

Astragalin

Catalog No: tcsc3720



Available Sizes

Size: 5mg

Size: 10mg



Specifications

CAS No:

480-10-4

Formula:

$C_{21}H_{20}O_{11}$

Pathway:

Others

Target:

Others

Purity / Grade:

>98%

Solubility:

10 mM in DMSO

Alternative Names:

Astragaline;3-Glucosylkaempferol;Kaempferol 3-β-D-glucopyranoside

Observed Molecular Weight:

448.38

Product Description

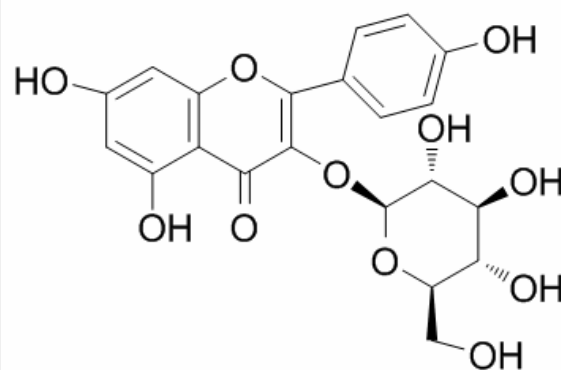
Astragalin (kaempferol-3-O-glucoside) is a flavonoid with anti-inflammatory activity and newly found in persimmon leaves and green tea seeds.

IC50 value:

Target:

in vitro: Astragalin nontoxic at $\leq 20 \mu\text{M}$ suppressed cellular induction of Toll-like receptor 4 (TLR4) and ROS production enhanced by LPS. Both LPS and H₂O₂ induced epithelial eotaxin-1 expression, which was blocked by astragalin. LPS activated and induced PLC γ 1, PKC β 2, and NADPH oxidase subunits of p22phox and p47phox in epithelial cells and such activation and induction were demoted by astragalin or TLR4 inhibition antagonizing eotaxin-1 induction. H₂O₂-upregulated phosphorylation of JNK and p38 MAPK was dampened by adding astragalin to epithelial cells, while this compound enhanced epithelial activation of Akt and ERK. H₂O₂ and LPS promoted epithelial apoptosis concomitant with nuclear condensation or caspase-3 activation, which was blunted by astragalin [1]. astragalin suppressed the expression of tumor necrosis factor α , interleukin 6, and nitric oxide in a dose-dependent manner in mMECs [2]. astragalin attenuated the infiltration of inflammatory cells, the activity of myeloperoxidase (MPO) and the expression of tumor necrosis factor- α (TNF- α), interleukin-6 (IL-6) and interleukin-1 β (IL-1 β) in a dose-dependent manner. Additionally, Western blotting results showed that astragalin efficiently blunt decreased nuclear factor-kappaB (NF- κ B) activation by inhibiting the degradation and phosphorylation of I κ B α and the nuclear translocation of p65 [3]. Astragalin significantly reduced LPS-induced expression of iNOS, COX-2 and cytokines/chemokines, and production of NO in J774A.1 mouse macrophages. Astragalin inhibited LPS-induced activation of NF- κ B as indicated by inhibition of degradation of I κ B α , nuclear translocation of NF- κ B, and NF- κ B dependent gene reporter assay [4].

in vivo: Mice were injected intraperitoneally (i.p.) with lipopolysaccharide (LPS) (dose range: 5-40 mg/kg). pretreatment with astragalin can improve survival during lethal endotoxemia and attenuate inflammatory responses in a murine model of lipopolysaccharide-induced acute lung injury [4].



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