

I(1,4,5)P₃ is dephosphorylated to I(1,4)P₂ by INPP5A/B at the plasma membrane

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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

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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. [↗](#)

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Reactome database release: 88

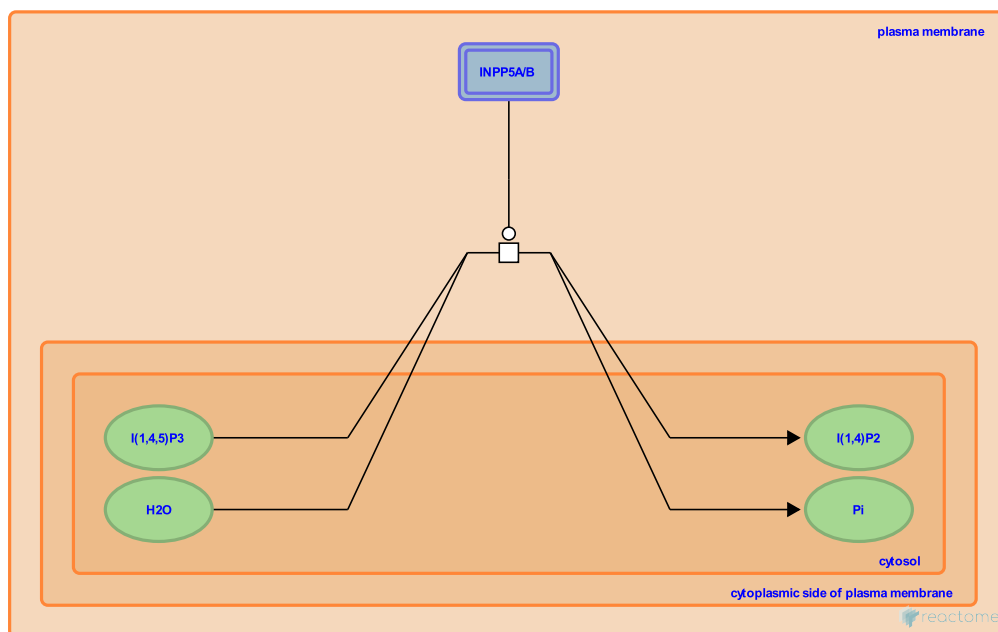
This document contains 1 reaction ([see Table of Contents](#))

I(1,4,5)P3 is dephosphorylated to I(1,4)P2 by INPP5A/B at the plasma membrane [↗](#)

Stable identifier: R-HSA-1855222

Type: transition

Compartments: plasma membrane, cytosol



Type I inositol-1,4,5-trisphosphate 5-phosphatase (INPP5A) and the Type II phosphatase (INPP5B) are isoprenylated to the plasma membrane and act as a lipid anchor. Here they dephosphorylate inositol 1,4,5-trisphosphate (I(1,4,5)P3) to inositol 1,4-bisphosphate I(1,4)P2.).

The following lists the above proteins with their corresponding literature references: INPP5A (Laxminarayan et al. 1994); INPP5B (Jefferson & Majerus 1995, Ross et al. 1991, Schmid et al. 2004).

Literature references

- Bird, PI., Chan, BK., Tetaz, T., Mitchell, CA., Laxminarayan, KM. (1994). Characterization of a cDNA encoding the 43-kDa membrane-associated inositol-polyphosphate 5-phosphatase. *J Biol Chem*, 269, 17305-10. [↗](#)
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- Jefferson, AB., Majerus, PW. (1995). Properties of type II inositol polyphosphate 5-phosphatase. *J Biol Chem*, 270, 9370-7. [↗](#)
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Editions

2011-10-28	Authored, Edited	Williams, MG.
2012-11-07	Reviewed	Wundenberg, T.