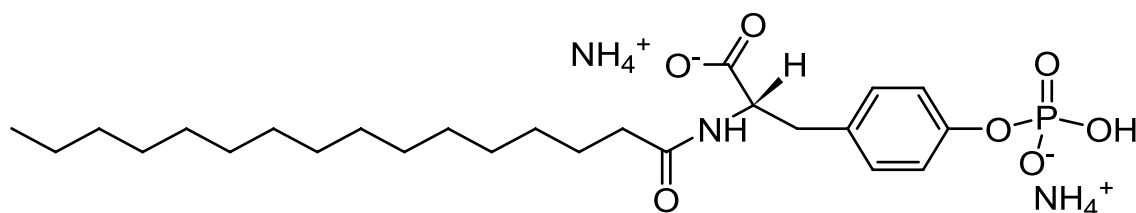


TECHNICAL DATA SHEET

N-Palmitoyl-Tyrosine-Phosphoric Acid

Catalog Number	800725	Physical state	Powder
Purity	> 99%	Transition temp.	No data
CAS	799268-45-4	CMC	No data
Synonyms	N-16:0-Tyrosine-PO ₄	PKA	No data
Molec. Formula	C ₂₅ H ₄₈ N ₃ O ₇ P	TLC mobile phase	C:M:W & C:M:A *, 65:35:8, v/v
MW	533.638	Exact Mass	533.323
Percent composition	C 56.27% H 9.07% N 7.87% O 20.99% P 5.80%		
Stability	Store in <-20°C freezer for up to one year		
Solubility	See note below in Product Use section		
Web link	800725		

*chloroform:methanol:water and chloroform:methanol:acetone



Description:

Lysophosphatidic acid (LPA) receptor modulators include N-palmitoyl serine phosphoric acid and N-palmitoyl-tyrosine phosphoric acid. N-palmitoyl serine phosphoric acid and N-palmitoyl-tyrosine phosphoric acid are competitive inhibitors of the LPA receptor in *Xenopus* oocytes (Neidlinger et al, 2006; Liliom et al, 1996). However, in mammalian cells, N-palmitoyl-tyrosine phosphoric acid may act as an agonist for the LPA receptor (An et al, 1998). LPA is a lipid mediator that acts similar to growth factors through G-protein coupled plasma membrane receptors (Neidlinger et al, 2006; Liliom et al, 1996; Bittman et al, 1996; An et al, 1998). LPA may play a role in platelet aggregation, smooth muscle contraction, vasoactive changes, cytoskeletal reorganization and cell proliferation (Neidlinger et al, 2006).

Product use:

N-palmitoyl-serine and N-palmitoyl-tyrosine phosphoric acid can be used for cell studies. An et al. dissolved these lipids in 0.1 mL PBS containing 0.1 mg/mL human serum albumin before adding to cells (An et al, 1998). In *X.laevis* studies, these LPA inhibitors were dissolved in DMSO at 1 mM and filtered through a 0.45 µm membrane filter before injection (Liliom et al, 1996).

References:

- Khandoga et al (2008) Lysophosphatidic acid-induced platelet shape change revealed through LPA(1-5)receptor-selective probes and albumin. Platelets 19(6):415-27
- Neidlinger NA et al (2006) Hydrolysis of phosphatidylserine-exposing red blood cells by secretory phospholipase A2 generates lysophosphatidic acid and results in vascular dysfunction. J Biol Chem. 281(2): 775-81
- Liliom, K et al (1996) N-Palmitoyl-serine and N-palmitoyl-tyrosine phosphoric acids are selective competitive antagonists of the lysophosphatidic acid receptors. Molec Pham 50:616-23
- Bittman et al (1996) Inhibitors of lipid phosphatidate receptors: N-palmitoyl-serine and N-palmitoyl-tyrosine phosphoric acids. J Lipid Res 37(2): 391-8
- An S et al (1998) Recombinate human G protein-coupled lysophosphatidic receptors mediate intracellular calcium mobilization. Molec Pharm 54: 881-8

Related products: **N-palmitoyl-serine phosphoric acid** **Receptor Agonist/Antagonist**

MSDS: Available on Avanti's website for Product Number 800725

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