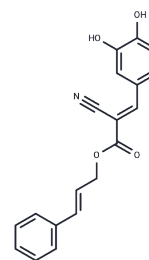


Cinnamyl-3,4-dihydroxy- α -cyanocinnamate

Chemical Properties

CAS No. :	132465-11-3
Formula:	C ₁₉ H ₁₅ NO ₄
Molecular Weight:	321.33
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	Cinnamyl-3,4-dihydroxy- α -cyanocinnamate (CDC) is a potent 12/15-lipoxygenase (12/15-LO) inhibitor (IC ₅₀ = 9-25nm), studied for type 1 diabetes.
Targets(IC ₅₀)	Lipoxygenase
In vitro	High glucose or 12(S)-HETE significantly enhanced transendothelial dextran transport, an effect amplified when both were combined. The 12/15-LO inhibitor, CDC, partially reduced this enhanced dextran transport [1].
In vivo	Elevated glucose and 12(S)-hydroxyeicosatetraenoic acid (HETE) levels can modify phosphorylation levels of vascular endothelial (VE)-cadherin and β -catenin without affecting their total protein expression. Conversely, the 12/15-LO inhibitor, Cinnamyl-3,4-dihydroxy- α -cyanocinnamate (CDC), counteracts the impact of high glucose on protein phosphorylation, thereby preserving the integrity of the endothelial cell barrier. These findings were substantiated by a mouse diabetes mellitus model [1].

Solubility Information

Solubility	DMSO: 40 mg/mL (124.48 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 (6.22 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	3.1121 mL	15.5603 mL	31.1207 mL
5 mM	0.6224 mL	3.1121 mL	6.2241 mL
10 mM	0.3112 mL	1.556 mL	3.1121 mL
50 mM	0.0622 mL	0.3112 mL	0.6224 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

Touaibia M, et al. Single and multiple inhibitors of the biosynthesis of 5-, 12-, 15-lipoxygenase products derived from cinnamyl-3,4-dihydroxy- α -cyanocinnamate: Synthesis and structure-activity relationship. Drug Dev Res. 2024 May;85(3):e22181.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481