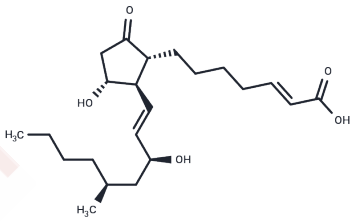
Data Sheet (Cat.No.T15757)

TargetMol

Limaprost

Chemical Properties



CAS No. : 74397-12-9

Formula: C22H36O5

Molecular Weight: 380.52

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	Limaprost (17α,20-dimethyl-δ2-PGE1) is an analog of PGE1 with structural modifications intended to give it a prolonged half-life and greater potency.It is a potent and orally active vasodilator. Limaprost increases blood flow and inhibits platelet aggregation. Limaprost (17α,20-dimethyl-δ2-PGE1) can be used for pain relief, has antianginal effects, and has potential for ischaemic symptoms treatment.
Targets(IC50)	PGE Synthase
In vitro	By a concentration-dependent manner, Limaprost inhibits the IL-1-mediated induction of nerve growth factor (IC50: 70.9 ?nM human IVD cells) [3].
In vivo	PGE1 and limaprost exhibited a novel pharmacological action that suppresses NGF expression in human IVD cells, and other prostanoids differentially regulated NGF expression.?Limaprost has been used to treat patients with lumbar spinal stenosis in Japan and was proved to be effective in relieving symptoms.Platelet aggregation, adhesiveness, bleeding time, and thrombocytopenia induced by ADP and collagen infusion in guinea-pigs are inhibited by oral administration of Limaprost at the same doses or doses less than those relieving vasopressin-induced ST depression of ECG.? Intra-coronary injection of Limaprost (1-100 ng/kg) in dogs causes a remarkable increase in coronary blood flow without any influence on heart rate, blood pressure, myocardial oxygen consumption, and redox potential.?Limaprost given orally at more than 100 mg/kg relieves vasopressin-induced ST depression of rat electrocardiogram.? Resistance in both large and small vessels of the dog coronary artery is decreased by intravenous injection of Limaprost (1-3 mg/kg) [1].

Solubility Information

Solubility	DMSO: 40 mg/mL (105.12 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: 2 mg/mL (5.26 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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.628 mL	13.1399 mL	26.2798 mL
5 mM	0.5256 mL	2.628 mL	5.256 mL
10 mM	0.2628 mL	1.314 mL	2.628 mL
50 mM	0.0526 mL	0.2628 mL	0.5256 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

Tsuboi T, et al. Pharmacological evaluation of OP 1206, a prostaglandin E1 derivative, as an antianginal agent. Arch Int Pharmacodyn Ther. 1980 Sep;247(1):89-102.
Swainston Harrison T, et al. Limaprost. Drugs. 2007;67(1):109-18; discussion 119-20.
Murata K, et al. PGE1 Attenuates IL-1β-induced NGF Expression in Human Intervertebral Disc Cells. Spine (Phila Pa 1976). 2016 Jun;41(12):E710-6.