

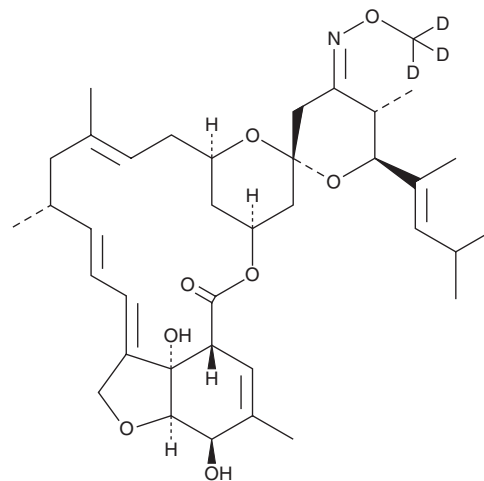
PRODUCT INFORMATION



Moxidectin-d₃ Item No. 28766

Formal Name: (2R,2a'E,2a1'S,4Z,4'E,5S,6S,6'R,8'E,11'R,15'S,17a'R,20'R,20a'R)-2a1',20'-dihydroxy-4-((methoxy-d₃)imino)-5,6',8',19'-tetramethyl-6-((E)-4-methylpent-2-en-2-yl)-2a1',3,4,5,6,6',7',10',11',14',15',17a',20',20a'-tetradecahydro-2'H,17'H-spiro[pyran-2,13'-[11,15]methano[1,5]dioxacyclooctadecino[9,8,7-cd]benzofuran]-17'-one

Synonym: CL-301423-d₃
MF: C₃₇H₅₀D₃NO₈
FW: 642.8
Chemical Purity: ≥95% (Moxidectin)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Moxidectin-d₃ is intended for use as an internal standard for the quantification of moxidectin (Item No. 17165) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Moxidectin-d₃ is supplied as a solid. A stock solution may be made by dissolving the moxidectin-d₃ in the solvent of choice, which should be purged with an inert gas. Moxidectin-d₃ is soluble in organic solvents such as methanol and chloroform.

Description

Moxidectin is a macrocyclic lactone endectocide and a derivative of nemadectin.^{1,2} It reduces fecal nematode egg counts by 98.4 and 99.8% in naturally infected calves when administered subcutaneously at doses of 0.2 and 0.3 mg/kg, respectively.² Moxidectin (0.2 and 0.3 mg/kg) reduces worm burden of *O. ostertagi* and *T. axei* in the abomasum, and *Cooperia* species and *N. helvetianus* in the small intestine, of naturally infected calves. It potentiates GABA-gated currents in *Xenopus* oocytes expressing rat $\alpha_1\beta_2\gamma_2$ subunit-containing GABA_A receptors with an EC₅₀ value of 11.8 nM.³ Formulations containing moxidectin have been used in the treatment of onchocerciasis, as well as in the prevention and treatment of parasitic infections in veterinary medicine.

References

1. Kumar, A., Byun, H.S., Bittman, R., et al. *Cell. Signal.* **23(7)**, 1144-1152 (2011).
2. Ranjan, S., Trudeau, C., Prichard, R.K., et al. *Vet. Parasitol.* **41(3-4)**, 227-231 (1992).
3. Ménez, C., Sutra, J.-F., Prichard, R., et al. *PLoS Negl. Trop. Dis.* **6(11)**, e1883 (2012).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/19/2022

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