Product Data Sheet

Chemical Properties

Product Name: Cardamonin
Cas No.: 19309-14-9; 18956-16-6
M.Wt: 270.28
Formula: C16H14O4

Chemical Name: (E)-1-(2,4-dihydroxy-6-methoxyphenyl)-3-phenylprop-2-en-1-one
Canonical SMILES: OC1=C(C(/C=C/C2=CC=CC=C2)=O)C(OC)=CC(O)=C1

Solubility: Soluble in DMSO > 10 mM
Storage: Store at -20°C

General tips: For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shopping Condition: Evaluation sample solution: ship with blue ice
All other available size: ship with RT, or blue ice upon request

Biological Activity

Targets: Immunology/Inflammation
Pathways: NF-κB

Description:
IC50: 1.2 μM (NF-κB activation) [1]
Cardamonin (2′,4′-dihydroxy-6′-methoxychalcone), a chalcone isolated from the fruits of Alpinia rafflesiana, shows anti-inflammatory activity by targeting the nuclear factor kappa-light-chain-enhancer of activated B cells (NF-κB) pathway. NF-κB is a protein complex that
controls cytokine production, transcription of DNA and cell survival.

In vitro: Cardamonin is a potential anti-inflammatory drug that targets the NF-κB pathway, which leads to suppress both NO and PGE2 synthesis, iNOS and COX-2 expression and enzymatic activity. The inhibition activation was due to a dose-dependent inhibition of phosphorylation and degradation of I-κBα, which resulted in a reduction of p65 NF-κB nuclear translocation [2]. Cardamonin also appears to inhibit prostaglandin E2, thromboxane B2 production, tumor necrosis factor a (TNF-a) release, and intracellular reactive oxygen species generation, all in a dose-dependent manner [3].

In vivo: Cardamonin shows protective effects on acute lung injury in sepsis. In mice, the results showed that cardamonin decreases systemic inflammatory responses, during sepsis, by downregulating TNF-a and interleukins [3].

Clinical trial: So far, no clinical study has been conducted.

Reference: