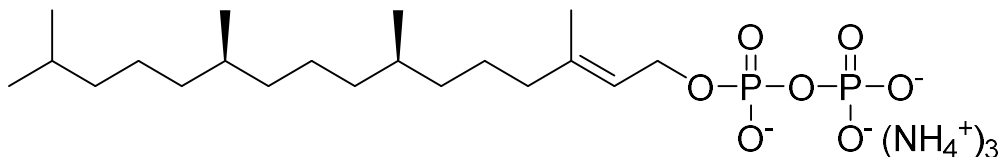


Phytyl Diphosphate (PhytylIPP)

Catalog number: I-0190



Molecular Formula: C₂₀H₅₁N₃O₇P

MW: 507.59

CAS#: 38476-27-6

Alternate Name: Phytyl pyrophosphate

Solubility: water (>1 mg/mL)

Storage and Handling: Store dry at -20 °C. Stock solutions should be stored frozen (-20 °C or below).

Background: Phytyl diphosphate is the precursor in the biosynthesis of tocopherol (Vitamin E) and phylloquinol in plants. It is formed by hydrolysis of the phytol side chain on chlorophyll to phytol followed by phosphorylation by the kinases VTE5 & VTE6.

References: 1) Ischebeck, T, et al. (2006) "A Salvage Pathway for Phytol Metabolism in *Arabidopsis*" J. Biol. Chem., 281(5), 2470-2477

2) vom Dorp, K., Hoelzl, G., Plohmann, C., Eisenhut, M., Abraham, Marion; Weber, A. P. M., Hanson, A. D., Doermann, P. (2015) "Remobilization of phytol from chlorophyll degradation is essential for tocopherol synthesis and growth of *Arabidopsis*" Plant Cell, 27(10), 2846-2859.

3) Gutbrod, K., Romer, J., Doermann, P. (2019) "Phytyl Metabolism in Plants" Progress in Lipid Research, 74, 1-17.

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

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Technical Data Sheet, Rev 1, 5/3/24– **For research use only.** Not intended for diagnostic or therapeutic use.

