



# 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

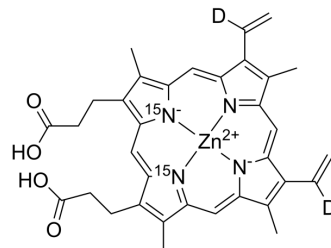
[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

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

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

## Zinc Protoporphyrin-d<sub>2</sub>, <sup>15</sup>N<sub>2</sub>

<b>Cat. No.:</b>	HY-101193S
<b>Molecular Formula:</b>	C <sub>34</sub> H <sub>30</sub> D <sub>2</sub> N <sub>2</sub> <sup>15</sup> N <sub>2</sub> O <sub>4</sub> Zn
<b>Molecular Weight:</b>	630.02
<b>Target:</b>	Apoptosis; Endogenous Metabolite; Reactive Oxygen Species; Isotope-Labeled Compounds
<b>Pathway:</b>	Apoptosis; Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB; Others
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Zinc Protoporphyrin-d <sub>2</sub> , <sup>15</sup> N <sub>2</sub> is <sup>15</sup> N and deuterated labeled Zinc Protoporphyrin (HY-101193). Zinc Protoporphyrin (Zn(II)-protoporphyrin IX) is an orally active and competitive heme oxygenase-1 (HO-1) inhibitor and markedly attenuates the protective effects of Phloroglucinol (PG) against H <sub>2</sub> O <sub>2</sub> <sup>[1]</sup> . Zinc Protoporphyrin is used as a screening marker of iron deficiency in individual pregnant women and children, but also to assess population iron status in combination with haemoglobin concentration <sup>[2]</sup> . Zinc Protoporphyrin has anti-cancer activity <sup>[3]</sup> .
<b>In Vitro</b>	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs <sup>[1]</sup> . to increase in Protoporphyrin (Zn(II)-protoporphyrin IX; 5 μM; 72 hours) causes the fraction of late apoptotic and necrotic cells increasing from 10.9% in controls to 30.4% after 72 h <sup>[4]</sup> . Zinc Protoporphyrin (1.25-40 μM; 48 or 72 hours) exerts cytostatic/cytotoxic effects against tumor cells <sup>[4]</sup> . Zinc Protoporphyrin (2.5, 5 μM; 48 or 72 hours) results in dose- and time-dependent reduction of cells in the G1 phase of the cell cycle <sup>[4]</sup> . Zinc Protoporphyrin (1.25-40 μM; 48 hours) leads to the accumulation of cleaved (active) caspase-3 <sup>[4]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Zinc Protoporphyrin (12.5, 25, 50 mg/kg for i.p.; 12.5, 50 mg/kg for p.o.; from day 7 to 19) exerts dose-dependent antitumor effects manifested by the retardation of tumor growth <sup>[4]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Park C, et al. Protective Effect of Phloroglucinol on Oxidative Stress-Induced DNA Damage and Apoptosis through Activation of the Nrf2/HO-1 Signaling Pathway in HaCaT Human Keratinocytes. *Mar Drugs*. 2019 Apr 13;17(4).
- [2]. Nowis D, et al. Zinc protoporphyrin IX, a heme oxygenase-1 inhibitor, demonstrates potent antitumor effects but is unable to potentiate antitumor effects of chemotherapeutics in mice. *BMC Cancer*. 2008 Jul 11;8:197.
- [3]. Mwangi MN, et al. Diagnostic utility of zinc protoporphyrin to detect iron deficiency in Kenyan pregnant women. *BMC Med*. 2014 Nov 26;12:229.
- [4]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-216.

---

**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