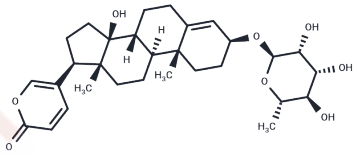
Data Sheet (Cat.No.TN2105)

TargetMol

Proscillaridin A

Chemical Properties



CAS No. : 466-06-8

Formula: C30H42O8

Molecular Weight: 530.65

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	Proscillaridin A is a natural product.It is a potent poison of topoisomerase I/II activity with IC50 values of 30 nM and 100 nM, respectively.
Targets(IC50)	Topoisomerase
In vitro	proscillaridin A, on the proliferation of breast cancer MCF-7 cells.?In terms of inhibition of cell proliferation of MCF-7 cells, the compounds rank in the order proscillaridin A>digoxin>ouabain.?While both digoxin and ouabain inhibited topoisomerase II catalytic activity at nanomolar concentrations (100 nM), neither agent inhibited topoisomerase I catalytic activity even at concentrations as high as 100 microM.?On the other hand, proscillaridin A was a potent poison of topoisomerase I and II activity at nanomolar drug concentrations (30 nM, 100 nM, respectively), suggesting that this agent may produce its cytotoxic activity by targeting both enzymes simultaneously.? These studies suggest that the stabilization of DNA-topoisomerase II complexes is closely linked to the mechanism of digoxin, ouabain and proscillaridin A cytotoxicity.? The potential DNA-binding properties of the cardiac glycosides have been assessed by measuring the displacement of ethidium bromide from calf thymus DNA.

Solubility Information

Solubility	DMSO: 100 mg/mL (188.45 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (7.54 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8845 mL	9.4224 mL	18.8448 mL
5 mM	0.3769 mL	1.8845 mL	3.769 mL
10 mM	0.1884 mL	0.9422 mL	1.8845 mL
50 mM	0.0377 mL	0.1884 mL	0.3769 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

Bielawski K, et al. Inhibition of DNA topoisomerases I and II, and growth inhibition of breast cancer MCF-7 cells by ouabain, digoxin and proscillaridin A.Biol Pharm Bull. 2006 Jul;29(7):1493-7.