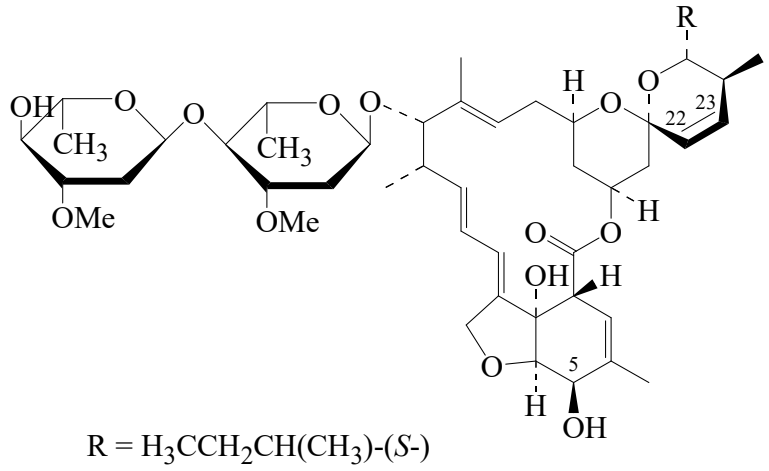
>>**Entry Name: Avermectin B_{1a}**
Synonym(s): 5-*O*-Demethylavermectin A_{1a}, 9Cl. C $076B_{1a}$. Antibiotic C $076B_{1a}$. Affirm. Vertimec



R = $H_3CCH_2CH(CH_3)$-(*S*-)

CAS Registry Number: 65195-55-3
Related CAS Registry Numbers(s): 71751-41-2 106434-14-4 113665-88-6 113665-89-7 131483-64-2 135556-35-3 135556-38-6 135681-09-3

Molecular Formula: $C_{48}H_{72}O_{14}$
Molecular Weight: 873.088
Accurate Mass: 872.49221
Percentage Composition: C 66.03%; H 8.31%; O 25.66%
General Statement: Macrolide-type antibiotic
Biological Source: Prod. by *Streptomyces avermitilis*
Biological Use/Importance: Anthelmintic agent. Active against *Nematospiroides dubius* in mice
Optical Rotation: $[\alpha]_D^{27}$+55.7 (c, 1.06 in $CHCl_3$)
Solubility: Sol. MeOH, C_6H_6; poorly sol. H_2O
Calculated Log P Data: Log P 2.25 (uncertain value) (calc)
UV: [neutral] λ_{max} 237 (ε 29120); 243 (ε 31850); 252 (ε 20510) (MeOH) (Berdy)
Other Data: Component of Abamectin, INN, BSI, ANSI, USAN (Avid)

>>**Derivative:** O^5-Me
Synonym(s): Avermectin A_{1a}. C $076A_{1a}$. Antibiotic C $076A_{1a}$

CAS Registry Number: 65195-51-9

Molecular Formula: $C_{49}H_{74}O_{14}$
Molecular Weight: 887.115
Accurate Mass: 886.50786
Percentage Composition: C 66.34%; H 8.41%; O 25.25%
Biological Source: Prod. by *Streptomyces avermitilis*
Biological Use/Importance: Anthelmintic. Active against *Nematospirodes dubius* in mice
Optical Rotation: $[\alpha]_D^{27}$+68.5 (c, 0.77 in $CHCl_3$)
Calculated Log P Data: Log P 2.87 Uncertain value (calc)

>>**Derivative:** O^5-Me, 3'-*O*-de-Me, 4'-*O*-deglycosyl

CAS Registry Number: 99965-59-0

Molecular Formula: $C_{41}H_{60}O_{11}$
Molecular Weight: 728.918
Accurate Mass: 728.413565
Percentage Composition: C 67.56%; H 8.30%; O 24.14%
Biological Source: Prod. by *Streptomyces avermitilis*
Solubility: Sol. MeOH, Me_2CO; fairly sol. hexane; poorly sol. H_2O

>>**Derivative:** 3'-*O*-De-Me
Synonym(s): 3'-De-*O*-methylavermectin B_{1a}

CAS Registry Number: 100044-30-2
Molecular Formula: $C_{47}H_{70}O_{14}$
Molecular Weight: 859.062
Accurate Mass: 858.47656
Percentage Composition: C 65.71%; H 8.21%; O 26.07%
Biological Source: Prod. by *Streptomyces avermitilis*
Solubility: Sol. MeOH, Me_2CO; fairly sol. hexane; poorly sol. H_2O

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