

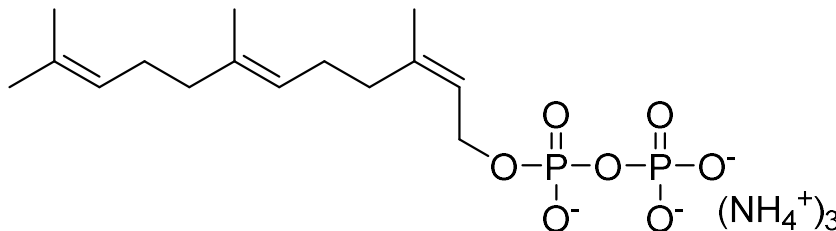
2Z,6E-Farnesyl Diphosphate (Z-FPP)

Catalog number: I-0180

Molecular Formula: $C_{15}H_{37}N_3O_7P_2$

MW: 433.4

CAS#: 40716-68-5



Alternative Names: 2Z,6E-farnesyl pyrophosphate

Solubility: water and most aqueous buffers, >5 mg/mL

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

Background: Isoprenoid compounds are a diverse group of natural products which are essential components in all cells. Isoprenoids are biosynthesized from the simple precursors isopentenyl diphosphate (IPP) and dimethylallyl diphosphate (DMAPP). Eukaryotes, fungi, and some gram-positive bacteria produce IPP through the mevalonate (MVA) pathway whereas gram-negative and some gram-positive bacteria utilize the non-mevalonate or 2-C-methyl-D-erythritol-4-phosphate (MEP) pathway. 2Z,6E-farnesyl diphosphate is formed by (2Z,6E)-farnesyl diphosphate synthase catalyzed condensation of IPP with geranyl diphosphate (GPP). Z-FPP is the precursor of decaprenyl diphosphate, which has a central role in the biosynthesis of the mycobacterial cell wall.

References: 1) Kaur D, Brennan PJ, Crick DC. (2004) "Decaprenyl diphosphate synthesis in *Mycobacterium tuberculosis*." *J Bacteriol.* 186(22), 7564-70. doi: 10.1128/JB.186.22.7564-7570.2004.

2) Takanori Ambo, Motoyoshi Noike, Hirofumi Kurokawa, Tanetoshi Koyama, (2009) "Cloning and functional analysis of cis-prenyltransferase from *Thermobifida fusca*" *Journal of Bioscience and Bioengineering*, 107(6) 620-622. doi:10.1016/j.jbiosc.2009.02.006.

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.

