

Certificate of Analysis

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Product Name: DMOG

Catalog No.: 4408

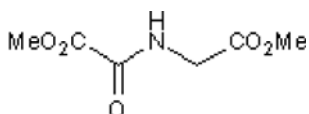
Batch No.: 3

CAS Number: 89464-63-1

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆H₉NO₅
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

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	41.15	5.18	8
Found	41.32	5.12	7.75

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

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CAS Number: 89464-63-1

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

Description:

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

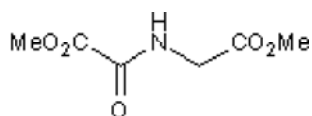
Physical and Chemical Properties:

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Batch Molecular Weight: 175.14

Physical Appearance: White solid

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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. Our standard recommendations are:

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 α by the prolylhydroxylase inhibitor dimethoxyglycine decreases radiosensitivity. *PLoS One* **6** e26064. PMID: 22016813.

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