Data Sheet (Cat.No.TN4288)

TargetMol
A DRUG SCREENING EXPERT

Isoferulic acid

Chemical Properties

CAS No.:	25522-33-2
Formula:	C10H10O4
Molecular Weight:	194.2
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Isoferulic acid is an effective natural antioxidant in both lipid and aqueous media, it may be a new promising anti-glycation agent for the prevention of diabetic complications via inhibition of advanced glycation end products (AGEs) formation and oxidation-dependent protein damage. Isoferulic acid is a novel and potent inhibitor of murine IL-8 production, it also has inhibitory effect on mushroom tyrosinase.
Targets(IC_{50})	Antifection: None GLUT: None HDAC: None IL Receptor: None
In vitro	The inhibitory activity of Isoferulic acid (IFA) on fructose- and glucose-mediated protein glycation and oxidation of bovine serum albumin (BSA) was investigated. METHODS AND RESULTS:Our data showed that IFA (1.25-5 mM) inhibited the formation of fluorescent advanced glycation end products (AGEs) and non-fluorescent AGE [NÎµ-(carboxymethyl) lysine: CML], as well as the level of fructosamine. IFA also prevented protein oxidation of BSA indicated by decreasing protein carbonyl formation and protein thiol modification. Furthermore, IFA suppressed the formation of β-cross amyloid structures of BSA. CONCLUSIONS:Therefore, IFA might be a new promising anti-glycation agent for the prevention of diabetic complications via inhibition of AGEs formation and oxidation-dependent protein damage.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.149 mL	25.747 mL	51.493 mL
5 mM	1.030 mL	5.149 mL	10.299 mL
10 mM	0.515 mL	2.575 mL	5.149 mL
50 mM	0.103 mL	0.515 mL	1.030 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Isoferulic acid, a new anti-glycation agent, inhibits fructose- and glucose-mediated protein glycation in vitro. Molecules. 2013 May 30;18(6):6439-54.

2. Evaluation of antioxidant activity of isoferulic acid in vitro. Nat Prod Commun. 2011 Sep;6(9):1285-8.

3. Inhibitory effect of ferulic acid and isoferulic acid on murine interleukin-8 production in response to influenza virus infections in vitro and in vivo. Planta Med. 1995 Jun;61(3):221-6.

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