

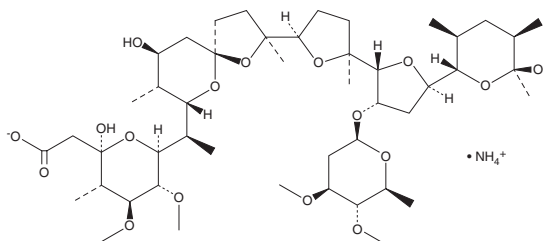
PRODUCT INFORMATION



Maduramicin (ammonium salt)

Item No. 34270

CAS Registry No.: 84878-61-5
Formal Name: maduramicin α , monoammonium salt
Synonyms: Antibiotic X-14868A, CL 259,971, Maduramycin, Prinicin
MF: $C_{47}H_{79}O_{17} \cdot NH_4$
FW: 934.2
Purity: $\geq 95\%$
Supplied as: A solid
Storage: $-20^\circ C$
Stability: ≥ 4 years
Item Origin: Synthetic



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

Laboratory Procedures

Maduramicin (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the maduramicin (ammonium salt) in the solvent of choice, which should be purged with an inert gas. Maduramicin (ammonium salt) is soluble in the organic solvent dimethyl formamide at a concentration of approximately 1 mg/ml.

Description

Maduramicin is a polyether ionophore antibiotic that has been found in *Nocardia*.¹ It selectively binds to potassium, rubidium, sodium, lithium, and cesium ions over divalent cations. Maduramicin is active against Gram-positive bacteria (MICs = 0.9-125 $\mu g/ml$) but not Gram-negative bacteria (MICs = $>1,000 \mu g/ml$) or fungi (MICs = 250- $>1,000 \mu g/ml$). It reduces the viability of asexual and gametocyte *P. falciparum* parasites (EC_{50} s = 1.3 and 14.8 nM, respectively) and reduces *P. berghei* transmission in a mouse model of malaria when administered at doses of 4 and 8 mg/kg.² Maduramicin (5-10 ppm in the diet) reduces the severity of lesions and completely protects chicks against mortality in a model of coccidiosis induced by *E. tenella*.¹ Formulations containing maduramicin have been used in the treatment of coccidiosis in chickens.

References

1. Liu, C.-M., Hermann, T.E., Downey, A., *et al.* Novel polyether antibiotics X-14868A, B, C, and D produced by a *Nocardia*. Discovery, fermentation, biological as well as ionophore properties and taxonomy of the producing culture. *J. Antibiot. (Tokyo)* **36**(4), 343-350 (1983).
2. Maron, M.I., Magle, C.T., Czeny, B., *et al.* Maduramicin rapidly eliminates malaria parasites and potentiates the gametocytocidal activity of the pyrazoleamide PA21A050. *Antimicrob. Agents Chemother.* **60**(3), 1492-1499 (2015).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM