



Catalog # 10-2371

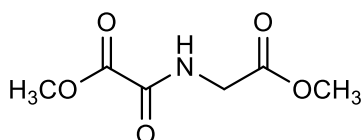
DMOG

89464-63-1

N-(2-Methoxy-2-oxoacetyl)glycine methyl ester

Dimethyloxalylglycine

Lot # FB1289



Inhibits PHD or prolyl hydroxylase domain-containing proteins, activating HIF1 α ^{1,2} and inhibiting JMJD2A (IC₅₀ = 2.5 μ M)³. Displays neuroprotective effects. Inhibits neuronal cell death caused by neurotrophin deprivation⁴. Prevents activation of the ATR/CHK1/p53 pathway and suppresses apoptosis induced by DNA damage⁵.

- 1) Asikainen et al. (2005), *Activation of hypoxia-inducible factors in hyperoxia through prolyl 4-hydroxylase blockade in cells and explants of primate lung*; Proc. Natl. Acad. Sci. USA, **102** 10212
- 2) Jaakkola et al. (2001), *Targeting of HIF-alpha to the von Hippel-Lindau ubiquitylation complex by O2-regulated prolyl hydroxylation*; Science, **292** 468
- 3) Hamada et al. (2009), *Synthesis and activity of N-oxalylglycine and its derivatives as jumonji C-domain-containing histone lysine demethylase inhibitors*; Bioorg. Med. Chem. Lett., **19** 2852
- 4) Lomb et al. (2009), *Prolyl hydroxylase inhibitors depend on extracellular glucose and hypoxia-inducible factor (HIF)-2alpha to inhibit cell death caused by nerve growth factor deprivation: evidence that HIF-2alpha has a role in NGF-promoted survival of sympathetic neurons*; Mol. Pharmacol., **75** 1198
- 5) Xie et al. (2012), *PHD3-dependent hydroxylation of HCLK2 promotes the DNA damage response*; J. Clin. Invest., **122** 2827

PHYSICAL DATA

Molecular Weight:	175.14
Molecular Formula:	C ₆ H ₉ NO ₅
Purity:	99% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 25 mg/ml), Ethanol (up to 25 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied desiccated and protected from light at -20°C for up to 2 years from the date of purchase. Solutions are not stable and should be made fresh and used within one working day.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.

Focus Biomolecules LLC 400 Davis Drive, Suite 600 Plymouth Meeting PA 19462

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