

PRODUCT INFORMATION

Digoxigenin Bisdigitoxoside

Item No. 35356

CAS Registry No.: 5297-05-2
Formal Name: (3 β ,5 β ,12 β)-3-[[2,6-dideoxy-4-O-(2,6-dideoxy- β -D-ribo-hexopyranosyl)- β -D-ribo-hexopyranosyl]oxy]-12,14-dihydroxy-card-20(22)-enolide

Synonym: Bisdigoxigenin

MF: C₃₅H₅₄O₁₁

FW: 650.8

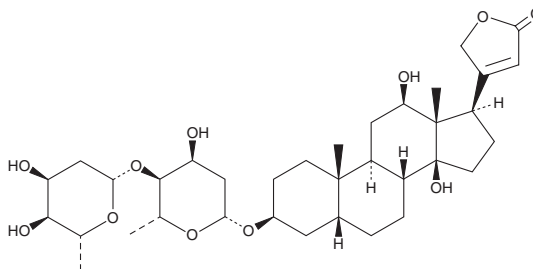
Purity: $\geq 98\%$

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

Digoxigenin bisdigitoxoside is supplied as a solid. A stock solution may be made by dissolving the digoxigenin bisdigitoxoside in the solvent of choice, which should be purged with an inert gas. Digoxigenin bisdigitoxoside is slightly soluble in DMSO and methanol (sonicated).

Description

Digoxigenin bisdigitoxoside is a Na⁺/K⁺-ATPase inhibitor and an active cardiac glycoside metabolite of digoxin (Item No. 22266).^{1,2} It is formed from digoxin by the cytochrome P450 (CYP) isoform CYP3A.³ Digoxigenin bisdigitoxoside inhibits the Na⁺/K⁺-ATPase isoforms $\alpha 1\beta 1$ and $\alpha 2\beta 1$ with K_i values of 196 and 74 nM, respectively.

References

1. Katz, A., Tal, D.M., Heller, D., *et al.* Digoxin derivatives with enhanced selectivity for the $\alpha 2$ isoform of Na,K-ATPase: Effects on intraocular pressure in rabbits. *J. Biol. Chem.* **289**(30), 21153-21162 (2014).
2. Abshagen, U. and Rietbrock, N. Metabolism of digoxigenin, digoxigeninmonodigitoxoside and digoxigeninbisdigitoxoside in rats. *Naunyn Schmiedebergs Arch Pharmacol.* **276**(2), 157-166 (1973).
3. Salphati, L. and Benet, L.Z. Metabolism of digoxin and digoxigenin digitoxosides in rat liver microsomes: Involvement of cytochrome P4503A. *Xenobiotica* **29**(2), 171-185 (1999).

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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