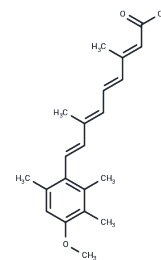


Acitretin

Chemical Properties

CAS No. :	55079-83-9
Formula:	C ₂₁ H ₂₆ O ₃
Molecular Weight:	326.43
Storage:	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	Acitretin (Ro 10-1670) is a second-generation systemic retinoid used in the treatment of psoriasis.
Targets(IC50)	Apoptosis, Retinoid Receptor, Autophagy
In vitro	Acitretin stimulates ADAM10 promoter activity with an EC(50) of 1.5 mM and leads to an increase of mature ADAM10 protein that results in a two- to three-fold increase of the ratio between alpha- and beta-secretase activity in neuroblastoma cells. [1] Acitretin (5-20 μM) impairs mitochondrial phosphorylation efficiency as demonstrated by the decrease in the state 3 respiration and ATP levels, and by the increase in the lag phase of ADP phosphorylation cycle, without affecting the membrane potential. Acitretin induces Ca(2+)-mediated mitochondrial permeability transition (MPT) and decreased the adenine nucleotide translocase (ANT) content. [2] Acitretin preferentially inhibits the growth of SCL-1 cells in a dose- and time-dependent manner, but not of non-malignant keratinocyte HaCaT cells. Acitretin increases the levels of CD95 (Fas), CD95-ligand and Fas-associated death domain. Acitretin is able to induce apoptosis in skin cancer cells possibly via death receptor CD95 apoptosis pathway without affecting the viability of normal keratinocyte. [3]
In vivo	Acitretin undergoes alpha-oxidation, chain shortening O-demethylation, and glucuronidation in the perfused rat liver. [4] Acitretin rapidly appears in liver and muscle of rats, where it undergoes redistribution into skin and adipose tissue. [5]

Solubility Information

Solubility	H ₂ O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 18.33 mg/mL (56.15 mM), Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 1.5 mg/mL (4.6 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0634 mL	15.3172 mL	30.6344 mL
5 mM	0.6127 mL	3.0634 mL	6.1269 mL
10 mM	0.3063 mL	1.5317 mL	3.0634 mL
50 mM	0.0613 mL	0.3063 mL	0.6127 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

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