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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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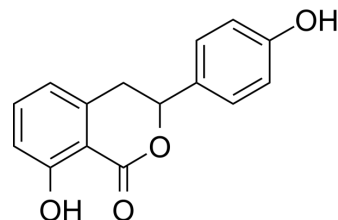
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Hydrangenol

Cat. No.:	HY-N4028
CAS No.:	480-47-7
Molecular Formula:	C ₁₅ H ₁₂ O ₄
Molecular Weight:	256.25
Target:	MMP; COX; Interleukin Related; p38 MAPK; ERK; Keap1-Nrf2
Pathway:	Metabolic Enzyme/Protease; Immunology/Inflammation; MAPK/ERK Pathway; Stem Cell/Wnt; NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Hydrangenol is an orally active antiphotaging compound. It can be isolated from <i>Hydrangea serrata</i> leaves. Hydrangenol prevents wrinkle formation by reducing MMP and inflammatory cytokine expression and increasing moisturizing factors and antioxidant genes level ^[1] .											
IC₅₀ & Target	MMP-1	MMP-3	COX-2	IL-6								
In Vivo	<p>Hydrangenol (5-40 mg/kg; p.o.; daily for 7 weeks) mitigated wrinkle formation, dorsal thickness, dehydration, and collagen degradation in UVB-irradiated HR-1 hairless mice^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>UVB-irradiated HR-1 hairless mice^[1]</td> </tr> <tr> <td>Dosage:</td> <td>5, 10, 20, or 40 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Oral gavage; daily for 7 weeks</td> </tr> <tr> <td>Result:</td> <td> <p>Increased the expression of involucrin, filaggrin, and aquaporin-3 (AQP3) as well as hyaluronic acid (HA) production via hyaluronidase (HYAL)-1/-2 downregulation.</p> <p>Increased the expression of Pro-COL1A1.</p> <p>Decreased the expression matrix metalloproteinase (MMP)-1/-3, cyclooxygenase-2 (COX-2), and interleukin-6 (IL-6).</p> <p>Attenuated the phosphorylation of mitogen-activated protein kinases (MAPKs) including ERK and p38, activator protein 1 (AP-1) subunit, and signal transduction and activation of transcription 1 (STAT1).</p> <p>Upregulated the expression of nuclear factor-E2-related factor 2 (Nrf2), heme oxygenase-1 (HO-1), NAD(P)H quinone dehydrogenase 1 (NQO-1), glutamate cysteine ligase modifier subunit (GCLM), and glutamate cysteine ligase catalysis subunit (GCLC).</p> </td> </tr> </table>				Animal Model:	UVB-irradiated HR-1 hairless mice ^[1]	Dosage:	5, 10, 20, or 40 mg/kg	Administration:	Oral gavage; daily for 7 weeks	Result:	<p>Increased the expression of involucrin, filaggrin, and aquaporin-3 (AQP3) as well as hyaluronic acid (HA) production via hyaluronidase (HYAL)-1/-2 downregulation.</p> <p>Increased the expression of Pro-COL1A1.</p> <p>Decreased the expression matrix metalloproteinase (MMP)-1/-3, cyclooxygenase-2 (COX-2), and interleukin-6 (IL-6).</p> <p>Attenuated the phosphorylation of mitogen-activated protein kinases (MAPKs) including ERK and p38, activator protein 1 (AP-1) subunit, and signal transduction and activation of transcription 1 (STAT1).</p> <p>Upregulated the expression of nuclear factor-E2-related factor 2 (Nrf2), heme oxygenase-1 (HO-1), NAD(P)H quinone dehydrogenase 1 (NQO-1), glutamate cysteine ligase modifier subunit (GCLM), and glutamate cysteine ligase catalysis subunit (GCLC).</p>
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REFERENCES

[1]. Myung DB, et al. Hydrangenol Isolated from the Leaves of *Hydrangea serrata* Attenuates Wrinkle Formation and Repairs Skin Moisture in UVB-Irradiated Hairless Mice. *Nutrients*. 2019 Oct 2;11(10):2354.

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

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