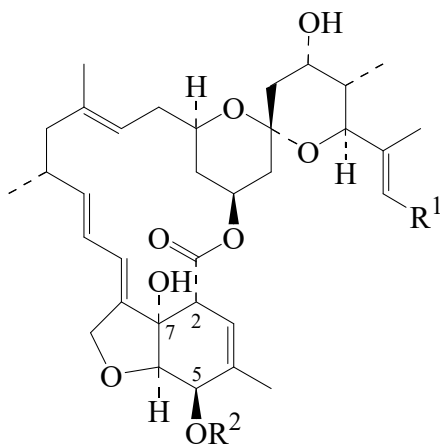




>>Entry Name: Antibiotic S 541

Synonym(s): S 541



S54 1A $R^1 = \text{CH}(\text{CH}_3)_2$, $R^2 = \text{H}$

S54 1B $R^1 = R^2 = \text{CH}_3$

S54 1C $R^1 = \text{CH}_3$, $R^2 = \text{H}$

S54 1D $R^1 = \text{CH}_2\text{CH}_3$, $R^2 = \text{H}$

S54 1E $R^1 = \text{CH}_2\text{CH}_3$, $R^2 = \text{CH}_3$

S54 1F $R^1 = \text{CH}(\text{CH}_3)_2$, $R^2 = \text{CH}_3$

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-F28249 α . S 541A. Antibiotic LL-F28249 α . Nemadectin α . CL 287088

CAS Registry Number: 102130-84-7

Molecular Formula: $\text{C}_{36}\text{H}_{52}\text{O}_8$

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: $[\alpha]_{\text{D}}^{26} +133$ (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: $\text{C}_{36}\text{H}_{50}\text{O}_8$

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)