Cinnamyl-3,4-dihydroxy-α-cyanocinnamate

Cat. No.: HY-138688

CAS No.: 132465-11-3

Molecular Formula: $C_{19}H_{15}NO_4$

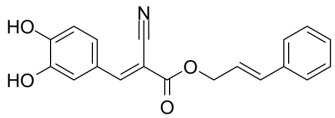
Molecular Weight: 321.33

Target: Lipoxygenase

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (155.60 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	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	1.5560 mL	3.1121 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (7.78 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.78 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Cinnamyl-3,4-dihydroxy-α-cyanocinnamate (CDC) is a potent 12/15-Lipoxygenases (LO) inhibitor. Cinnamyl-3,4-dihydroxy-α-cyanocinnamate has the potential for the research of type 1 diabetes mellitus[1].

In Vitro

High glucose or 12(S)-HETE remarkably increased transendothelial dextran transport, and in combination it was increased further. Addition of the 12/15-LO inhibitor, CDC, partially suppressed dextran transport[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

The high glucose and 12(S)-hydroxyeicosatetraenoic acid (HETE) could alter vascular endothelial (VE)-cadherin and β catenin phosphorylation levels, but did not alter total protein expression. However, the 12/15-LO inhibitor, Cinnamyl-3,4-dihydroxy-α-cyanocinnamate (CDC), antagonized the effect of high glucose on protein phosphorylation to mitigate

destruction of the endothelial cell barrier, and the mouse diabetes mellitus model further confirmed these conclusions[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Wang X, et al. 12(S)-hydroxyeicosatetraenoic acid impairs vascular endothelial permeability by altering adherens junction phosphorylation levels and affecting the binding and dissociation of its components in high glucose-induced vascular injury. J Diabet

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