Certificate of Analysis

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: $C_6H_9NO_5$

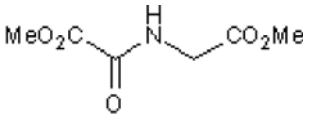
Batch Molecular Weight: 175.14

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM
ethanol to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

^{1}H 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

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CAS Number: 89464-63-1

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

Description:

Prolyl 4-hydroxylase (P4H) inhibitor; inhibits hypoxia-inducible factor α (HIF-α) prolyl hydroxylase (HIF-PH). Increases levels of HIF-1α; promotes cell survival under hypoxic conditions.

Physical and Chemical Properties:

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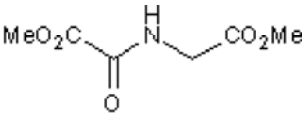
Batch Molecular Weight: 175.14

Physical Appearance: White solid

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 100 mM
DMSO to 100 mM
ethanol 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:

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 Hif1α by the prolylhydroxylase inhibitor dimethyoxalyglycine decreases radiosensitivity. PLoS One ***6*** e26064. PMID: 22016813.

Lomb *et al* (2009) Prolyl hydroxylase inhibitors depend on extracellular glucose and hypoxia-inducible factor (HIF)-2α to inhibit cell death caused by nerve growth factor (NGF) deprivation: evidence that HIF-2α has a role in NGF-promoted survival of sympathetic neurons. Mol.Pharmacol. ***75*** 1198. PMID: 19204094.

Jaakkola *et al* (2001) Targeting of HIF-α to the von Hippel-Lindau ubiquitylation complex by O_2-regulated prolyl hydroxylation. Science ***292*** 468. PMID: 11292861.