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Zuschläge

- Mindermengenzuschlag
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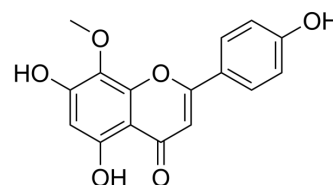
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4'-Hydroxywogonin

Cat. No.:	HY-N1904
CAS No.:	57096-02-3
Molecular Formula:	C ₁₆ H ₁₂ O ₆
Molecular Weight:	300.26
Target:	IKK; NF-κB; p38 MAPK; PI3K; Akt; Reactive Oxygen Species; Interleukin Related; TNF Receptor; Apoptosis; Caspase; Bcl-2 Family
Pathway:	NF-κB; MAPK/ERK Pathway; PI3K/Akt/mTOR; Immunology/Inflammation; Metabolic Enzyme/Protease; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	4'-Hydroxywogonin (8-Methoxyapigenin), a flavonoid, could be isolated from a variety of plants including <i>Scutellaria barbata</i> and <i>Verbena littoralis</i> . 4'-Hydroxywogonin has anti-inflammatory activity via TAK1/IKK/NF-κB, MAPKs and PI3/AKT signaling pathways. 4'-Hydroxywogonin inhibits angiogenesis by disrupting PI3K/AKT signaling. 4'-Hydroxywogonin inhibits cell proliferation and induces apoptosis ^{[1][2][3]} .										
In Vitro	<p>4'-Hydroxywogonin (8-Methoxyapigenin; 0.5-15 μM; 0-24 h) has low cytotoxicity and inhibits NO and PGE₂ production in LPS-stimulated RAW 264.7 macrophages by suppression of iNOS and COX-2 expression^[1].</p> <p>4'-Hydroxywogonin (0.5-15 μM; 1 and 12 h) suppresses LPS-induced expression of pro-inflammatory cytokines in RAW 264.7 macrophages and suppresses LPS-induced activation of NF-κB^[1].</p> <p>4'-Hydroxywogonin (0.5-15 μM; 1 h) suppresses LPS-induced degradation of IκB-α and activation of IKK and TAK and suppresses the phosphorylation of MAPK and AKT in RAW 264.7 macrophages^[1].</p> <p>4'-Hydroxywogonin (0.5-15 μM; 24 h) inhibits ROS production in LPS-stimulated RAW 264.7 macrophages^[1].</p> <p>4'-Hydroxywogonin (0-10 μg/mL; 24 h) reduces the viability of SW620 cells in a concentration- and time-dependent manner and decreases the mRNA and protein expression of vascular endothelial growth factor-A (VEGF-A), the predominant pro-angiogenic cytokine in tumor angiogenesis^[2].</p> <p>4'-Hydroxywogonin (24 h; SUP-B15 and Jurkat cells) induces apoptosis and decreases the expression of C-MYC, BCL-2 and cleaved caspase 3^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[1]</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Cell Line:</td> <td>RAW 264.7 macrophages</td> </tr> <tr> <td>Concentration:</td> <td>0.5, 5 and 15 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Had low cytotoxicity in RAW 264.7 macrophages.</td> </tr> </table> <p>Western Blot Analysis^[1]</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Cell Line:</td> <td>RAW 264.7 macrophages</td> </tr> </table>	Cell Line:	RAW 264.7 macrophages	Concentration:	0.5, 5 and 15 μM	Incubation Time:	24 hours	Result:	Had low cytotoxicity in RAW 264.7 macrophages.	Cell Line:	RAW 264.7 macrophages
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Cell Line:	RAW 264.7 macrophages										

Concentration:	0.5, 5 and 15 μ M
Incubation Time:	1 hours
Result:	Attenuated the increase of iNOS and COX-2 mRNA expression induced by LPS in RAW 264.7 cells.

Western Blot Analysis^[1]

Cell Line:	RAW 264.7 macrophages
Concentration:	0.5, 5 and 15 μ M
Incubation Time:	1 and 12 hours
Result:	Reduced TNF- α , IL-6 and IL-1 β mRNA expression in a dose-dependent manner. Inhibited LPS-induced p65 phosphorylation and nuclear translocation.

Western Blot Analysis^[1]

Cell Line:	RAW 264.7 macrophages
Concentration:	0.5, 5 and 15 μ M
Incubation Time:	1 hours
Result:	Attenuated LPS induced I κ B- α degradation. Attenuated the phosphorylation of ERK1/2 and p38 in a dose-dependent manner. Reduced the intensity of the TAK1/TAB1 band.

Western Blot Analysis^[2]

Cell Line:	SW620 cells
Concentration:	0.1, 1, and 10 μ g/mL
Incubation Time:	24 hours
Result:	Downregulated VEGF-A expression in colorectal cancer cells and suppressed angiogenesis.

In Vivo

4'-Hydroxywogonin (10 and 20 mg/kg; i.p.; male C57BL/6 mice) alleviates LPS-induced acute lung injury (ALI) in a mouse model^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male C57BL/6 mice (6-8 weeks old; 20 g) with acute lung injury model ^[1]
Dosage:	10 and 20 mg/kg
Administration:	Intraperitoneal injection, 12 and 1 h before LPS treatment
Result:	Had potential protective effects against inflammation in LPS induced ALI mice. Attenuated the degree of leukocyte infiltration.

REFERENCES

[1]. 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.

Caution: Product has not been fully validated for medical applications. For research use only.

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