



SZABO SCANDIC

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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

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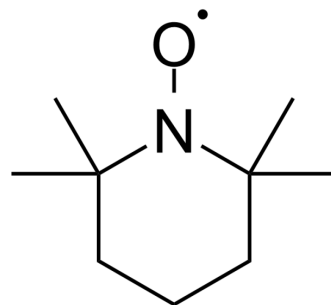
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Tempo

Cat. No.:	HY-W001187		
CAS No.:	2564-83-2		
Molecular Formula:	C ₉ H ₁₈ NO		
Molecular Weight:	156.25		
Target:	Mitochondrial Metabolism; DNA/RNA Synthesis; Reactive Oxygen Species		
Pathway:	Metabolic Enzyme/Protease; Cell Cycle/DNA Damage; Immunology/Inflammation; NF-κB		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (640.00 mM; Need ultrasonic)
H₂O : 100 mg/mL (640.00 mM; ultrasonic and warming and heat to 60°C)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		6.4000 mL	32.0000 mL	64.0000 mL
	5 mM		1.2800 mL	6.4000 mL	12.8000 mL
	10 mM		0.6400 mL	3.2000 mL	6.4000 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (16.00 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (16.00 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (16.00 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Tempo is a nitric oxide radical and a selective scavenger of ROS in mitochondria. Tempo is also an organocatalyst that disproportionates superoxide and oxidizes primary alcohols to aldehydes in a catalytic cycle. Tempo has mutagenic and antioxidant effects and can induce DNA strand breaks. Tempo also exerts cytotoxic and mutagenic properties in mouse lymphoma cells^{[1][2][3][4]}.

In Vitro

Tempo (1-5 mM; 4 h) can cause DNA damage in L5178Y cells and exert cytotoxicity and genotoxicity^[2].

Tempo (1-5 mM; 4 h) causes DNA breaks in mouse lymphoma cells^[2].

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

Cell Cytotoxicity Assay^[2]

Cell Line:	L5178Y cells and mouse lymphoma cells
Concentration:	1, 2, 3, 4, 5 mM
Incubation Time:	4 h
Result:	Exerted cytotoxicity and genotoxicity in L5178Y cells, and caused DNA-strand breaks in lymphoma cells.

CUSTOMER VALIDATION

- Br J Cancer. 2020 Jul;123(1):126-136.
- FASEB J. 2021 May;35(5):e21445.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Chen X, et al. Isocitrate dehydrogenase 2 contributes to radiation resistance of oesophageal squamous cell carcinoma via regulating mitochondrial function and ROS/pAKT signalling. Br J Cancer. 2020 May 5.

[2]. Kaur G, et al. Eugenol precludes cutaneous chemical carcinogenesis in mouse by preventing oxidative stress and inflammation and by inducing apoptosis. Mol Carcinog. 2010 Mar;49(3):290-301.

[3]. Guo X, et al. Comparative Genotoxicity of TEMPO and 3 of Its Derivatives in Mouse Lymphoma Cells. Toxicol Sci. 2018 May 1;163(1):214-225.

Caution: Product has not been fully validated for medical applications. For research use only.

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