Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Ferulic acid

Catalog No: tcsc0007108

Available Sizes

Size: 100mg

Size: 500mg

Specifications

CAS No:
1135-24-6

Formula:
$C_{10}H_{10}O_4$

Pathway:
Protein Tyrosine Kinase/RTK

Target:
FGFR

Purity / Grade:
>98%

Solubility:
DMSO : 100 mg/mL (514.99 mM; Need ultrasonic)

Alternative Names:
Coniferic acid

Observed Molecular Weight:
194.18

Product Description

Ferulic acid is a novel fibroblast growth factor receptor 1 (**FGFR1**) inhibitor with **IC_{50}**s of 3.78 and 12.5 μM for **FGFR1** and **FGFR2**, respectively.

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IC50 & Target: IC50: 3.78 μM (FGFR1), 12.5 μM (FGFR2)[1]

In Vitro: Ferulic acid (FA) is a novel fibroblast growth factor receptor 1 (FGFR1) inhibitor with IC_{50}s of 3.78 and 12.5 μM for FGFR1 and FGFR2, respectively. Ferulic acid exhibits great inhibitory activity on FGFR1 with an inhibitory rate of 92% at 1 μM. The proliferation of HUVEC stimulated by FGF1 is markedly decreased after Ferulic acid treatment ranging from 5 to 40 μM for 24 h. Ferulic acid does not exert significant cell viability up to 20 μM, but over 30 μM Ferulic acid exhibits a cytotoxic effect in HUVEC compare to the control. Ferulic acid inhibits FGF1-induced HUVEC migration and invasion in a dose-dependent manner. Ferulic acid markedly suppresses the FGF1-induced phosphorylation of PI3K and Akt. Ferulic acid treatments significantly inhibit MMP-2 and MMP-9 expression stimulated by FGF1[1].

In Vivo: Treatment with Ferulic acid (FA) potently inhibits FGF1-induced neovascularization. It is found that intragastric administration of Ferulic acid markedly inhibits tumor volume and tumor weight, as compare to the counterparts treated with DMSO. Furthermore, Ferulic acid treatment is well tolerated, and there is no significant difference in weight between the vehicle group and the FA-treated groups[1]. Ferulic acid (0.01, 0.1, 1 or 10 mg/kg) given by oral route decreases significantly the immobility time in the forced swimming test (FST) and tail suspension test (TST), whereas produces no effect in the open-field test. Results demonstrate that the administration of Ferulic acid (0.001 mg/kg, p.o.) boosts the antidepressant-like effect of fluoxetine (5 mg/kg, p.o.) in the TST [2].