

# Avermectin B1a

Catalog No: tcsc0718



## Available Sizes

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**Size:** 5mg



## Specifications

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**CAS No:**

65195-55-3

**Formula:**

$C_{48}H_{72}O_{14}$

**Pathway:**

Anti-infection

**Target:**

Parasite

**Purity / Grade:**

>98%

**Solubility:**

10 mM in DMSO

**Alternative Names:**

Abamectin B1a

**Observed Molecular Weight:**

873.08

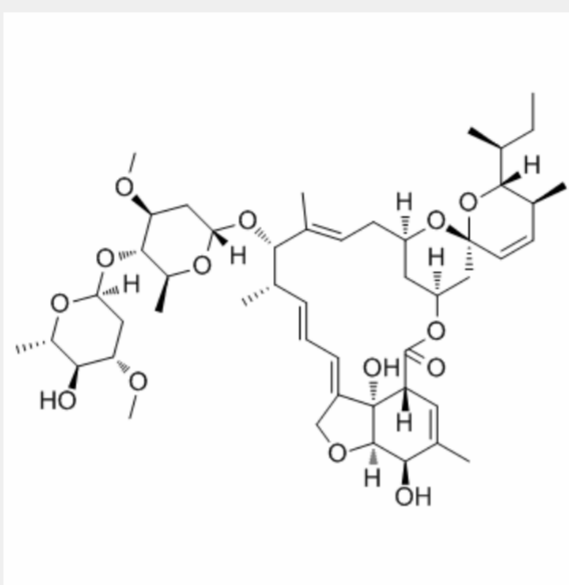
## Product Description

Avermectin B1a is an antiparasitic agent that paralyzes nematodes without causing hypercontraction or flaccid paralysis.

**In Vitro:** [<sup>3</sup>H]AVM B1a preferentially binds to synaptic membranes from several regions of rat brain. [<sup>3</sup>H]AVM B1a specific binding to intact monolayers of granule cells increases rapidly with time of incubation and reaches equilibrium after approximately 20 min at 24°C. Higher concentrations of [<sup>3</sup>H]AVM B1a leads to markedly greater nonspecific binding, 60% at 25 nM. Various AVM analogs also

produce concentration-dependent inhibition of [<sup>3</sup>H]AVM B1a binding in intact cerebellar neurons. AVM B1a and moxidectin are similar in potency (IC<sub>50</sub> values, 120 and 126 nM, respectively)<sup>[3]</sup>. AVMB1a-stimulated chloride efflux from mouse brain synaptic vesicles results from the activation of GABA-insensitive chloride channels and that this action is distinct from their previously documented effects on GABA-gated chloride channels in mouse brain preparations<sup>[4]</sup>.

**In Vivo:** Bacteria are significantly inhibited when the AVM B1a concentration is higher than 83.3 mg/kg, while fungi are less impaired in soil. Soil respiration is also inhibited by high concentration AVM B1a, which differs with soil types. The half lethal dosage (LD<sub>50</sub>) of AVM B1a to soil earthworm is estimated as 4.63 mg × cm<sup>2</sup> in filter paper contact test, and as 24.13 and 17.06 mg/kg, respectively after treated 7 and 14 days in artificial soil<sup>[1]</sup>. In artificial soil, the LC50 of AVM B1a on earthworms are 24.1 mg/kg and 17.1 mg/kg, respectively, for 7 and 14 days. About 80.0% and 94.8% of the accumulated AVM B1a are eliminated respectively in two groups within 1 day after they are exposed to AVM B1a-free soil, but a trace amount of AVM B1a is found for a relative long time in earthworms<sup>[2]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!