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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

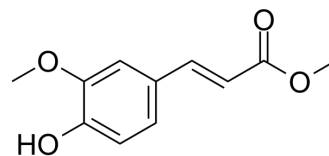
mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

Ferulic acid methyl ester

Cat. No.:	HY-W018643		
CAS No.:	2309-07-1		
Molecular Formula:	C ₁₁ H ₁₂ O ₄		
Molecular Weight:	208.21		
Target:	p38 MAPK; Autophagy		
Pathway:	MAPK/ERK Pathway; Autophagy		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (480.28 mM)
 H₂O : 2 mg/mL (9.61 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		4.8028 mL	24.0142 mL	48.0284 mL
	5 mM		0.9606 mL	4.8028 mL	9.6057 mL
	10 mM		0.4803 mL	2.4014 mL	4.8028 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (12.01 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (12.01 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (12.01 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ferulic acid methyl ester (Methyl ferulate) is a derivative of ferulic acid, isolated from *Stemona tuberosa*, with anti-inflammatory and antioxidant properties^{[1][2]}. Ferulic acid methyl ester is a cell membrane and brain permeable compound, shows free radical scavenging ability, used in the research of neurodegenerative disorders^[1]. Ferulic acid methyl ester inhibits COX-2 expression, blocks p-p38 and p-JNK in primary bone marrow derived-macrophages^[2].

IC₅₀ & Target	p38																
In Vitro	<p>Ferulic acid methyl ester (25 µg/mL) has no cytotoxic effects on BMDMs after treatment for 6 h, 18 h, 48 h^[2].</p> <p>Ferulic acid methyl ester (Methyl ferulate; 5, 10, 25 µg/mL) suppresses TNFα, IL6, IFNγ but not IL10, inhibits NO generation at 10 and 25 µg/mL, in primary bone marrow derived-macrophages (BMDMs)^[2].</p> <p>Ferulic acid methyl ester (25 µg/mL) inhibits COX-2 expression, blocks p-p38 and p-JNK^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[2]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Primary bone marrow derived-macrophages (BMDMs)</td> </tr> <tr> <td>Concentration:</td> <td>25 µg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>6 h, 18 h, 48 h</td> </tr> <tr> <td>Result:</td> <td>Showed no cytotoxic effects on BMDMs.</td> </tr> </table> <p>Western Blot Analysis^[2]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>RAW 246.7 cells</td> </tr> <tr> <td>Concentration:</td> <td>10 µg/mL and 25 µg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>For 1 h before stimulation with LPS</td> </tr> <tr> <td>Result:</td> <td>Significantly suppressed COX-2 expression at 25 µg/mL.</td> </tr> </table>	Cell Line:	Primary bone marrow derived-macrophages (BMDMs)	Concentration:	25 µg/mL	Incubation Time:	6 h, 18 h, 48 h	Result:	Showed no cytotoxic effects on BMDMs.	Cell Line:	RAW 246.7 cells	Concentration:	10 µg/mL and 25 µg/mL	Incubation Time:	For 1 h before stimulation with LPS	Result:	Significantly suppressed COX-2 expression at 25 µg/mL.
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REFERENCES

- [1]. Sultana R. Ferulic acid ethyl ester as a potential therapy in neurodegenerative disorders. *Biochim Biophys Acta*. 2012 May;1822(5):748-52.
- [2]. Phuong NT, et al. Anti-inflammatory activity of methyl ferulate isolated from *Stemona tuberosa* Lour. *Asian Pac J Trop Med*. 2014 Sep;7S1:S327-31.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA