyldigitoxin

Item No. 24024

CAS Registry No.: 1111-39-3
Formal Name: (3 β ,5 β)-3-[[O-3-O-acetyl-2,6-dideoxy- β -D-ribo-hexopyranosyl-(1 \rightarrow 4)-O-2,6-dideoxy- β -D-ribo-hexopyranosyl-(1 \rightarrow 4)-2,6-dideoxy- β -D-ribo-hexopyranosyl]oxy]-14-hydroxy-card-20(22)-enolide

MF: C₄₃H₆₆O₁₄

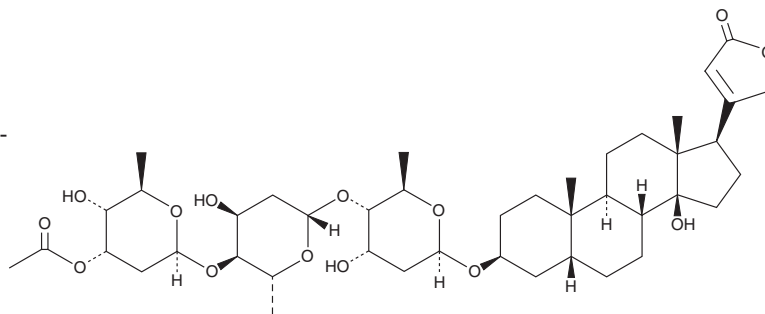
FW: 807.0

Purity: \geq 95%

Supplied as: A solid

Storage: -20°C

Stability: \geq 4 years



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

Laboratory Procedures

Acetyldigitoxin is supplied as a solid. A stock solution may be made by dissolving the acetyldigitoxin in the solvent of choice, which should be purged with an inert gas. Acetyldigitoxin is slightly soluble in chloroform, DMSO, and methanol.

Description

Acetyldigitoxin is cardiac glycoside and an inhibitor of the Na⁺/K⁺ ATPase with an IC₅₀ value of 5 nM in isolated rat pinealocytes.¹ This inhibition results in loss of the transmembrane Na⁺ gradient, which decreases activity of the Na⁺/Ca²⁺ exchanger, increasing intracellular calcium levels, inotropy, and cardiac force.^{2,3} Formulations containing acetyldigitoxin have been used for the treatment of heart failure and chronic atrial fibrillation.

References

1. González-García, C., Ceña, V., and Klein, D.C. Characterization of the α^+ -like Na⁺,K⁺-ATPase which mediates ouabain inhibition of adrenergic induction of N-acetyltransferase (EC 2.3.1.87) activity: Studies with isolated pinealocytes. *Mol. Pharmacol.* **32**(6), 792-797 (1987).
2. Katz, A., Lifshitz, Y., Bab-Dinitz, E., *et al.* Selectivity of digitalis glycosides for isoforms of human Na,K-ATPase. *J. Biol. Chem.* **285**(25), 19582-19592 (2010).
3. Matsui, H. and Schwartz, A. Mechanism of cardiac glycoside inhibition of the (Na⁺-K⁺)-dependent ATPase from cardiac tissue. *Biochim. Biophys. Acta.* **151**(3), 655-663 (1968).

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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