

PRODUCT INFORMATION

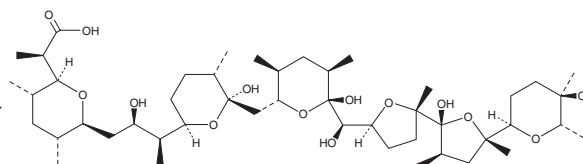


Alborixin

Item No. 40933

CAS Registry No.: 57760-36-8

Formal Name: (αR,2S,3S,5R,6S)-6-[(2R,3S)-3-[(2R,5S,6R)-6-[[[(2R,3S,5R,6R)-6-[(R)-[(2S,2'R,3'R,5S,5'S)-5'-[(2R,5R,6S)-6-ethyltetrahydro-5-hydroxy-5-methyl-2H-pyran-2-yl]octahydro-2'-hydroxy-2,3',5'-trimethyl[2,2'-bifuran]-5-yl]hydroxymethyl]tetrahydro-6-hydroxy-3,5-dimethyl-2H-pyran-2-yl]methyl]tetrahydro-6-hydroxy-5-methyl-2H-pyran-2-yl]-2-hydroxybutyl]tetrahydro-α,3,5-trimethyl-2H-pyran-2-acetic acid



MF: C₄₈H₈₄O₁₄

FW: 885.2

Purity: ≥70%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Item Origin: Bacterium/*Streptomyces lasii*

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

Laboratory Procedures

Alborixin is supplied as a solid. A stock solution may be made by dissolving the alborixin in the solvent of choice, which should be purged with an inert gas. Alborixin is soluble in ethanol, methanol, dichloromethane, and DMSO.

Description

Alborixin is an ionophore originally isolated from *S. albus* that has diverse biological activities.¹⁻⁴ It is active against *B. cereus*, *B. megaterium*, *S. lactis*, *S. aureus*, and *C. xerosis* (MIC₅₀s = 0.4, <0.1, 0.8, 0.2, 0.8 mg/kg, respectively).¹ Alborixin decreases the proliferation of eight cancer cell lines (IC₅₀s = 3.2 to 15.4 μM).² It induces apoptosis, decreases the mitochondrial membrane potential, and increases the levels of reactive oxygen species (ROS) in HCT116 colon cancer cells when used at a concentration of 5 μM. Alborixin (1 mg/kg) increases heart rate, right ventricular contractile force, systolic and diastolic arterial blood pressure, and plasma levels of glucose in the coronary sinus and hepatic veins, as well as decreases the QT interval and plasma levels of potassium and sodium, but not calcium, in the coronary sinus and hepatic, renal, and deep femoral veins in normotensive dogs.³ It reduces the number of *C. parvum* oocytes in *C. parvum*-infected mice when administered at doses of 1.5 or 2.5 mg/kg.⁴ Alborixin is toxic to mice (LD₅₀ = 150 mg/kg).¹

References

1. Delhomme, C., Kergomard, A., Kergomard, G., et al. *J. Antibiot. (Tokyo)* **29(7)**, 692-695 (1976).
2. Shah, A.M., Wani, A., Qazi, P.H., et al. *Chem. Biol. Interact.* **256**, 198-208 (2016).
3. Moins, N., Gachon, P., and Duchene-Marullaz, P. *J. Cardiovasc. Pharmacol.* **1(6)**, 659-671 (1979).
4. Blagburn, B.L., Sundermann, C.A., Lindsay, D.S., et al. *Antimicrob. Agents Chemother.* **35(7)**, 1520-1523 (1991).

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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