

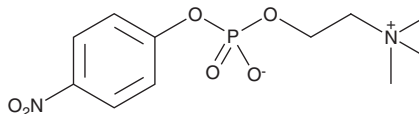
PRODUCT INFORMATION



p-Nitrophenylphosphorylcholine

Item No. 21042

CAS Registry No.: 21064-69-7
Formal Name: 2-[[hydroxy(4-nitrophenoxy)phosphinyl]oxy]-N,N,N-trimethylethanaminium, inner salt
Synonyms: 4-Nitrophenylphosphorylcholine, O-(4-Nitrophenylphosphoryl)choline, *para*-Nitrophenylphosphorylcholine, 4-NPPC, *p*-NPPC, *para*-NPPC
MF: C₁₁H₁₇N₂O₆P
FW: 304.2
Purity: ≥98%
UV/Vis.: λ_{max}: 217, 286 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

p-Nitrophenylphosphorylcholine is supplied as a crystalline solid. A stock solution may be made by dissolving the *p*-nitrophenylphosphorylcholine in the solvent of choice, which should be purged with an inert gas. *p*-Nitrophenylphosphorylcholine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of *p*-nitrophenylphosphorylcholine in ethanol and DMSO is approximately 10 mg/ml and approximately 1 mg/ml in DMF.

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. Organic solvent-free aqueous solutions of *p*-nitrophenylphosphorylcholine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of *p*-nitrophenylphosphorylcholine in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

p-Nitrophenylphosphorylcholine is a chromogenic substrate that is used to measure phospholipase C (PLC) activity.¹⁻⁴ Hydrolysis of *p*-nitrophenylphosphorylcholine by PLC results in the liberation of *p*-nitrophenol, which can be measured at 405 nm at pH 7.2-7.5.

References

- Berka, R.M., Gray, G.L., and Vasil, M.L. Studies of phospholipase C (heat-labile hemolysin) in *Pseudomonas aeruginosa*. *Infect. Immun.* **34**(3), 1071-1074 (1981).
- Fatmawati, N.N., Sakaguchi, Y., Suzuki, T., *et al.* Phospholipase C produced by *Clostridium botulinum* types C and D: Comparison of gene, enzymatic, and biological activities with those of *Clostridium perfringens* alpha-toxin. *Acta Med. Okayama.* **67**(1), 9-18 (2013).
- Kurioka, S. Synthesis of *p*-nitrophenylphosphorylcholine and the hydrolysis with phospholipase C. *J. Biochem.* **63**(5), 678-680 (1968).
- Vanha-Perttula, T. and Kasurinen, J. A secretory phospholipase C-like enzyme in the bovine epididymal caput. *FEBS J.* **203**(1), 69-72 (1986).

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.

WARRANTY AND LIMITATION OF REMEDY

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