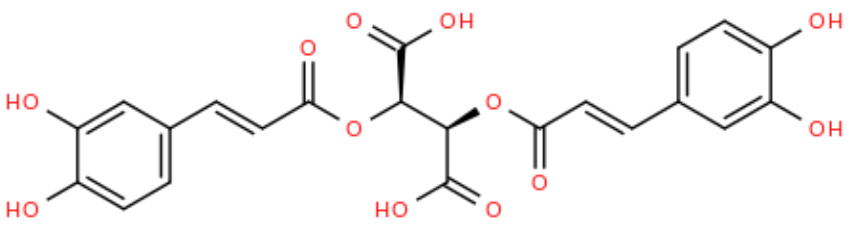
L-Chicoric Acid

Cat# C3246– 5、10、25、50、100 mg

Storage -20°C for 1 years | -80°C for 6 months in solvent

INTFORMATION

Product Name	L-Chicoric Acid
Cat NO.	C3246
Size	5、10、25、50、100 mg
Description	L-Chicoric Acid ((-)-Chicoric acid) is a dicaffeoyltartaric acid and a potent, selective and reversible HIV-1 integrase inhibitor with an IC50 of ~100 nM. L-Chicoric Acid inhibits HIV-1 replication in tissue culture[1][2][3].
Cas No.	70831-56-0
Purity	> 98%
Molecular Formulation	$C_{22}H_{18}O_{12}$
Molecular Weight	474.37
In Vitro	L-Chicoric Acid inhibits integration at concentrations from 500 nM to 10 μM but also inhibits entry at concentrations above 1 μM. L-Chicoric Acid clearly affects viral entry at concentrations of 5 μM and higher. L-Chicoric Acid also inhibits integration as indicated both by an increased ratio of two LTR circle DNA to cDNA and an accompanying decrease in integrated provirus. The EC50 of L-Chicoric Acid against HIV is approximately 500 nM, a concentration that does not inhibit HIV entry in H9 cells[1]. The ED50 of L-Chicoric Acid against HIVNL4-3 control virus is 400 nM, while HIVNL4-3 passaged in the presence of 8 μM L-Chicoric Acid is completely resistant to the compound[2].
Target / IC_{50}	IC50: ～100 nM (HIV-1 integrase)[1][2] HIV-1[2]
Storage	-20°C, stored under nitrogen In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)
Image	

SOLUBILITY

In vitro

DMSO : 100 mg/mL

Preparing Stock Solutions	concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.1081 mL	10.5403 mL	21.0806 mL
	5 mM	0.4216 mL	2.1081 mL	4.2161 mL
	10 mM	0.2108 mL	1.0540 mL	2.1081 mL

In vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.27 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.27 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.27 mM); Clear solution

*All of the co-solvents are provided by MCE.

REFERENCES

[1]. Reinke RA, et al. L-chicoric acid inhibits human immunodeficiency virus type 1 integration in vivo and is a noncompetitive but reversible inhibitor of HIV-1 integrase in vitro. Virology. 2004 Sep 1;326(2):203-19.

[2]. King PJ, et al. Resistance to the anti-human immunodeficiency virus type 1 compound L-chicoric acid results from a single mutation at amino acid 140 of integrase. J Virol. 1998 Oct;72(10):8420-4.

[3]. Robinson WE Jr. L-chicoric acid, an inhibitor of human immunodeficiency virus type 1 (HIV-1) integrase, improves on the in vitro anti-HIV-1 effect of Zidovudine plus a protease inhibitor (AG1350). Antiviral Res. 1998 Aug;39(2):101-11.

PRODUCT USE LIMITATION

These products are intended for research use only.