



# SZABO SCANDIC

Part of Europa Biosite

## 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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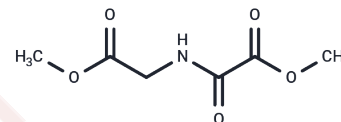
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## DMOG

## Chemical Properties

CAS No. :	89464-63-1
Formula:	C <sub>6</sub> H <sub>9</sub> NO <sub>5</sub>
Molecular Weight:	175.14
Appearance:	no data available
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year



## Biological Description

Description	DMOG (Dimethyloxalyglycine), an antagonist of the $\alpha$ -ketoglutarate cofactor, is an inhibitor for HIF prolyl hydroxylase.
Targets(IC50)	HIF/HIF Prolyl-Hydroxylase,HIF,Autophagy
In vitro	DMOG shows only weakly active in the microsomal system, but efficiently suppresses hydroxyproline synthesis in intact cells. [1] DMOG reduces FGF-2-induced proliferation and cyclin A expression by inhibiting prolyl hydroxylase activity in HPASMC. [3]
In vivo	DMOG inhibits endogenous HIF inactivation and induces angiogenesis in the ischaemic skeletal muscles of mice. [2] Up-regulation of hypoxia-inducible factor-1 $\alpha$ by DMOG may be the cardioprotective mechanism of ischemic postconditioning in hyperlipidemic rats [4].
Cell Research	To analyze DNA synthesis as an index of cellular proliferation, VSMC are plated in 48-well plates (5,000 per square centimeter) in growth medium, incubated overnight, and serum-deprived (1% FCS) for 24 h. Replicate wells are then stored at -70°C for baseline (day 0) cell counts, and fresh medium with or without growth factors is added to the remaining wells, which are incubated 72-96 h in 20 or 5% O <sub>2</sub> . Days 0 and 3 or 4 cell counts are determined by lysing cells in a buffer containing a fluorescent dye, which has minimal fluorescence by itself but fluoresces when bound to DNA or RNA. Absolute cell numbers are calculated by comparing the fluorescence of specimens with that of a standard curve similarly prepared using a known number of cells. (Only for Reference)

## Solubility Information

Solubility	H <sub>2</sub> O: 17.54 mg/mL (100 mM),Sonication is recommended. DMSO: 60 mg/mL (342.58 mM), Ethanol: 35 mg/mL (199.84 mM), ( $< 1$ mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	5.7097 mL	28.5486 mL	57.0972 mL
5 mM	1.1419 mL	5.7097 mL	11.4194 mL
10 mM	0.571 mL	2.8549 mL	5.7097 mL
50 mM	0.1142 mL	0.571 mL	1.1419 mL

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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.

### Reference

Zheng B X, Long W, Zheng W, et al. Mitochondria-Selective Dicationic Small-Molecule Ligand Targeting G-Quadruplex Structures for Human Colorectal Cancer Therapy. *Journal of Medicinal Chemistry*. 2024

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