

**Product Name:** DMOG

**Catalog No.:** 4408

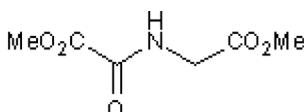
**Batch No.:** 6

CAS Number: 89464-63-1

IUPAC Name: *N*-(2-Methoxy-2-oxoacetyl)glycine methyl ester

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>6</sub>H<sub>9</sub>NO<sub>5</sub>  
**Batch Molecular Weight:** 175.14  
**Physical Appearance:** White solid  
**Solubility:** water to 100 mM  
 DMSO to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 97.9% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	41.15	5.18	8
Found	41.58	5.11	7.94

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

DMOG is a prolyl 4-hydroxylase (P4H) inhibitor; inhibits hypoxia-inducible factor  $\alpha$  (HIF- $\alpha$ ) prolyl hydroxylase (HIF-PH). Increases levels of HIF-1 $\alpha$ ; promotes cell survival under hypoxic conditions. Inhibits differentiation of hematopoietic stem cells (HSCs) in culture.

**Physical and Chemical Properties:**

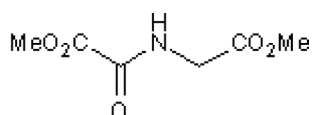
Batch Molecular Formula: C<sub>6</sub>H<sub>9</sub>NO<sub>5</sub>

Batch Molecular Weight: 175.14

Physical Appearance: White solid

**Minimum Purity:**  $\geq$ 97%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

water to 100 mM

DMSO to 100 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Jackson *et al*** (2017) Targeting the aryl hydrocarbon receptor nuclear translocator complex with DMOG and Stemregenin 1 improves primitive hematopoietic stem cell expansion. *Stem Cell Res* **21** 124. PMID: 28445828.

**Barnucz *et al*** (2013) Prolyl-hydroxylase inhibition preserves endothelial cell function in a rat model of vascular ischemia reperfusion injury. *J.Pharmacol.Exp.Ther.* **345** 25. PMID: 23388095.

**Ayrapetov *et al*** (2011) Activation of Hif1 $\alpha$  by the prolylhydroxylase inhibitor dimethoxyalylglycine decreases radiosensitivity. *PLoS One* **6** e26064. PMID: 22016813.

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