

PRODUCT INFORMATION



sn-Glycerol-3-phosphate (cyclohexyl ammonium salt hydrate)

Item No. 20729

Formal Name: 1,2R,3-propanetriol, 1-(dihydrogen phosphate), cyclohexanamine, hydrate (1:2:X)

Synonym: G3P

MF: C₃H₉O₆P • 2C₆H₁₃N [XH₂O]

FW: 370.4

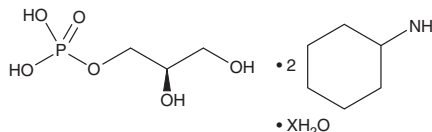
Purity: ≥95%

UV/Vis.: λ_{max}: 201 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

sn-Glycerol-3-phosphate (G3P) (cyclohexyl ammonium salt hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the G3P (cyclohexyl ammonium salt hydrate) in the solvent of choice, which should be purged with an inert gas. G3P (cyclohexyl ammonium salt hydrate) is soluble in the organic solvent ethanol at a concentration of approximately 1 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of G3P (cyclohexyl ammonium salt hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of G3P (cyclohexyl ammonium salt hydrate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

G3P is a phosphoric ester of glycerol that is a chemical intermediate in glycolysis and lipid metabolism.¹ G3P is an integral part of the glycerophosphate shuttle, in which NADH is oxidized to regenerate NAD⁺ and reducing equivalents are transferred to the oxidative phosphorylation pathway.²⁻⁵ G3P is used as a substrate for lipid biosynthesis pathways in synthetic biology, in studies of reactive oxygen species in heart tissue, and to measure phosphatidic acid in cell cultures.⁶⁻⁸ It plays a vital role in systemic acquired resistance in plant immunity.⁹ G3P availability affects insulin production as a substrate for glycerol-3-phosphate phosphatase.¹⁰ Altered levels of G3P have been found in the saliva of Alzheimer's, frontal lobe dementia, and Lewy body disease patients.¹¹

References

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WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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