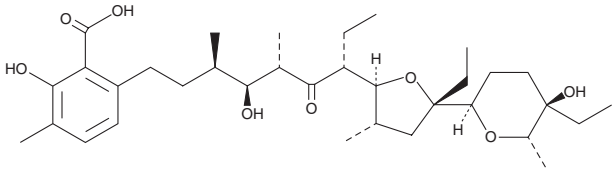
PRODUCT INFORMATION

Lasalocid

Item No. 15505

CAS Registry No.: 25999-31-9
Formal Name: 6-[(3R,4S,5S,7R)-7-[(2S,3S,5S)-5-ethyl-5-[(2R,5R,6S)-5-ethyltetrahydro-5-hydroxy-6-methyl-2H-pyran-2-yl]tetrahydro-3-methyl-2-furanyl]-4-hydroxy-3,5-dimethyl-6-oxononyl]-2-hydroxy-3-methyl-benzoic acid
Synonyms: Antibiotic X 537A, CID-5360807, Ionophore X 537A
MF: $C_{34}H_{54}O_8$
FW: 590.8
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Bacterium/*Streptomyces* sp.



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

Laboratory Procedures

Lasalocid is supplied as a solid. A stock solution may be made by dissolving the lasalocid in the solvent of choice, which should be purged with an inert gas. Lasalocid is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

Description

Lasalocid is a polyketide-synthase derived ionophore antibiotic originally isolated from *S. lasaliensis*.[1,2] It binds to monovalent and divalent cations, including potassium, sodium, calcium, and magnesium cations.[3] Lasalocid (0.01 and 0.1 µg/ml) is active against *E. tenella*.[4] *In vivo*, lasalocid (125 ppm in the feed) reduces the severity of gastrointestinal lesions in chicks experimentally infected with *E. tenella*, *E. maxima*, *E. necatrix*, *E. brunetti*, or *E. acervulina*. It has been found in groundwater.[5] Formulations containing lasalocid have been used in the treatment of coccidiosis in poultry.

References

1. Migita, A., Watanabe, M., Hirose, Y., *et al.* Identification of a gene cluster of polyether antibiotic lasalocid from *Streptomyces lasaliensis*. *Biosci. Biotechnol. Biochem.* **73(1)**, 169-176 (2009).
2. Mitrovic, M. and Schildknecht, E.G. Anticoccidial activity of lasalocid (X-537A) in chicks. *Poult. Sci.* **53(4)**, 1448-1455 (1974).
3. Antonenko, Y.N. and Yaguzhinsky, L.S. The ion selectivity of nonelectrogenic ionophores measured on a bilayer lipid membrane: nigericin, monensin, A23187 and lasalocid A. *Biochim. Biophys. Acta* **938(2)**, 125-130 (1988).
4. Folz, S.D., Lee, B.L., Nowakowski, L.H., *et al.* Anticoccidial evaluation of halofuginone, lasalocid, maduramicin, monensin and salinomycin. *Vet. Parasitol.* **28(1-2)**, 1-9 (1988).
5. Mooney, D., Richards, K.G., Danaher, M., *et al.* An investigation of anticoccidial veterinary drugs as emerging organic contaminants in groundwater. *Sci. Total Environ.* **746**, 141116 (2020).

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