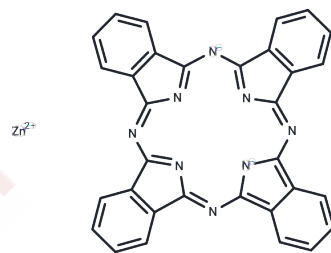


Zinc phthalocyanine

Chemical Properties

CAS No. :	14320-04-8
Formula:	C ₃₂ H ₁₆ N ₈ Zn
Molecular Weight:	577.92
Storage:	Keep away from direct sunlight Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Zinc phthalocyanine (ZnPc) are photosensitive, is commonly applied in industry (catalysts, photoconductors) and biomedical (photodynamic therapy).
Targets(IC50)	Apoptosis, Others, Caspase, ROS
Cell Research	<p>Instructions</p> <p>1. Photooxidation of cyclohexane: ZnPc, as a photosensitizer, shows high catalytic activity in the photooxidation reaction of cyclohexane. The basic reaction steps are as follows:</p> <ol style="list-style-type: none"> 1. Prepare the reaction system: Dissolve ZnPc in an appropriate solvent, usually benzene or other organic solvents. The concentration of ZnPc is generally between 10⁻⁵ and 10⁻³ M, and the specific concentration depends on the experimental requirements. 2. Reaction conditions: Add cyclohexane and oxygen to the reaction vessel. Generally, ZnPc (as a photosensitizer) is added under an appropriate nitrogen atmosphere and kept at a low temperature (such as 5-10°C) to promote the oxidation reaction. 3. Irradiation light source: Use a light source of a specific wavelength (usually visible light or ultraviolet light), such as a xenon lamp, laser, etc., to irradiate the reaction mixture. ZnPc will produce singlet and triplet excited states under the excitation of light, thereby initiating an oxidation reaction. 4. Monitoring the reaction: Monitor the reaction products, such as the oxidation products of cyclohexene (such as cyclohexanol, cyclohexanone, etc.) by gas chromatography (GC) or mass spectrometry (MS). <p>2. Application of photodynamic therapy (PDT): ZnPc is used as a photosensitizer to produce singlet oxygen (¹O₂) by light excitation in PDT for the treatment of cancer and other diseases. ZnPc is generally incorporated into a drug carrier (such as liposomes) and injected into the patient. Under laser irradiation, the singlet oxygen produced by ZnPc excitation can effectively kill tumor cells or diseased tissues.</p> <p>3. Industrial application:</p> <ol style="list-style-type: none"> 1. In industry, ZnPc is widely used as a photoconductor and catalyst material in photoelectric conversion, dye-sensitized solar cells (DSSC) and other fields. 2. In catalytic applications, ZnPc is used as a catalyst or catalytic carrier, especially in photooxidation reactions with high efficiency. <p>Notes</p>

A DRUG SCREENING EXPERT

Cell Research	<p>1. Solubility: ZnPc itself has poor solubility, so it is usually necessary to use organic solvents (such as dichloromethane, ethanol, etc.) to dissolve it.</p> <p>2. Photosensitivity: ZnPc is highly sensitive to light, so it is necessary to avoid direct exposure to strong light and control the light source during operation.</p> <p>The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.</p>
---------------	---

Solubility Information

Solubility	DMSO: Insoluble, H ₂ O: Insoluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	--

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7303 mL	8.6517 mL	17.3034 mL
5 mM	0.3461 mL	1.7303 mL	3.4607 mL
10 mM	0.173 mL	0.8652 mL	1.7303 mL
50 mM	0.0346 mL	0.173 mL	0.3461 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Cortés-Villena A, et al. Deciphering the Energy Transfer Mechanism Across Metal Halide Perovskite-Phthalocyanine Interfaces. *Adv Sci (Weinh)*. 2025 Jan 10:e2414831.

Windle ER, et al. Role of Secondary Structure and Time-Dependent Binding on Disruption of Phthalocyanine Aggregates by Guanine-Rich Nucleic Acids. *Chemistry*. 2025 Jan 9;31(2):e202403095.

Ahmetali E, et al. Zinc Phthalocyanine Core-First Star Polymers Through Nitroxide Mediated Polymerization and Nitroxide Exchange Reaction. *Macromol Rapid Commun*. 2025 Jan;46(1):e2400601.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481