

Dinoprost

Chemical Properties

CAS No. : 551-11-1

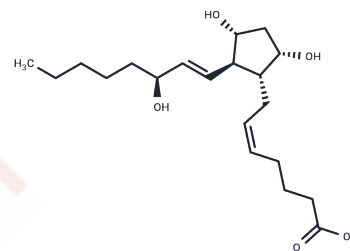
Formula: C₂₀H₃₄O₅

Molecular Weight: 354.48

Store at low temperature

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Dinoprost (Prostaglandin F _{2a}) is a naturally occurring prostaglandin. It is used in medicine to induce labor and as an abortifacient.
Targets(IC ₅₀)	Apoptosis,Endogenous Metabolite,Autophagy,Prostaglandin Receptor
In vitro	Dinoprost (Prostaglandin F _{2α} ; 1 μM; 24 hours) induces ER stress, autophagy, and apoptosis in goat luteal cells and significantly increases the expression of GRP78 and UPR sensors[3].

Solubility Information

Solubility	H ₂ O: 100 mg/mL (282.1 mM),Sonication is recommended. DMSO: 100 mg/mL (282.1 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 (11.28 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	2.821 mL	14.1052 mL	28.2103 mL
5 mM	0.5642 mL	2.821 mL	5.6421 mL
10 mM	0.2821 mL	1.4105 mL	2.821 mL
50 mM	0.0564 mL	0.2821 mL	0.5642 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

Sharma I, et al. Role of 8-iso-prostaglandin F2alpha and 25-hydroxycholesterol in the pathophysiology of endometriosis. *Fertil Steril.* 2010 Jun;94(1):63-70.

Coulthard G, et al. Stereocontrolled organocatalytic synthesis of prostaglandin PGF2 α in seven steps. *Nature.* 2012 Sep 13;489(7415):278-81.

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