

Product Name:	Avermectin B1a Monosaccharide
Product Number:	A138
CAS Number:	71831-09-9
Molecular Formula:	$C_{41}H_{60}O_{11}$
Molecular Weight:	728.9
Appearance:	White solid
Solubility:	soluble in ethanol, methanol, DMF and DMSO.
Source:	semi-synthetic
Storage Conditions:	-20°C
Description:	Avermectin B1a Monosaccharide is degradation product produced by selective hydrolysis of the terminal saccharide of Avermectin under acidic conditions. Avermectin B1a Monosaccharide is a potent inhibitor of nematode larval development, but is devoid of paralytic activity. Despite the importance of Avermectin as an anthelmintic in animal health, there are few published reports of the biological activity or the levels of Avermectin B1a Monosaccharide in animals or in the environment. Avermectins are a family of natural macrocyclic lactones produced by the soil actinomycete <i>Streptomyces avermitilis</i>. There are eight different avermectin natural product compounds and they are given the designations A1a, A1b, A2a, A2b, B1a, B1b, B2a, and B2b based upon the structure of the individual compounds. The B1 fraction has the most effective antiparasitic activity. Avermectin B1a Monosaccharide is soluble in ethanol, methanol, DMF and DMSO.
Mechanism of Action:	Avermectins can modulate gamma-aminobutyric acid (GABA) chloride channels in vertebrate neurons.
Insect Biology Applications	Electrophysiological findings by injection of <i>E. elegans</i> mRNA into <i>Xenopus laevis</i> oocytes indicated that Avermectins act on glutamate-gated chloride channels in nematodes.

References:

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