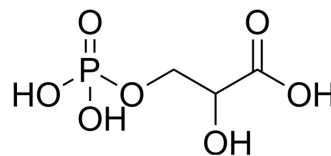


3-Phosphoglyceric acid

Cat. No.:	HY-113491
CAS No.:	820-11-1
Molecular Formula:	C ₃ H ₇ O ₇ P
Molecular Weight:	186.06
Target:	Biochemical Assay Reagents
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	3-Phosphoglyceric acid is a metabolic intermediate in both glycolysis and the Calvin cycle. 3-Phosphoglyceric acid is involved in alveolar macrophage epigenetic regulation.									
IC₅₀ & Target	Human Endogenous Metabolite									
In Vitro	<p>3-Phosphoglyceric acid (400 μM; 24 hours; BMDMs) treatment enhances Spp1 transcription in VHL-deficient macrophages, and the reduced H3K4me3 modification is also reversed^[1].</p> <p>3-Phosphoglyceric treatment significantly augments gene expression as well as H3K4me3 deposition of Spp1 in IL-4-stimulated macrophages^[1].</p> <p>In yeast, 3-Phosphoglyceric acid acts as a metabolic checkpoint for the formation of a multicomponent enzyme complex including serine metabolic enzymes and pyruvate kinase isoform 2 (PKM2) homologue, which senses both serine metabolism and glycolysis and regulates H3K4 methylation and histone phosphorylation^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>RT-PCR^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Bone marrow-derived macrophages (BMDMs)</td> </tr> <tr> <td>Concentration:</td> <td>400 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Enhanced Spp1 transcription in VHL-deficient macrophages, and the reduced H3K4me3 modification was also reversed.</td> </tr> </table>		Cell Line:	Bone marrow-derived macrophages (BMDMs)	Concentration:	400 μM	Incubation Time:	24 hours	Result:	Enhanced Spp1 transcription in VHL-deficient macrophages, and the reduced H3K4me3 modification was also reversed.
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REFERENCES

[1]. Zhang W, et al. The E3 ligase VHL controls alveolar macrophage function via metabolic-epigenetic regulation. *J Exp Med*. 2018 Dec 3;215(12):3180-3193.

Caution: Product has not been fully validated for medical applications. For research use only.

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