

PRODUCT INFORMATION

Geranylgeranyl Pyrophosphate (ammonium salt)

Item No. 63330

CAS Registry No.: 313263-08-0
Formal Name: P-[(2E,6E,10E)-3,7,11,15-tetramethyl-2,6,10,14-hexadecatetraen-1-yl] ester-diphosphoric acid, triammonium salt

Synonym: GGPP

MF: $C_{20}H_{33}O_7P_2 \cdot 3NH_4$

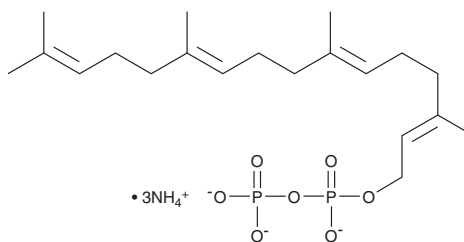
FW: 501.5

Purity: $\geq 95\%$

Supplied as: A solution in methanol:10 mM ammonium hydroxide (70:30)

Storage: $-20^\circ C$

Stability: ≥ 1 year



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

Laboratory Procedures

GGPP (ammonium salt) is supplied as a solution in methanol:10 mM ammonium hydroxide (70:30). 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. We do not recommend storing the aqueous solution for more than one day.

Description

GGPP is an intermediate in the HMG-CoA reductase pathway derived directly from farnesyl pyrophosphate and used in the biosynthesis of terpenes and terpenoids.¹ It also serves as a substrate in the prenylation of a variety of critical intracellular proteins including small GTPases.² This post-translational modification is necessary for correct localization of proteins to intracellular membranes for proper functionality and has become a focus of anticancer drug discovery.^{3,4}

References

1. Vance, D.E. Cholesterol and related derivatives, Chapter 23, in Biochemistry. Zubay, G., editor, 2nd ed., Macmillan Publishing Company, New York, 725-748 (1988).
2. McTaggart, S.J. Isoprenylated proteins. *Cell Mol. Life Sci.* **63**(3), 255-267 (2006).
3. Baron, R.A. and Seabra, M.C. Rab geranylgeranylation occurs preferentially via the pre-formed REP-RGGT complex and is regulated by geranylgeranyl pyrophosphate. *Biochem. J.* **415**(1), 67-75 (2008).
4. Maynor, M., Scott, S.A., Rickert, E.L., et al. Synthesis and evaluation of 3- and 7-substituted geranylgeranyl pyrophosphate analogs. *Bioorg. Med. Chem. Lett.* **18**(6), 1889-1892 (2008).

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.

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