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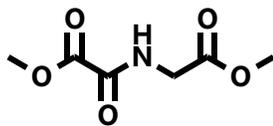
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## Prolyl 4-hydroxylase (P4H) Inhibitor – DMOG

**Chemical Name:** methyl 2-((2-methoxy-2-oxoethyl)amino)-2-oxoacetate



Molecular Weight:	175.14
Formula:	C <sub>6</sub> H <sub>9</sub> NO <sub>5</sub>
Purity:	≥98%
CAS#:	89464-63-1
Solubility:	DMSO up to 100 mM Water up to 100 mM
Storage	Powder: 4°C 1 year DMSO: 4°C 3 month -20°C 1 year

### Biological Activity:

DMOG is a selective, competitive and cell permeable prolyl 4-hydroxylase (P4H) inhibitor. It inhibits hypoxia-inducible factor  $\alpha$  (HIF- $\alpha$ ) prolyl hydroxylase (HIF-PH). It acts to stabilize HIF-1 $\alpha$  expression at normal oxygen tensions in cultured cells, at concentrations between 0.1 and 1 mM. DMOG acts as a pro-angiogenic compound, acting via the HIF-1 $\alpha$  system.

### How to Use:

**In vitro:** DMOG was used at 100  $\mu$ M final concentration in vitro and in cellular assays.

**In vivo:** n/a

### Reference:

1. Jaakkola P, et al. Targeting of HIF-alpha to the von Hippel-Lindau ubiquitylation complex by O2-regulated prolyl hydroxylation. (2001) *Science*. 292(5516):468-72.
2. Lomb DJ, et al. Prolyl hydroxylase inhibitors depend on extracellular glucose and hypoxia-inducible factor (HIF)-2alpha to inhibit cell death caused by nerve growth factor (NGF) deprivation: evidence that HIF-2alpha has a role in NGF-promoted survival of sympathetic neurons. (2009) *Mol Pharmacol*. 75(5):1198-209.
3. Ayrapetov MK, et al. Activation of Hif1 $\alpha$  by the prolylhydroxylase inhibitor dimethoxyglycine decreases radiosensitivity. (2011) *PLoS One*. 6(10):e26064.
4. Barnucz E, et al. Prolyl-hydroxylase inhibition preserves endothelial cell function in a rat model of vascular ischemia reperfusion injury. (2013) *J Pharmacol Exp Ther*. 345(1):25-31.

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