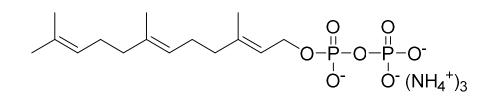


Farnesyl Diphosphate (FPP)

Catalog number: 1-0150



Molecular Formula: C₁₅H₃₇N₃O₇P₂

MW: 433.92

CAS#: 104715-19-7

Alternate Name: Farnesyl pyrophosphate

Solubility: water or 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.

References: 1) Rohdich, F., Hecht, S., Gartner, K., Asam, P., Krieger, C., Amslinger, S., Arigoni, D., Bacher, A., & Eisenrich, W. Studies on the nonmevalonate terpene biosynthetic pathway; metabolic role of IspH (LytB) protein. *Proc. Natl. Acad. Sci. USA* **99**, 1158-63. (2002).

2) Burke, C. & Croteau, R. Interaction with the small subunit of geranyl diphosphate synthase modifies the chain length specificity of geranylgeranyl diphosphate synthase to produce geranyl diphosphate. *J Biol Chem.* **277**, 3141-9. (2002).

3) Voynova, N. E., S. E. Rios, et al. (2004). "Staphylococcus aureus mevalonate kinase: isolation and characterization of an enzyme of the isoprenoid biosynthetic pathway." J Bacteriol 186(1): 61-7.

4) Martin, D. M., J. Faldt, et al. (2004). "Functional Characterization of Nine Norway Spruce TPS Genes and Evolution of Gymnosperm Terpene Synthases of the TPS-d Subfamily." Plant Physiol 135(4): 1908-1927.

5) Gibot, L., J. Follet, et al. (2009). "Human caspase 7 is positively controlled by SREBP-1 and SREBP-2." Biochem J 420(3): 473-83.

6) Falara, V., Akhtar, T. A., Nguyen, T. T. H., Spyropoulou, E. A., Bleeker, P. M., Schauvinhold, I., ... Pichersky, E. (2011). "The tomato terpene synthase gene family." Plant Physiology, 157(2), 770-789. DOI: 10.1104/pp.111.179648

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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