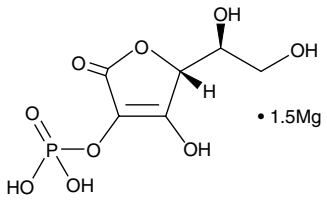
Product Information

L-Ascorbic Acid 2-phosphate (magnesium salt)

Item No. 16457

CAS Registry No.: 113170-55-1
Formal Name: 2-(dihydrogen phosphate)-L-ascorbic acid, dimagnesium salt
Synonyms: AA2P, Ascorbyl PM, Phospitan C
MF: $C_6H_6O_9P$ • 1.5Mg
FW: 289.5
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 259 nm



Laboratory Procedures

For long term storage, we suggest that L-ascorbic acid 2-phosphate (AA2P) (magnesium salt) be stored as supplied at -20°C. It should be stable for at least two years.

AA2P (magnesium salt) is supplied as a crystalline solid. Aqueous solutions of AA2P (magnesium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of AA2P in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

L-Ascorbic acid (vitamin C; Item No. 14656) is essential for the synthesis of collagen, with deficiency resulting in scurvy.[1] Notably, humans and other primates, guinea pigs, and certain other animals lack an enzyme necessary for vitamin C synthesis.[1] AA2P is a long-acting ascorbic acid derivative that stimulates collagen expression and formation and is used in human cell culture.[2,3] It may be included in media to enhance the survival of human embryonic stem cells or increase the growth and replicative lifespan of human corneal endothelial cells.[4,5] AA2P is also used to drive osteogenic differentiation in human adipose stem cells and in human mesenchymal stromal/stem cells.[6-8]

References

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8. Mariner, P.D., Johannesen, E., and Anseth, K.S. Manipulation of miRNA activity accelerates osteogenic differentiation of hMSCs in engineered 3D scaffolds. *J. Tissue Eng. Regen. Med.* **6(4)**, 314-324 (2012).

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