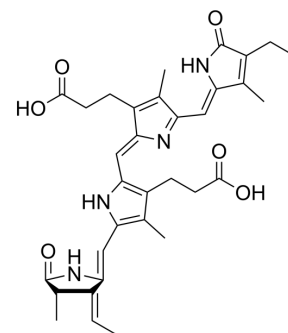


Phycocyanobilin

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



SOLVENT & SOLUBILITY

In Vitro	DMSO : < 1 mg/mL (ultrasonic; heat to 60°C) (insoluble or slightly soluble)
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: PBS Solubility: 10 mg/mL (17.05 mM); Suspended solution; Need ultrasonic Add each solvent one by one: Tris-HCl buffer Solubility: 5.88 mg/mL (10.02 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description	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 ^{[1][2][3]} .	
In Vitro	Phycocyanobilin (100 μM; 0-250 min) inhibits the peroxidation of methyl linoleate and produces a prolonged induction period ^[1] . Phycocyanobilin (1 mM; 0-300 min) suppresses the oxidation of the liposomes ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Phycocyanobilin (15 mg/kg; p.o.; in diet for 2 weeks) shows antioxidant effects in type 2 diabetes mice ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Male C57BL/Ks J db/db mice, a rodent model for type 2 diabetes ^[3]
	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 _{2α} 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.

REFERENCES

- [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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