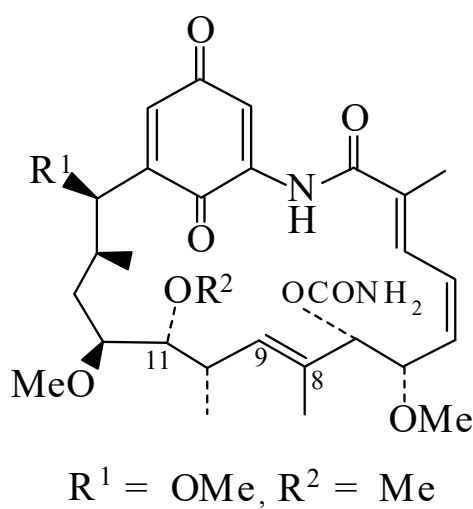




>>Entry Name: Herbimycin A

Synonym(s): 17-Demethoxy-15-methoxy-11-*O*-methylgeldanamycin. Herbimycin. TAN 420F. Antibiotic TAN 420F



CAS Registry Number: 70563-58-5

Molecular Formula: $\text{C}_{30}\text{H}_{42}\text{N}_2\text{O}_9$

Molecular Weight: 574.67

Accurate Mass: 574.289033

Percentage Composition: C 62.70%; H 7.37%; N 4.87%; O 25.06%

Biological Source: Prod. by *Streptomyces hygroscopicus*

Use/Importance: Active against tobacco mosaic virus. Shows potent herbicidal activity and weak antifungal activity

Physical Description: Yellow columns (EtOAc)

Melting Point: Mp 230°

Optical Rotation: $[\alpha]_{\text{D}}^{20} +137$ (c, 1.0 in CHCl_3)

UV: [neutral] λ_{max} 271 (ϵ 20100); 393 (ϵ 2000) (MeOH) (Derep)

Hazard & Toxicity: LD₅₀ (mus, ipr) 19 mg/kg

Sigma: H6649

>>Derivative: 8,9-Epoxy

Synonym(s): 8,9-Epoxyherbimycin A

Molecular Formula: $\text{C}_{30}\text{H}_{42}\text{N}_2\text{O}_{10}$

Molecular Weight: 590.669

Accurate Mass: 590.283948

Percentage Composition: C 61.00%; H 7.17%; N 4.74%; O 27.09%

Source/Synthesis: Semisynthetic

Use/Importance: Shows antitumour props.

Optical Rotation: $[\alpha]_{\text{D}}^{23} +126$ (c, 0.5 in CHCl_3)

References:

Omura, S. *et al.*, *J. Antibiot.*, 1979, **32**, 255, (isol, struct, props, cmr, nmr)

Omura, S. *et al.*, *Tet. Lett.*, 1979, 4323

Furusaki, A. *et al.*, *J. Antibiot.*, 1980, **33**, 781, (cryst struct)

Omura, S. *et al.*, *J. Antibiot.*, 1984, **37**, 1264, (props, derivs)

Shibata, K. *et al.*, *J. Antibiot.*, 1986, **39**, 1630, (pmr, cmr, struct)

Nakata, M. *et al.*, *Bull. Chem. Soc. Jpn.*, 1992, **65**, 2974, (synth)