Web: www.taiclone.com
Tel: +886-2-2735-9682
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Avermectin B1a

Catalog No: tcsc0718

Available Sizes

Size: 5mg

Specifications

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: [^{3}H]AVM B1a preferentially binds to synaptic membranes from several regions of rat brain. [^{3}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 [^{3}H]AVM B1a leads to markedly greater nonspecific binding, 60% at 25 nM. Various AVM analogs also

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produce concentration-dependent inhibition of [^{3}H]AVM B1a binding in intact cerebellar neurons. AVM B1a and moxidectin are similar in potency (IC_{50} values, 120 and 126 nM, respectively)[3]. 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[4].

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_{50}) of AVM B1a to soil earthworm is estimated as 4.63 mg × cm^2 in filter paper contact test, and as 24.13 and 17.06 mg/kg, respectively after treated 7 and 14 days in artificial soil[1]. Iin 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[2].