Avermectin B₁₅ₐ
Item No. 22000

CAS Registry No.: 65195-55-3
Formal Name: 5-O-demethyl-avermectin A₁₅ₐ
Synonyms: Antibiotic C 076B₁₅ₐ, L-676,863
MF: C₄₈H₇₂O₁₄
FW: 873.1
Purity: ≥99%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years

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

Laboratory Procedures

Avermectin B₁₅ₐ is supplied as a solid. A stock solution may be made by dissolving the avermectin B₁₅ₐ in the solvent of choice. Avermectin B₁₅ₐ is soluble in organic solvents such as methanol, ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas.

Avermectin B₁₅ₐ is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Avermectin B₁₅ₐ is a macrocyclic lactone disaccharide anthelmintic agent that binds to high and low affinity sites on the mammalian GABAₐ receptor.¹⁻³ Binding to the high affinity site activates the receptor to increase chloride influx, while binding to the low affinity site blocks the channel.³ Avermectin B₁₅ₐ inhibits binding of the glycine receptor antagonist strychnine to membranes and the solubilized receptor from rat spinal cord (Kᵢₗ = 1.3 and 3.6 µM, respectively).⁴ Formulations containing avermectin B₁₅ₐ (>80%) and avermectin B₁₅ (≤20%; Item No. 17453) are used in insecticides and veterinary anthelmintic formulas as abamectin (Item No. 19201).⁵,⁶

References