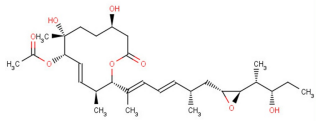
Data Sheet (Cat.No.T16551)

TargetMol
A DRUG SCREENING EXPERT

Pladienolide B

Chemical Properties



CAS No.:	445493-23-2
Formula:	C30H48O8
Molecular Weight:	536.7
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Pladienolide B causes apoptosis. Pladienolide B is an effective cancer cell growth inhibitor that targets the SF3B1 subunit of the spliceosome. Pladienolide B exerts antitumor activities mediated through the inhibition of pre-mRNA splicing.
Targets(IC_{50})	Others: None
In vitro	Pladienolide B (0.1-2 nM; 24-48 hours) decreases SF3b1 expression in human cervical carcinoma cells. Pladienolide B causes (0.1-2 nM; 24 hours) cell cycle arrest and apoptosis. Pladienolide B (0.1-2 nM; 24-72 hours) suppresses human cervical carcinoma cells viability[3].
In vivo	Pladienolide B (2.5-10 mg/kg; i.v.; daily for 5 days) shows intense antitumor activities[4].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.863 mL	9.316 mL	18.632 mL
5 mM	0.373 mL	1.863 mL	3.726 mL
10 mM	0.186 mL	0.932 mL	1.863 mL
50 mM	0.037 mL	0.186 mL	0.373 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Effenberger KA, et al. Coherence between cellular responses and in vitro splicing inhibition for the anti-tumor drug pladienolide B and its analogs. J Biol Chem. 2014 Jan 24;289(4):1938-47.
2. Aouida M, et al. CRISPR/Cas9-mediated target validation of the splicing inhibitor Pladienolide B. Biochim Open. 2016 Feb 24;3:72-75.
3. Zhang Q, et al. Inhibition of SF3b1 by pladienolide B evokes cycle arrest, apoptosis induction and p73 splicing in human cervical carcinoma cells. Artif Cells Nanomed Biotechnol. 2019 Dec;47(1):1273-1280.
4. Mizui Y, et al. Pladienolides, new substances from culture of Streptomyces platensis Mer-11107. III. In vitro and in vivo antitumor activities. J Antibiot (Tokyo). 2004 Mar;57(3):188-96.

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Tel:781-999-4286 E-mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481