

PA is hydrolysed to 1-acyl LPA by PLA2[1]

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Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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Literature references

- Fabregat, A., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics*, 18, 142. [↗](#)
- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)
- Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)
- Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

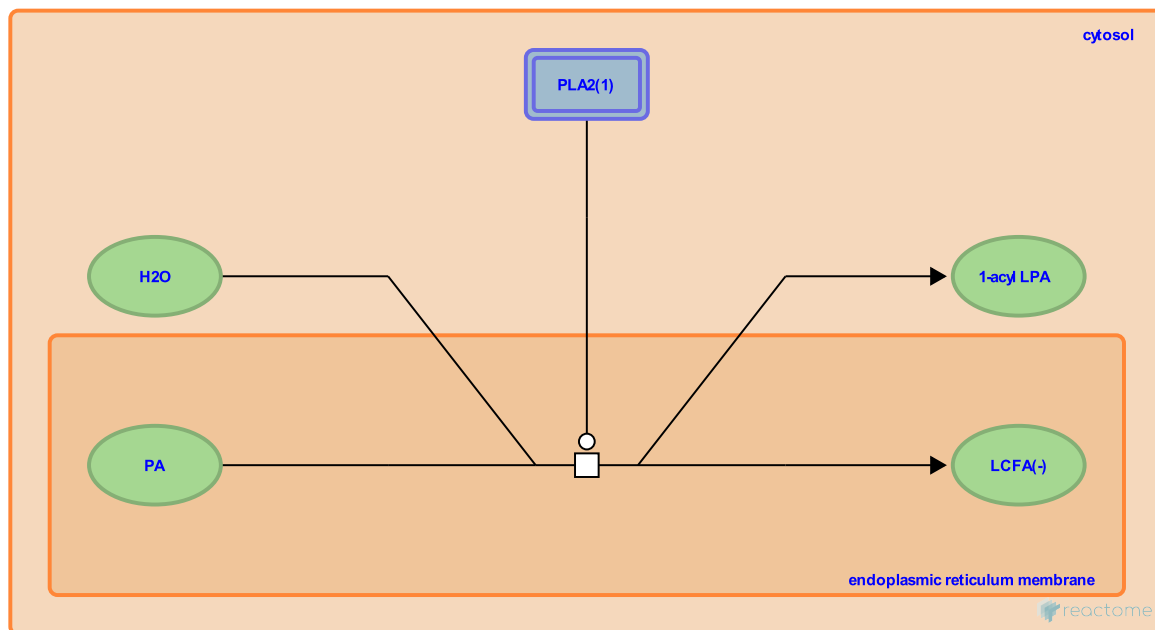
This document contains 1 reaction ([see Table of Contents](#))

PA is hydrolysed to 1-acyl LPA by PLA2[1] [↗](#)

Stable identifier: R-HSA-1482656

Type: transition

Compartments: cytosol, endoplasmic reticulum membrane



At the endoplasmic reticulum (ER) membrane, phosphatidic acid (PA) is hydrolyzed, and has one of its acyl chains cleaved off, by phospholipase A2 alpha/beta/delta/zeta (PLA2G4A/B/D/F) to form 1-acyl lysophosphatidic acid (LPA) (Ghomashchi et al. 2010).

Literature references

Lehr, M., Gelb, MH., Aloulou, A., Naika, GS., Bollinger, JG., Ghomashchi, F. et al. (2010). Interfacial kinetic and binding properties of mammalian group IVB phospholipase A2 (cPLA2beta) and comparison with the other cPLA2 isoforms. *J Biol Chem*, 285, 36100-11. [↗](#)

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