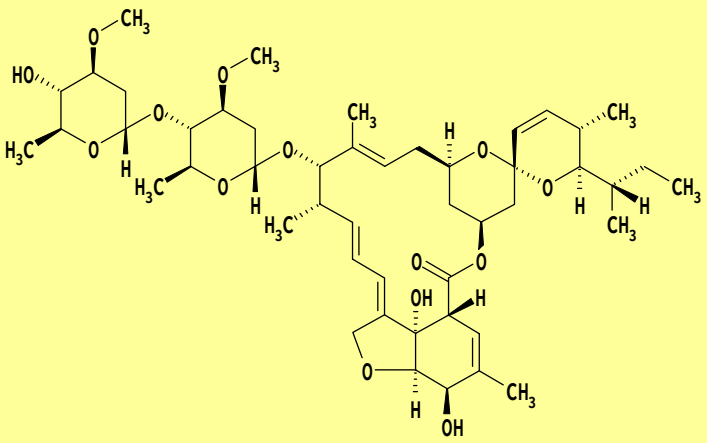
Avermectin B1a	Cat.# BLS0350

Structure



Origin: *Streptomyces avermitilis* MA-4680

CAS Registry Number: 65195-55-3

CA Index Name: 5-O-Demethyl-Avermectin A1a

Appearance: white powder

Molecular Formula/ Weight: $C_{48}H_{72}O_{14}$=873.08

Melting Point: 153-155℃ **Purity:**>98% by HPLC

Solubility: Sol. in Chloroform, Acetone, MeOH
Inso. in water

Background Information:

Avermectins were co-discovered from The Kitasato Institute, Streptomyces avermectinius with Merck Sharp and Dohme in 1979[1)].

Avermectins are an unusual 16-membered macrolide, and shows very strong anthelmintic activity. Avermectins are a family of four closely-related major components, A1a, A2a, B1a and B2a, and four minor components, A1b, A2b, B1b and B2b, which are lower homologs of the corresponding major components. Among them, avermectin B1a shows the highest activity[2)]. The first total synthesis of avermectin A1a was achieved by Danishefsky et al[3)].

Avermectins interact with glutamate-gated chloride channel in nerve and muscle cells only in nematodes, and insects and ticks[4)](scheme 1).

Handling and Storage:

Store at -20℃.

References:

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4. D. F. Cully et al., J. Biol. Chem., **271**, 20187–20191 (1997).
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9. S. Ōmura and A. Crump, Nature Review, Microbiology, **12**, 984-989 (2004).

Manufactured with Cortesy strain from The Kitasato Institute.