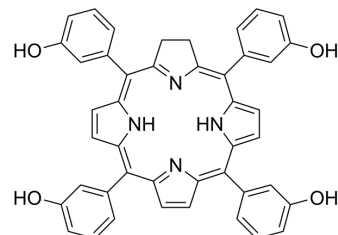


Temoporfin

Cat. No.:	HY-16488
CAS No.:	122341-38-2
Molecular Formula:	C ₄₄ H ₃₂ N ₄ O ₄
Molecular Weight:	680.75
Target:	Reactive Oxygen Species
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 20.83 mg/mL (30.60 mM; ultrasonic and warming and heat to 60°C)																					
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent</th> <th rowspan="2">Mass</th> <th colspan="3">Concentration</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Preparing Stock Solutions</td> <td>1 mM</td> <td>1.4690 mL</td> <td>7.3448 mL</td> <td>14.6897 mL</td> </tr> <tr> <td>5 mM</td> <td>0.2938 mL</td> <td>1.4690 mL</td> <td>2.9379 mL</td> </tr> <tr> <td>10 mM</td> <td>0.1469 mL</td> <td>0.7345 mL</td> <td>1.4690 mL</td> </tr> </tbody> </table>	Solvent	Mass	Concentration			1 mg	5 mg	10 mg	Preparing Stock Solutions	1 mM	1.4690 mL	7.3448 mL	14.6897 mL	5 mM	0.2938 mL	1.4690 mL	2.9379 mL	10 mM	0.1469 mL	0.7345 mL	1.4690 mL
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	Please refer to the solubility information to select the appropriate solvent.																					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 1 mg/mL (1.47 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 1 mg/mL (1.47 mM); Clear solution 																					

BIOLOGICAL ACTIVITY

Description	Temoporfin (m-THPC), a reduced porphyrin, is a potent second-generation photosensitizer. Temoporfin can be used in the research of photodynamic therapy (PDT) for head and neck cancers ^{[1][2][3]} .
In Vitro	A detailed confocal fluorescence microscopy study of a human adenocarcinoma shows weak localization of Temoporfin in lysosomes and mitochondria. Instead, it is found to be localized in the endoplasmic reticulum (ER) and the Golgi apparatus [1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Temoporfin in liver tissue decreases rapidly in time after initial high levels at 4 h after administration (0.1-0.3 mg/kg). In tumour tissue no decrease in photosensitizer levels occurred, with Temoporfin remaining high up to 48 h after administration ^[2] .

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nucleic Acids Res. 2023 May 16;gkad365.
- Theranostics. 2018 Feb 4;8(5):1435-1448.
- Cell Death Dis. 2020 Oct 31;11(10):938.
- Biomed Pharmacother. 2024 May 24;176:116768.
- Biomacromolecules. 2024 Jun 18.

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REFERENCES

- [1]. Senge MO, et, al. Temoporfin (Foscan®, 5,10,15,20-tetra(m-hydroxyphenyl)chlorin)--a second-generation photosensitizer. Photochem Photobiol. 2011 Nov-Dec;87(6):1240-96.
- [2]. Rovers JP, et, al. Effective treatment of liver metastases with photodynamic therapy, using the second-generation photosensitizer meta-tetra(hydroxyphenyl)chlorin (mTHPC), in a rat model. Br J Cancer. 1999 Oct;81(4):600-8.
- [3]. Reshetov V, et, al. Photodynamic therapy with conventional and PEGylated liposomal formulations of mTHPC (temoporfin): comparison of treatment efficacy and distribution characteristics in vivo. Int J Nanomedicine. 2013;8:3817-31.
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Caution: Product has not been fully validated for medical applications. For research use only.

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