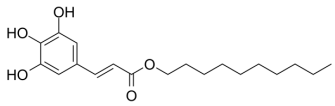
3,4,5-Trihydroxycinnamic acid decyl ester

Cat. No.:	HY-131999		
CAS No.:	1770778-45-4		
Molecular Formula:	$C_{19}H_{28}O_5$		
Molecular Weight:	336.42		
Target:	Others		
Pathway:	Others		
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 : 100 mg/mL (297.25 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.9725 mL	14.8624 mL	29.7247 mL
5 mM	0.5945 mL	2.9725 mL	5.9449 mL
10 mM	0.2972 mL	1.4862 mL	2.9725 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 (7.43 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.43 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.43 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

3,4,5-Trihydroxycinnamic acid decyl ester is an excellent inhibitor of lipid absorption and accumulation, with anti-obesity properties. 3,4,5-Trihydroxycinnamic acid decyl ester is a pancreatic lipase inhibitor, with an EC_{50} of approximately 0.9 μM[1] .

IC_{50} & Target

EC50: 0.9 μM (pancreatic lipase)[1]

In Vitro

3,4,5-Trihydroxycinnamic acid decyl ester (30 μM) exhibits an inhibitory potency of approximately 92% for pancreatic lipase

	in vitro[1]. 3,4,5-Trihydroxycinnamic acid decyl ester (0.1-40 μM) inhibits pancreatic lipase activity in dose-dependent manner, with an EC_{50} value being approximately 0.9 μM[1]. 3,4,5-Trihydroxycinnamic acid decyl ester inhibits pancreatic lipase in vitro and lipid accumulation during 3T3-L1 cell differentiation[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	3,4,5-Trihydroxycinnamic acid decyl ester (30-150 mg/kg; p.o.) suppresses a rise in blood triglyceride (TG) levels in mice given corn oil orally[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	6 weeks old Male ddY mice[1]
Dosage:	30 mg/kg, 150 mg/kg
Administration:	Oral administration
Result:	Reduced plasma TG in a dose-dependent manner.

REFERENCES

[1]. Masahiko Imai ,et al. Inhibitory effects of hydroxylated cinnamoyl esters on lipid absorption and accumulation. Bioorg Med Chem. 2015 Jul 1;23(13):3788-95.

Caution: Product has not been fully validated for medical applications. For research use only.

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