Product Data Sheet

Product Name: Chartreusin
Cat. No.: GC18536

Chemical Properties

Cas. No.	6377-18-0		
Chemical Name	10-[[6-deoxy-2-O-(6-deoxy-3-O-methyl-α-D-galactopyranosyl)-β-D-galactopyranosyl]oxy]-6-hydroxy-1-methyl-benzo[h][1]benzopyrano[5,4,3-cde][1]benzopyran-5,12-dione		
SMILES	OC1=C(C(OC2=C3C(C(O4)=O)=C(C)C=C2)=O)C3=C4C5=C1C=CC=C5O[C@@H]6O[C@H](C)[C@H](O)[C@H](O)[C@H]6O[C@]7([H])[C@H](O)[C@@H](OC)[C@@H](O)[C@@H](C)O7		
Formula	$C_{32}H_{32}O_{14}$	M.Wt	640.6
Solubility	Acetone: soluble,DMSO: 10 mg/ml,Methanol: slightly soluble	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Chartreusin		

Background

Chartreusin is an antibiotic originally isolated from S. chartreusis with diverse biological activities. It inhibits growth of S. aureus, B. subtilis, M. luteus, M. flavus, B. fragilis, C. difficile, C. perfringens, and P. acnes (MICs = 0.4-12.5 μg/ml). Chartreusin binds to DNA and induces electrophoretic shifts in both supercoiled and nicked plasmid DNA. It also inhibits strand-passing activity of topoisomerase II in a P4 unknotting assay. Chartreusin inhibits protein synthesis in chick embryo fibroblasts (CEFs) and mouse fibroblast 3T6 cells (IC50s = 7 and 70 μM, respectively). It is cytotoxic to human lung carcinoma A549 cells in vitro (IC50 = 95 nM) and increases median survival in P388 leukemia and B16 melanoma mouse tumor models when administered at a dose of 10 mg/kg per day.

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