



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### 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

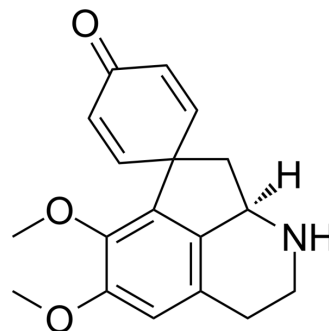
[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

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

## Stepharine

Cat. No.:	HY-N9347
CAS No.:	2810-21-1
Molecular Formula:	C <sub>18</sub> H <sub>19</sub> NO <sub>3</sub>
Molecular Weight:	297.35
Target:	Toll-like Receptor (TLR)
Pathway:	Immunology/Inflammation
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 25 mg/mL (84.08 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		3.3630 mL	16.8152 mL	33.6304 mL
	5 mM		0.6726 mL	3.3630 mL	6.7261 mL
	10 mM		0.3363 mL	1.6815 mL	3.3630 mL

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

### BIOLOGICAL ACTIVITY

#### Description

Stepharine, an natural alkaloid, directly interacts with TLR4 and binds to the TLR4/MD2 complex (TLR4 inhibitor). Stepharine possesses anti-aging, anti-viral and anti-hypertensive effects<sup>[1]</sup>.

#### In Vitro

Stepharine (10, 30 μM) substantially inhibits nitric oxide (NO) release as well as the mRNA and protein expression of pro-inflammatory mediators [inducible nitric oxide synthase, interleukin (IL)-6, tumor necrosis factor (TNF)-α, IL-1β] in LPS-activated BV-2 cells<sup>[1]</sup>.  
Stepharine (10, 30 μM) inhibits LPS-induced increase of TLR4 expression, IκBα phosphorylation, and NF-κB p65 nuclear translocation<sup>[1]</sup>.  
Stepharine exhibits neuroprotective effects on SH-SY5Y cells cultured with LPS-treated conditioned medium. Stepharine has also shown to inhibit cholinesterase in vitro<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

Stepharine (500 μg/kg) inhibited NeuN<sup>+</sup> cells loss and Iba-1<sup>+</sup> cells increase in the MCAO ischemic cortex<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Middle cerebral artery occlusion (MCAO) rat model <sup>[1]</sup> .
---------------	--

---

Dosage:	500 µg/kg (20 µL).
Administration:	Intranasally injected into rats 1h after MCAO.
Result:	Attenuated the neuronal loss induced by MCAO (MCAO+ stepharine) group.

---

## REFERENCES

---

[1]. Tingyu Hao, et al. Inflammatory mechanism of cerebral ischemia-reperfusion injury with treatment of stepharine in rats. *Phytomedicine*. 2020 Dec;79:153353.

---

**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](mailto:tech@MedChemExpress.com)

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