



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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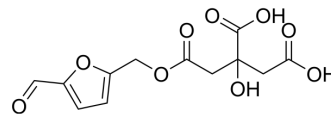
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## Mumefural

<b>Cat. No.:</b>	HY-N8903
<b>CAS No.:</b>	222973-44-6
<b>Molecular Formula:</b>	C <sub>12</sub> H <sub>12</sub> O <sub>9</sub>
<b>Molecular Weight:</b>	300.22
<b>Target:</b>	Integrin; NF-κB; Toll-like Receptor (TLR); TNF Receptor
<b>Pathway:</b>	Cytoskeleton; NF-κB; Immunology/Inflammation; Apoptosis
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Mumefural is a bioactive component of the processed fruit of <i>Prunus mume</i> Sieb. Mumefural inhibits platelet aggregation. Mumefural shows anti-thrombotic effects and ameliorates cognitive impairment <sup>[1][2]</sup> .			
<b>IC<sub>50</sub> &amp; Target</b>	NF-κB	TLR4	P-selectin	E-selectin
	TNF-α			
<b>In Vivo</b>	<p>Mumefural (0.1-10 mg/kg; i.p.; once) shows anti-thrombotic effects in rats<sup>[1]</sup>.</p> <p>Mumefural (20-80 mg/kg; oral; daily for 42 days) ameliorates cognitive impairment in chronic cerebral hypoperfusion via regulating the septohippocampal cholinergic system and neuroinflammation<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>			
	Animal Model:	SD rats, FeCl <sub>3</sub> -induced arterial thrombosis model <sup>[1]</sup>		
	Dosage:	0.1, 1, or 10 mg/kg		
	Administration:	Intraperitoneal injection, 30 min before 35% FeCl <sub>3</sub> treatment		
	Result:	Significantly improved blood flow by inhibiting occlusion and thrombus formation. Prevented collagen fiber damage in injured vessels and inhibited the expression of the platelet activation-related proteins P-selectin and E-selectin. Significantly reduced the increased inflammatory signal of nuclear factor (NF)-κB, toll-like receptor 4 (TLR4), tumor necrosis factor (TNF)-α, and interleukin (IL)-6 in blood vessels.		
	Animal Model:	Male Wistar rats, Chronic cerebral hypoperfusion (CCH) model <sup>[2]</sup>		
	Dosage:	20, 40, or 80 mg/kg		
	Administration:	Oral, once a day for 42 days		
	Result:	Significantly improved cognitive impairment. Inhibited cholinergic system dysfunction, attenuated choline acetyltransferase-positive cholinergic neuron loss. Inhibited myelin basic protein degradation and increased the hippocampal expression of synaptic markers		

and cognition-related proteins. Reduced neuroinflammation, inhibited gliosis, and attenuated the activation of P2X7 receptor, TLR4/MyD88, NLRP3, and NF- $\kappa$ B.

Animal Model: SD rats<sup>[1]</sup>

Dosage: 2 or 10 mg/kg

Administration: IV or PO (Pharmacokinetic Analysis)

Result: Plasma pharmacokinetic parameters of Mumefural in SD rats<sup>[1]</sup>

	T <sub>1/2</sub> (h)	T <sub>max</sub> (h)	C <sub>max</sub> (ng/mL)	AUC <sub>0-t</sub> (ng·h/mL)	F (%)
IV (2 mg/kg)	0.14±0.05	0.08±0	1894.54±580.66	564.73±178.35	-
PO (2 mg/kg)	0.69±0.69	0.31±0.13	1731.61±290.64	1043.28±202.37	36.95±7.17

AUC<sub>(0-t)</sub>: area under the curve from the time of dosing to infinity; C<sub>max</sub>: maximum concentration; F: bioavailability; T<sub>1/2</sub>: terminal half-life; T<sub>max</sub>: time of the maximum concentration; SD: standard deviation; F was calculated using the following formula

## REFERENCES

[1]. Bang J, et al. Mumefural Improves Blood Flow in a Rat Model of FeCl<sub>3</sub>-Induced Arterial Thrombosis. *Nutrients*. 2020 Dec 10;12(12):3795.

[2]. Bang J, et al. Mumefural Ameliorates Cognitive Impairment in Chronic Cerebral Hypoperfusion via Regulating the Septohippocampal Cholinergic System and Neuroinflammation. *Nutrients*. 2019 Nov 13;11(11):2755.

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

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