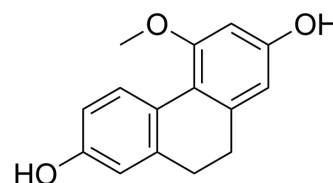


Coelonin

Cat. No.:	HY-N8884
CAS No.:	82344-82-9
Molecular Formula:	C ₁₅ H ₁₄ O ₃
Molecular Weight:	242.27
Target:	PTEN; Akt; NF-κB; Interleukin Related; TNF Receptor
Pathway:	PI3K/Akt/mTOR; NF-κB; Immunology/Inflammation; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Coelonin is a dihydrophenanthrene with anti-inflammation activity. Coelonin inhibits LPS-induced PTEN phosphorylation. Coelonin inhibits NF-κB activation and p27Kip1 degradation by regulating the PI3K/AKT pathway negatively. Coelonin can inhibit IκBα phosphorylation and degradation and increases the expression of IκBα protein ^{[1][2]} .											
IC₅₀ & Target	Akt	NF-κB	IL-1β	IL-6								
In Vitro	<p>Coelonin (2.5 μg/mL) significantly reduces both NF-κB p65 and p105/50 phosphorylation levels^[1].</p> <p>Coelonin (0-5 μg/mL, 1.5 h) dose dependently reduces the increase of the phosphorylation of PTEN, AKT and IκBα induced by LPS^[1].</p> <p>Coelonin (10 and 20 μg/ml) mitigates particulate matter 2.5 (PM2.5)-induced inflammation by reducing the generation of inflammatory factors, including interleukin-6 (IL-6) and tumor necrosis factor-α (TNF-α)^[2].</p> <p>The inhibition of IL-1β, IL-6 and TNF-α expression by Coelonin is independent of PTEN, whereas the inhibition of p27^{Kip1} degradation results in cell-cycle arrest in the G1 phase, which is dependent on PTEN^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>RAW264.7 cells</td> </tr> <tr> <td>Concentration:</td> <td>0, 1, 2.5, and 5 μg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>1.5 h</td> </tr> <tr> <td>Result:</td> <td>Dose dependently reduced the increase of p65 accumulation in the nucleus induced by LPS. Dose dependently reversed LPS-induced iNOS and COX2 expression. LPS (200 ng/mL) significantly increased the phosphorylation of PTEN, AKT and inhibitor of NF-κB (IκBα), which was dose-dependently reduced by coelonin pre-treatment.</td> </tr> </table>				Cell Line:	RAW264.7 cells	Concentration:	0, 1, 2.5, and 5 μg/mL	Incubation Time:	1.5 h	Result:	Dose dependently reduced the increase of p65 accumulation in the nucleus induced by LPS. Dose dependently reversed LPS-induced iNOS and COX2 expression. LPS (200 ng/mL) significantly increased the phosphorylation of PTEN, AKT and inhibitor of NF-κB (IκBα), which was dose-dependently reduced by coelonin pre-treatment.
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REFERENCES

- [1]. Jiang F, et al. Coelonin, an Anti-Inflammation Active Component of *Bletilla striata* and Its Potential Mechanism. *Int J Mol Sci.* 2019 Sep 8;20(18):4422.
- [2]. Cheng W, et al. Inhibition of inflammation-induced injury and cell migration by coelonin and militarine in PM2.5-exposed human lung alveolar epithelial A549 cells. *Eur*

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

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