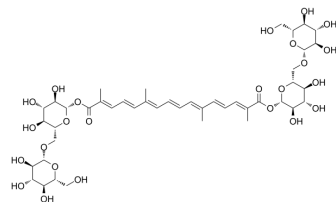


Crocin

Cat. No.:	HY-N0697
CAS No.:	42553-65-1
Molecular Formula:	C ₄₄ H ₆₄ O ₂₄
Molecular Weight:	976.96
Target:	Endogenous Metabolite; JAK; Apoptosis
Pathway:	Metabolic Enzyme/Protease; Epigenetics; JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Stem Cell/Wnt; Apoptosis
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 125 mg/mL (127.95 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	1.0236 mL	5.1179 mL	10.2358 mL
		5 mM	0.2047 mL	1.0236 mL	2.0472 mL
	10 mM	0.1024 mL	0.5118 mL	1.0236 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (2.13 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (2.13 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Crocin (Crocin I) is an orally active natural product that can be isolated from the stigma of <i>Crocus sativus</i> . Crocin inhibits tumor cell proliferation and promotes apoptosis through JAK pathway. Crocin has anti-inflammatory, antioxidant and antitumor activities ^{[1][2]} .	
In Vitro	Crocin (150, 200 μM, 24 h) plays an antitumor role in colon cancer cells by inhibiting the JAK pathway ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Viability Assay ^[1]	
	Cell Line:	HCT116

	<table border="1"> <tr> <td>Concentration:</td> <td>0, 50, 100, 150, 200, 250, 300, 350, 400, and 450 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Weakened the cell vitality in a concentration-dependent manner.</td> </tr> </table>	Concentration:	0, 50, 100, 150, 200, 250, 300, 350, 400, and 450 μ M	Incubation Time:	24 h	Result:	Weakened the cell vitality in a concentration-dependent manner.		
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In Vivo	<p>Crocin (20 mg/kg, orally, for 5 consecutive weeks) shows significant antioxidant, anti-inflammatory and antifibrotic effects on Bleomycin (HY-108345) -induced pulmonary fibrosis in rats^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Bleomycin-induced pulmonary fibrosis in rat^[2]</td> </tr> <tr> <td>Dosage:</td> <td>20 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>p.o.</td> </tr> <tr> <td>Result:</td> <td>Reduced the expression of TLR4 and IL-10. Reduced the expression of TNF-α and TGF-β1.</td> </tr> </table>	Animal Model:	Bleomycin-induced pulmonary fibrosis in rat ^[2]	Dosage:	20 mg/kg	Administration:	p.o.	Result:	Reduced the expression of TLR4 and IL-10. Reduced the expression of TNF- α and TGF- β 1.
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CUSTOMER VALIDATION

- Biomolecules. 2022, 12(12), 1813.
- Bioengineered. 2021 Dec;12(1):4569-4580.
- Cell Cycle. 2022 Jan 3;1-17.
- Cytokine. 2022 Jun;154:155888.
- Chem Biol Drug Des. 2024 Jan 29.

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REFERENCES

- [1]. Yang H, et al. Crocin exerts anti-tumor effect in colon cancer cells via repressing the JAK pathway. *Eur J Histochem*. 2023 Sep 12;67(3):3697.
- [2]. Zaghoul MS, et al. Crocin attenuates lung inflammation and pulmonary vascular dysfunction in a rat model of bleomycin-induced pulmonary fibrosis. *Life Sci*. 2019 Aug 26;116794.
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Caution: Product has not been fully validated for medical applications. For research use only.

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