

Product Data Sheet

Product Name: 3-Phosphoglyceric acid

Cat. No.: GC70376

Chemical Properties

Cas. No. 820-11-1

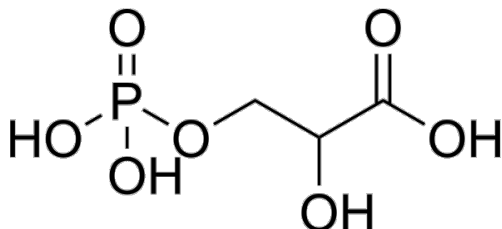
Formula $C_3H_7O_7P$ M.Wt 186.06

Solubility H_2O : 100 mg/mL (537.46 mM; Need ultrasonic) Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility , please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

3-Phosphoglyceric acid is a metabolic intermediate in both glycolysis and the Calvin cycle. 3-Phosphoglyceric acid is involved in alveolar macrophage epigenetic regulation.

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].

3-Phosphoglyceric treatment significantly augments gene expression as well as H3K4me3 deposition of Spp1 in IL-4-stimulated macrophages^[1].

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

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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].

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.

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