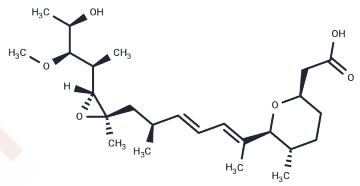
Data Sheet (Cat.No.T36749)

TargetMol

Herboxidiene

Chemical Properties



CAS No. : 142861-00-5

Formula: C25H42O6

Molecular Weight: 438.6

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Herboxidiene (GEX1A) is a plant-toxic polyketide compound isolated from Streptomyces ATCC 49982, with herbicidal, cholesterol-lowering, and anticancer activities. It exhibits anti-angiogenic activity by downregulating vascular endothelial growth factor receptor-2 (VEGFR-2) and hypoxia-inducible factor-1α (HIF-1α).
Targets(IC50)	DNA/RNA Synthesis
In vivo	Methods: Herboxidiene (1 mg/kg, intraperitoneal injection) was administered to mice bearing SVT2 mouse fibrosarcoma model, and the changes of tumors in vivo were observed. Results: Herboxidiene showed significant antitumor activity on day 4.[1]

Solubility Information

Solubility	Ethanol: 1 mg/mL (2.28 mM),Sonication is recommended. Dichloromethane: 1 mg/mL (2.28 mM),Sonication is recommended. DMSO: 1 mg/mL (2.28 mM),Sonication is recommended. Methanol: 1 mg/mL (2.28 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.280 mL	11.3999 mL	22.7998 mL
5 mM	0.456 mL	2.280 mL	4.560 mL
10 mM	0.228 mL	1.140 mL	2.280 mL
50 mM	0.0456 mL	0.228 mL	0.456 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Miller-Wideman, M., Makkar, N., tran, M.G.B., et al. Herboxidiene, a new herbicidal substance from Streptomyces chromofuscus A7847. Taxonomy, fermentation, isolation, physico-chemical and biological properties. J. Antibiot. (Tokyo) 45(6), 914-921 (1992).

Hasegawa, M., et al. Identification of SAP155 as the target of GEX1A (Herboxidiene), an antitumor natural product. ACS Chem Biol. 6(3), 229-233 (2011).

Imaizumi, T., et al. The synthesis and evaluation of the antiproliferative activity of deacidified GEX1A analogues. J Antibiot (Tokyo) 70(5), 675-679 (2017).

Jung, H.J., Kim, Y., Shin, J.Y., et al. Antiangiogenic activity of herboxidiene via downregulation of vascular endothelial growth factor receptor-2 and hypoxia-inducible factor-1α. Arch. Pharm. Res. 38(9), 1728-1735 (2015).