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

Chlorogenic acid

Catalog No: tcsc3766

Available Sizes

Size: 500mg

Specifications

CAS No:
327-97-9

Formula:
$C_{16}H_{18}O_9$

Pathway:
Metabolic Enzyme/Protease

Target:
HIF/HIF Prolyl-Hydroxylase

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 32 mg/mL (90.32 mM)

Alternative Names:
3-O-Caffeoylquinic acid;Heriguard;NSC-407296

Observed Molecular Weight:
354.31

Product Description

Chlorogenic acid(NSC-407296; 3-O-Caffeoylquinic acid) is one of the most abundant polyphenols in the human diet, has been reported to inhibit cancer cell growth and a major anti-inflammatory constituent of lonicerae flos extract.

IC50 value:

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Target:

in vitro: CGA significantly decreases the hypoxia-induced HIF-1α protein level in A549 cells, without changing its mRNA level. CGA was, however, found to suppress the transcriptional activity of HIF-1α under hypoxic conditions, leading to a decrease in the expression of its downstream target VEGF [1]. CGA inhibited various TLR agonist-, IL-1α-, or high-mobility group box-1-stimulated autophosphorylation (activation) of IRAK4 in peritoneal macrophages from C57BL/6 or C3H/HeJ mice via directly affecting the kinase activity of IRAK4, a proximal signal transducer in the MyD88-mediated innate immunity that enhances transcriptional activity of NF-κB or AP-1 [2].

in vivo: CGA can block hypoxia-stimulated angiogenesis in vitro and VEGF-stimulated angiogenesis in vivo using HUVEC cells in a mouse model [1]. CGA consequently attenuated protein or mRNA levels of NF-κB/AP-1 target genes encoding TNF-α, IL-1α, IL-6, and high-mobility group box-1 in vivo under endotoxemia or ALI [2]. CGA (10, 30 and 100 mg/kg) and omeprazole (positive control, 10 mg/kg) were administered orally 48 h after the RE operation for 12 days. CGA reduced the severity of esophageal lesions, and this beneficial effect was confirmed by histopathological observations. CGA reduced esophageal lipid peroxidation and increased the reduced glutathione/oxidized glutathione ratio. CGA attenuated increases in the serum level of tumor necrosis factor-α, and expressions of inducible nitric oxide synthase and cyclooxygenase-2 protein [3].