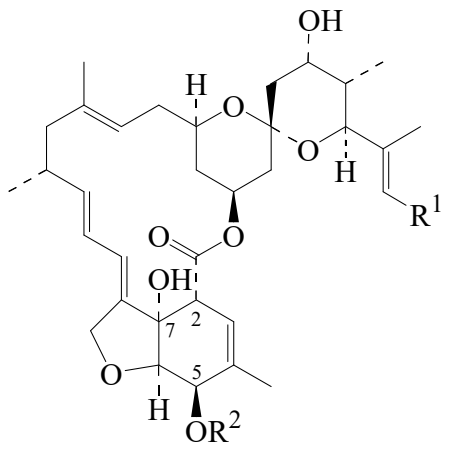
>>**Entry Name: Antibiotic S 541**
Synonym(s): S 541



S54 1A $R^1 = CH(CH_3)_2$, $R^2 = H$
S54 1B $R^1 = R^2 = CH_3$
S54 1C $R^1 = CH_3$, $R^2 = H$
S54 1D $R^1 = CH_2CH_3$, $R^2 = H$
S54 1E $R^1 = CH_2CH_3$, $R^2 = CH_3$
S54 1F $R^1 = CH(CH_3)_2$, $R^2 = CH_3$

Related CAS Registry Numbers(s): 112125-87-8

General Statement: Macrolide antibiotic complex
Source/Synthesis: Prod. by *Streptomyces thermoarchaensis*
Use/Importance: Active against fungi, insects, nematodes and other parasites
Other Data: Related to Milbemycins and Avermectins

>>**Variant: Antibiotic S 541A**
Synonym(s): Nemadectin, INN, USAN. LL-F28249α. S 541A. Antibiotic LL-F28249α. Nemadectin α. CL 287088

CAS Registry Number: 102130-84-7

Molecular Formula: $C_{36}H_{52}O_8$
Molecular Weight: 612.802
Accurate Mass: 612.36622
Percentage Composition: C 70.56%; H 8.55%; O 20.89%
Biological Source: Isol. from *Streptomyces cyaneogriseus* ssp. *noncyanogenus* and *Streptomyces thermoarchaensis*
Use/Importance: Shows potent activity against endo- and ecto-parasites of cattle, sheep, swine, dogs and horses
Optical Rotation: $[\alpha]_D^{26}$+133 (c, 0.3 in Me_2CO)
Calculated Log P Data: Log P 2.93 (uncertain value) (calc)
UV: [neutral] λ_{max} 238 (sh) (ε 27300); 244 (ε 30500); 253 (sh) (ε 19500) (MeOH) (Derep)

>>**Derivative:** 5-Ketone

CAS Registry Number: 113463-38-0

Molecular Formula: $C_{36}H_{50}O_8$
Molecular Weight: 610.786
Accurate Mass: 610.35057
Percentage Composition: C 70.79%; H 8.25%; O 20.96%
Biological Source: From *Streptomyces thermoarchaensis*
Solubility: BERDY SOL: Sol. MeOH, C_6H_6; fairly sol. hexane; poorly sol. H_2O
UV: [neutral] λ_{max} 240 (E1%/1cm 509) (MeOH) (Berdy)

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