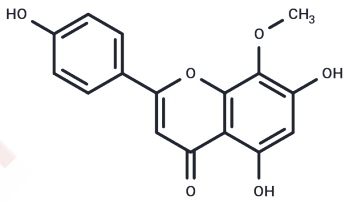
Data Sheet (Cat.No.TN1276)

TargetMol

4'-Hydroxywogonin

Chemical Properties



CAS No. : 57096-02-3

Formula: C16H12O6

Molecular Weight: 300.26

Storage: Keep away from moisture,Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	4'-Hydroxywogonin (8-Methoxyapigenin), a natural flavonoid with anti-inflammatory properties, reduced the production of pro-inflammatory cytokines (e.g., TNF-α, IL-6, and IL-1β), inhibited the TAK1/IKK/NF-κB signaling pathway, and reduced the phosphorylation of MAPKs and the PI3/Akt signaling pathway.
Targets(IC50)	Apoptosis,Bcl-2 Family,NF-κB,Reactive Oxygen Species,MAPK,Akt,Caspase,IL Receptor, Interleukin,IκB/IKK,p38 MAPK,PI3K,ROS,TNF
In vitro	4'-Hydroxywogonin suppressed the expression of COX-2 and iNOS in LPS-stimulated RAW 264.7 macrophages after 24-hour incubation with 0.5–15 μM concentrations, as demonstrated by Western blot analysis. [1] Treatment with 0.5–15 μM 4'-Hydroxywogonin for 24 hours reduced the production of nitric oxide (NO) and prostaglandin E2 (PGE2) in RAW 264.7 cells, as measured by Griess assay and ELISA, respectively. [1] 4'-Hydroxywogonin downregulated the expression of pro-inflammatory cytokines (TNF-α, IL-6, IL-1β) at the mRNA level after 4 hours (qRT-PCR) and at the protein level after 24 hours (Western blot) in RAW 264.7 macrophages. [1] Pre-treatment with 0.5–15 μM 4'-Hydroxywogonin for 1 hour inhibited the LPS-induced interaction between TAK1 and TAB1 and suppressed downstream activation of the TAK1/IKK/NF-κB pathway, as shown by co-immunoprecipitation and Western blot performed 30–60 minutes post-stimulation. [1] 4'-Hydroxywogonin reduced phosphorylation of ERK, JNK, p38 MAPKs, and Akt in RAW 264.7 cells after 30 minutes of LPS stimulation, confirmed by Western blot following pre-treatment with 0.5–15 μM. [1] 4'-Hydroxywogonin significantly decreased intracellular reactive oxygen species (ROS) levels in LPS-stimulated RAW 264.7 cells, as detected by DCFH-DA fluorescence staining after 30–60 minutes of incubation. [1]
In vivo	In an LPS-induced acute lung injury (ALI) mouse model, intraperitoneal injection of 4'-Hydroxywogonin at doses of 2.5, 5, or 10 mg/kg significantly suppressed the expression of COX-2 and iNOS in lung tissues, as shown by Western blot and immunohistochemistry. [1] Treatment with 4'-Hydroxywogonin markedly reduced nitric oxide (NO) and prostaglandin E2 (PGE2) levels in bronchoalveolar lavage fluid (BALF), measured by Griess assay and ELISA. [1]

In vivo	The levels of pro-inflammatory cytokines TNF-α and IL-6 in BALF decreased after 4'-Hydroxywogonin administration, indicating a systemic anti-inflammatory effect. [1] 4'-Hydroxywogonin alleviated lung tissue damage by reducing inflammatory cell infiltration and preserving alveolar structure. [1] 4'-Hydroxywogonin decreased the lung wet-to-dry weight ratio, suggesting a protective effect against LPS-induced pulmonary edema. [1]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3304 mL	16.6522 mL	33.3045 mL
5 mM	0.6661 mL	3.3304 mL	6.6609 mL
10 mM	0.333 mL	1.6652 mL	3.3304 mL
50 mM	0.0666 mL	0.333 mL	0.6661 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Fan C, et al. 4'-Hydroxywogonin suppresses lipopolysaccharide-induced inflammatory responses in RAW 264.7 macrophages and acute lung injury mice. PLoS One. 2017 Aug 8;12(8):e0181191.