

# PRODUCT INFORMATION



## PON-PC

Item No. 9000463

**CAS Registry No.:** 135726-46-4  
**Formal Name:** 7R-[(1,9-dioxononyl)oxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-3,5,9-trioxa-4-phosphapentacosan-1-aminium, 4-oxide, inner salt  
**Synonyms:** 16:0/9:0-PC, PC(16:0/9:0), 1-Palmitoyl-2-(9-oxo-Nonanoyl)-sn-glycero-3-PC, 1-Palmitoyl-2-(9-oxo-Nonanoyl)-sn-glycero-3-Phosphatidylcholine, 1-Palmitoyl-2-(9-oxo-Nonanoyl)-sn-glycero-3-Phosphocholine

**MF:** C<sub>33</sub>H<sub>64</sub>NO<sub>9</sub>P

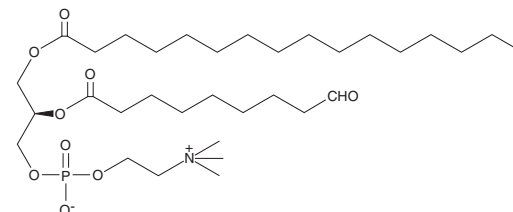
**FW:** 649.4

**Purity:** ≥95%

**Supplied as:** A solution in ethanol

**Storage:** -20°C

**Stability:** ≥2 years



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

## Description

PON-PC is an oxidized phospholipid containing a truncated 9-carbon fatty acyl chain terminating in an aldehyde at the *sn*-2 position.<sup>1,2</sup> It is a component of oxidized LDL formed by oxidation of palmitoyl oleoyl phosphatidylcholine (POPC) and can also be formed *via* a reaction with ozone in pulmonary surfactant.<sup>1-3</sup> PON-PC decreases the production of TNF- $\alpha$ , nitric oxide (NO), and NADP<sup>+</sup> in primary mouse alveolar macrophages, as well as reduces the bactericidal activity of RAW 264.7 cells, when used at a concentration of 40  $\mu$ M.<sup>1</sup> Bronchoalveolar lavage fluid (BALF) levels of PON-PC are elevated in mice exposed to cigarette smoke and in aged mice.<sup>2,4</sup>

## References

1. Kimura, T., Shibata, Y., Yamauchi, K., *et al.* Oxidized phospholipid, 1-palmitoyl-2-(9'-oxo-nonanoyl)-glycerophosphocholine (PON-GPC), produced in the lung due to cigarette smoking, impairs immune function in macrophages. *Lung* **190(2)**, 169-182 (2012).
2. da Costa Loureiro, L., da Costa Loureiro, L., Gabriel-Junior, E.A., *et al.* Pulmonary surfactant phosphatidylcholines induce immunological adaptation of alveolar macrophages. *Mol. Immunol.* **122**, 163-172 (2020).
3. Sasabe, N., Keyamura, Y., Obama, T., *et al.* Time course-changes in phosphatidylcholine profile during oxidative modification of low-density lipoprotein. *Lipids Health Dis.* **13**, 48 (2014).
4. Ke, Y., Karki, P., Kim, J., *et al.* Elevated truncated oxidized phospholipids as a factor exacerbating ALI in the aging lungs. *FASEB J.* **33(3)**, 3887-3900 (2019).

### 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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