For Research Use Only

(E)-Ferulic acid

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Catalog Number: CM19364

产品信息

Catalog Number:
CM19364

CAS号:
537-98-4

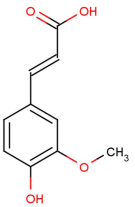
分子式:
$C_{10}H_{10}O_4$

主要靶点:
Ferroptosis|Endogenous Metabolite|BCL|Wnt/beta-catenin

主要通路:
代谢|细胞骨架|凋亡|干细胞

分子量:
194.18

溶解度:
DMSO:65 mg/mL (334.74 mM)



体外活性

trans-Ferulic acid exerted potent antioxidant effects. However, trans-Ferulic acid increased intracellular ROS levels, including hydrogen peroxide and superoxide anion, in H1299 cells. trans-Ferulic acid treatment inhibited cellular proliferation and induced moderate apoptotic cell death at the highest concentration used (0.6 mM). Furthermore, trans-Ferulic acid moderately inhibited the migration of H1299 cells at the concentrations of 0.3 and 0.6 mM and attenuated MMP-2 and MMP-9 activity. trans-Ferulic acid caused the phosphorylation of β-catenin, resulting in proteasomal degradation of β-catenin. Conversely, trans-Ferulic acid treatment increased the expression of pro-apoptotic factor Bax and decreased the expression of pro-survival factor survivin.

细胞实验

The 2,2-diphenyl-1-picrylhydrazyl assay was used to determine free radical scavenging capability. Assessment of intracellular reactive oxygen species (ROS) was evaluated using oxidized 2',7'-dichlorofluorescin diacetate and dihydroethidium staining. Trypan blue exclusion, colony formation, and anchorage-independent growth assays were used to determine cellular proliferation. Annexin V staining assay was used to assess cellular apoptosis by flow cytometry. Wound healing and Boyden's well assays were used to detect the migration and invasion of cells. Gelatin zymography was used to detect matrix metalloproteinase (MMP-2 and MMP-9) activity. Western blotting was used to detect expression levels of various signaling pathway proteins.

描述

Trans-Ferulic acid causes the phosphorylation of β-catenin, resulting in proteasomal degradation of β-catenin and increases the expression of pro-apoptotic factor Bax and decreases the expression of pro-survival factor survivin.trans-Ferulic acid exert both anti-proliferation and anti-migration effects in the human lung cancer cell line H1299.

储存

Powder: -20°C for 3 years | In solvent: -80°C for 2 years

For technical support and original validation data for this product please contact
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