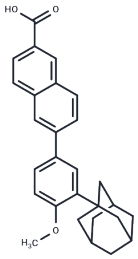
Data Sheet (Cat.No.T1093)

TargetMol

Adapalene

Chemical Properties



CAS No. : 106685-40-9

Formula: C28H28O3

Molecular Weight: 412.52

Appearance: no data available

Storage: keep away from direct sunlight,store at low temperature,keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Adapalene (CD271) is a dual RAR and RXR agonist, utilized in the treatment of skin conditions.
Targets(IC50)	Apoptosis,Retinoid Receptor,Autophagy
In vitro	In rhino mice, Adapalene reduces the quantity of comedonal melanin in the epidermis and increases epidermal thickness. Within both normal skin and acne explants, Adapalene decreases the expression of TLR-2 (TLR-2) and IL-10 (IL-10). By upregulating CD1d expression and downregulating the IL-10 expression in keratinocytes, Adapalene modulates the epidermal immune system. This action enhances the interaction between dendritic cells and T lymphocytes, augmenting antimicrobial activity against Propionibacterium acnes.
In vivo	In colorectal cancer cell lines CC-531, HT-29, and LOVO, as well as in human foreskin fibroblasts, Adapalene induces caspase-3 activity in tumor cells, inhibits DNA synthesis in a time- and dose-dependent manner, and triggers apoptosis.

Solubility Information

Solubility	DMSO: 12.5 mg/mL (30.3 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4241 mL	12.1206 mL	24.2412 mL
5 mM	0.4848 mL	2.4241 mL	4.8482 mL
10 mM	0.2424 mL	1.2121 mL	2.4241 mL
50 mM	0.0485 mL	0.2424 mL	0.4848 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.

Reference

Brogden RN, et al. Drugs, 1997, 53(3), 511-519.
Dou X, Huo T, Liu Y, et al.Discovery of novel and selective farnesoid X receptor antagonists through structure-based virtual screening, preliminary structure-activity relationship study, and biological evaluation.European Journal of Medicinal Chemistry.2024: 116323.
2. Ocker M, et al. Int J Cancer, 2003, 107(3), 453-459.
Tenaud I, et al. Exp Dermatol, 2007, 16(6), 500-506.