

# PRODUCT INFORMATION



## PtdIns-(3,4,5)-P<sub>3</sub> (1-stearoyl, 2-arachidonoyl) (sodium salt)

Item No. 64930

**Formal Name:** 1-(1-octadecanoyl-2R-(5Z,8Z,11Z,14Z)-eicosatetraenoylphosphatidyl)inositol-3,4,5-trisphosphate, tetrasodium salt

**Synonyms:** PI(3,4,5)P<sub>3</sub>, PI(3,4,5)P<sub>3</sub> (18:0/20:4), PI(P-18:0/20:4), PIP3[3,4,5](18:0/20:4), PIP3[3',4',5'](18:0/20:4), Phosphatidylinositol-3,4,5-trisphosphate C-18 (sodium salt), SAPI-3,4,5-P<sub>3</sub>

**MF:** C<sub>47</sub>H<sub>82</sub>O<sub>22</sub>P<sub>4</sub> • 4Na

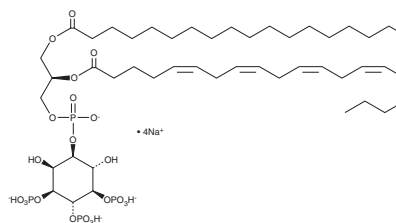
**FW:** 1,215.0

**Purity:** ≥98%

**Supplied as:** A lyophilized powder

**Storage:** -20°C

**Stability:** ≥5 years



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

### Laboratory Procedures

PtdIns-(3,4,5)-P<sub>3</sub> (1-stearoyl, 2-arachidonoyl) (sodium salt) is supplied as a lyophilized powder. For biological experiments, we suggest that organic solvent-free aqueous solutions of PtdIns-(3,4,5)-P<sub>3</sub>(1-stearoyl, 2-arachidonoyl) (sodium salt) be prepared by directly dissolving the lyophilized powder in aqueous buffers. PtdIns-(3,4,5)-P<sub>3</sub>(1-stearoyl, 2-arachidonoyl) (sodium salt) is miscible in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

### Description

The phosphatidylinositol (PtdIns) phosphates represent a small percentage of total membrane phospholipids. However, they play a critical role in the generation and transmission of cellular signals.<sup>1,2</sup> PtdIns-(3,4,5)-P<sub>3</sub> can serve as an anchor for the binding of signal transduction proteins bearing pleckstrin homology (PH) domains. Centaurin  $\alpha$  and Aks are examples of PtdIns-(3,4,5)-P<sub>3</sub>-binding proteins.<sup>3,4</sup> Protein-binding to PtdIns-(3,4,5)-P<sub>3</sub> is important for cytoskeletal rearrangement and membrane trafficking. PtdIns-(3,4,5)-P<sub>3</sub> is resistant to cleavage by PI-specific PLC. Thus, it is likely to function in signal transduction as a modulator in its own right, rather than as a source of inositol tetrakisphosphates. For further reading on inositol phospholipids, see also references 5 and 6.

### References

1. Lapetina, E.G., Billah, M.M., and Cuatrecasas, P. *Nature* **292**, 367-369 (1981).
2. Majerus, P.W. *Annu. Rev. Biochem.* **61**, 225-250 (1992).
3. Tanaka, K., Imajoh-Ohmi, S., Sawada, T., et al. *Eur. J. Biochem.* **245**, 512-519 (1997).
4. Yang, X., Rudolf, M., Carew, M.A., et al. *J. Biol. Chem.* **274**, 18973-18980 (1999).
5. Pike, L.J. and Casey, L. *J. Biol. Chem.* **271**, 26453-26456 (1996).
6. Berridge, M.J. *Nature* **361**, 315-325 (1993).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM