



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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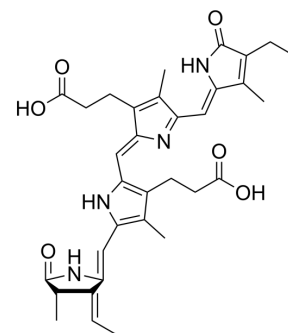
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## Phycocyanobilin

|                           |  |
|---------------------------|--|
| <b>Cat. No.:</b>          | HY-130750  |
| <b>CAS No.:</b>           | 20298-86-6   |
| <b>Molecular Formula:</b> | C <sub>33</sub> H <sub>38</sub> N <sub>4</sub> O <sub>6</sub>                                  |
| <b>Molecular Weight:</b>  | 586.68   |
| <b>Target:</b>            | Reactive Oxygen Species  |
| <b>Pathway:</b>           | Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB                                      |
| <b>Storage:</b>           | 4°C, protect from light<br>* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light) |



### SOLVENT & SOLUBILITY

|   |  |                              |             |             |             |              |
|---|--|------------------------------|-------------|-------------|-------------|--------------|
| <b>In Vitro</b>   | DMSO : 6 mg/mL (10.23 mM; Need ultrasonic and warming)   |                              |             |             |             |              |
|   | <b>Preparing Stock Solutions</b>   | <b>Solvent Concentration</b> | <b>Mass</b> | <b>1 mg</b> | <b>5 mg</b> | <b>10 mg</b> |
|   |  | <b>1 mM</b>                  |             | 1.7045 mL   | 8.5225 mL   | 17.0451 mL   |
|   |  | <b>5 mM</b>                  |             | 0.3409 mL   | 1.7045 mL   | 3.4090 mL    |
|   |  | <b>10 mM</b>                 |             | 0.1705 mL   | 0.8523 mL   | 1.7045 mL    |
| Please refer to the solubility information to select the appropriate solvent. |  |                              |             |             |             |              |
| <b>In Vivo</b>  | 1. Add each solvent one by one: PBS<br>Solubility: 10 mg/mL (17.05 mM); Suspended solution; Need ultrasonic<br><br>2. Add each solvent one by one: Tris-HCL Buffer<br>Solubility: 5.88 mg/mL (10.02 mM); Suspended solution; Need ultrasonic |                              |             |             |             |              |

### BIOLOGICAL ACTIVITY

|                    |   |
|--------------------|---|
| <b>Description</b> | Phycocyanobilin, an orally active antioxidative agent, is an effective scavenger for various reactive oxygen species. Phycocyanobilin can be used for the research of Alzheimer's disease <sup>[1][2][3]</sup> .  |
| <b>In Vitro</b>    | Phycocyanobilin (100 μM; 0-250 min) inhibits the peroxidation of methyl linoleate and produces a prolonged induction period <sup>[1]</sup> .<br>Phycocyanobilin (1 mM; 0-300 min) suppresses the oxidation of the liposomes <sup>[1]</sup> .<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |
| <b>In Vivo</b>     | Phycocyanobilin (15 mg/kg; p.o.; in diet for 2 weeks) shows antioxidant effects in type 2 diabetes mice <sup>[3]</sup> .<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only.   |

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|                 |  |
|-----------------|--|
| Animal Model:   | Male C57BL/Ks J db/db mice, a rodent model for type 2 diabetes <sup>[3]</sup>  |
| Dosage:         | 15 mg/kg   |
| Administration: | In diet for 2 weeks  |
| Result:         | Significantly decreased blood glucose levels. Normalized the increases in urinary 8-OHdG and 8-epi-PGF <sub>2α</sub> levels, renal oxidative stress markers evaluated by renal 8-OHdG staining and DHE staining, Nox4 mRNA, and protein expression, as well as the mRNA levels of other NAD(P)H oxidase components, inflammatory markers and HO-1. |

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## REFERENCES

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- [1]. Hirata T, et al. Antioxidant activities of phycocyanobilin prepared from *Spirulina platensis*. *Journal of Applied Phycology*, 2000, 12: 435-439.
- [2]. Matamoros BP, et al. Nutraceutical and therapeutic potential of Phycocyanobilin for treating Alzheimer's disease. *J Biosci.* 2021;46:42.
- [3]. Zheng J, et al. Phycocyanin and phycocyanobilin from *Spirulina platensis* protect against diabetic nephropathy by inhibiting oxidative stress. *Am J Physiol Regul Integr Comp Physiol.* 2013 Jan 15;304(2):R110-20.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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