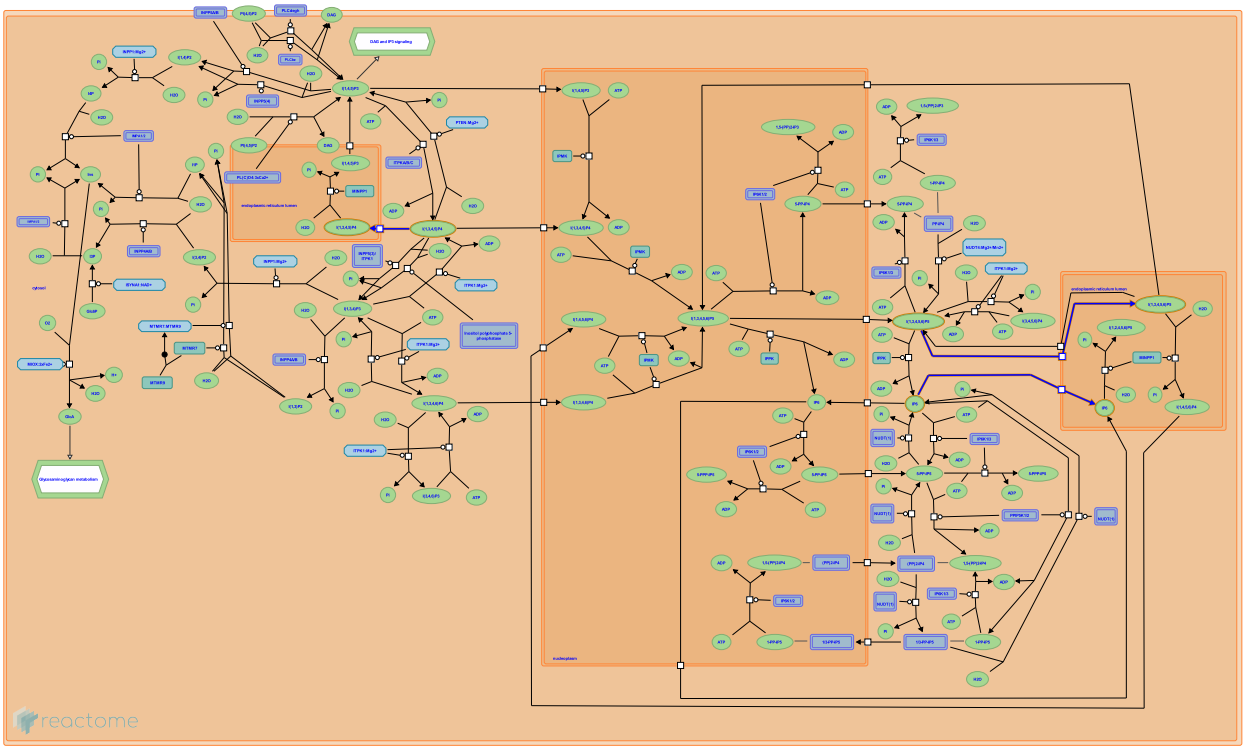
IPs transport between cytosol and ER lumen



Williams, MG., Wundenberg, T.

European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

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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. ↗

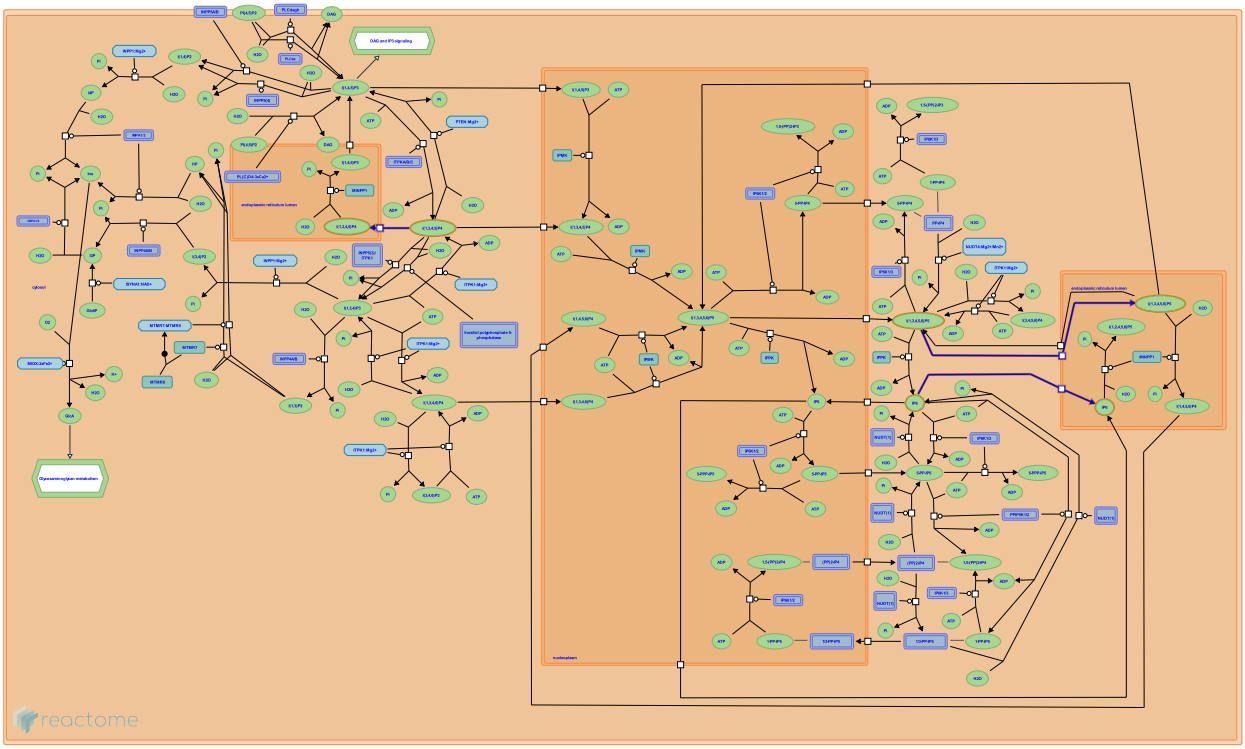
Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics, 33*, 3461-3467. ↗

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. ↗

IPs transport between cytosol and ER lumen ↗

Stable identifier: R-HSA-1855184



Inositol phosphates IP4, IP5, and IP6 are exported from the cytosol to the endoplasmic reticulum (ER) lumen (Caffrey et al. 1999, Chi et al. 1999). The molecular details of these transport processes remain uncertain.

Literature references

Chi, H., Reynolds, PR., O'keefe, RJ., Romano, PR., Rosier, RN., Wang, J. et al. (1999). Multiple inositol polyphosphate phosphatase: evolution as a distinct group within the histidine phosphatase family and chromosomal localization of the human and mouse genes to chromosomes 10q23 and 19. *Genomics, 56*, 324-36. ↗

Hidaka, K., Matsuda, M., Caffrey, JJ., Hirata, M., Shears, SB. (1999). The human and rat forms of multiple inositol polyphosphate phosphatase: functional homology with a histidine acid phosphatase up-regulated during endochondral ossification. *FEBS Lett, 442*, 99-104. ↗

Editions

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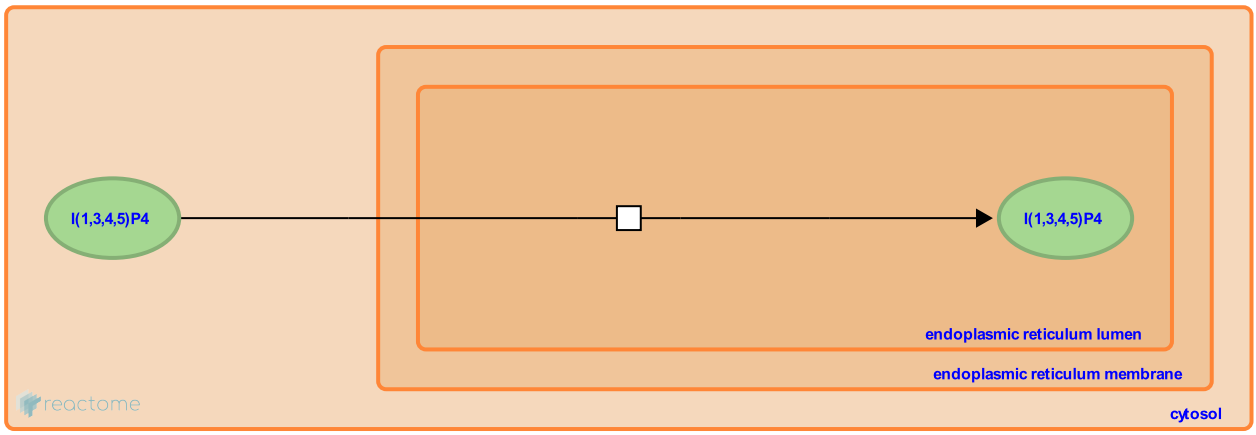
I(1,3,4,5)P4 transports from the cytosol to the ER lumen ↗

Location: IPs transport between cytosol and ER lumen

Stable identifier: R-HSA-1855186

Type: transition

Compartments: endoplasmic reticulum lumen, cytosol



Inositol 1,3,4,5-tetrakisphosphate (I(1,3,4,5)P4) translocates from the cytosol to the endoplasmic reticulum (ER) lumen (Caffrey et al. 1999, Chi et al. 1999).

Literature references

Chi, H., Reynolds, PR., O'keefe, RJ., Romano, PR., Rosier, RN., Wang, J. et al. (1999). Multiple inositol polyphosphate phosphatase: evolution as a distinct group within the histidine phosphatase family and chromosomal localization of the human and mouse genes to chromosomes 10q23 and 19. *Genomics, 56*, 324-36. ↗

Hidaka, K., Matsuda, M., Caffrey, JJ., Hirata, M., Shears, SB. (1999). The human and rat forms of multiple inositol polyphosphate phosphatase: functional homology with a histidine acid phosphatase up-regulated during endochondral ossification. *FEBS Lett, 442*, 99-104. ↗

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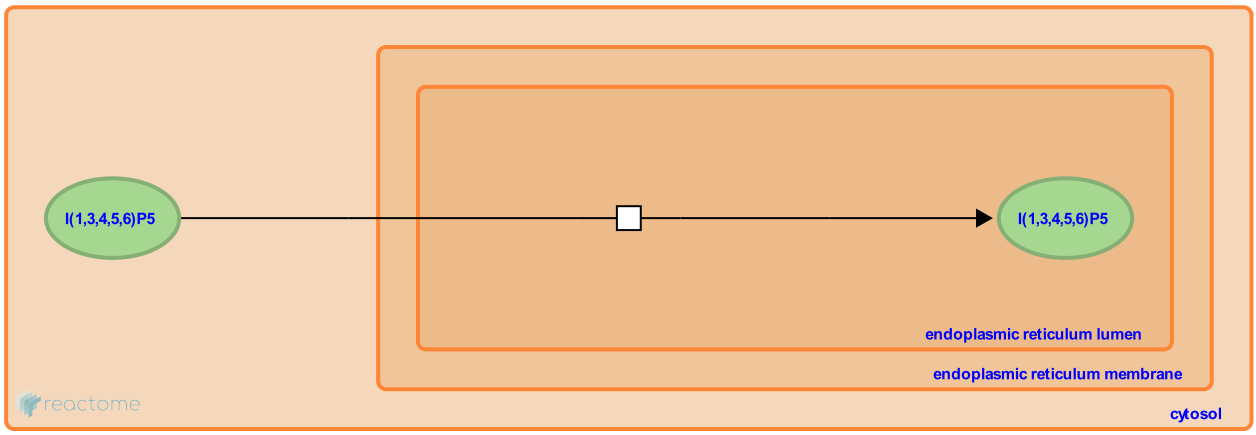
I(1,3,4,5,6)P5 transports from the cytosol to the ER lumen ↗

Location: IPs transport between cytosol and ER lumen

Stable identifier: R-HSA-1855195

Type: transition

Compartments: endoplasmic reticulum lumen, cytosol



Inositol 1,3,4,5,6-pentakisphosphate I(1,3,4,5,6)P5 translocates from the cytosol to the endoplasmic reticulum (ER) lumen (Caffrey et al. 1999, Chi et al. 1999).

Literature references

Chi, H., Reynolds, PR., O'keefe, RJ., Romano, PR., Rosier, RN., Wang, J. et al. (1999). Multiple inositol polyphosphate phosphatase: evolution as a distinct group within the histidine phosphatase family and chromosomal localization of the human and mouse genes to chromosomes 10q23 and 19. *Genomics, 56*, 324-36. ↗

Hidaka, K., Matsuda, M., Caffrey, JJ., Hirata, M., Shears, SB. (1999). The human and rat forms of multiple inositol polyphosphate phosphatase: functional homology with a histidine acid phosphatase up-regulated during endochondral ossification. *FEBS Lett, 442*, 99-104. ↗

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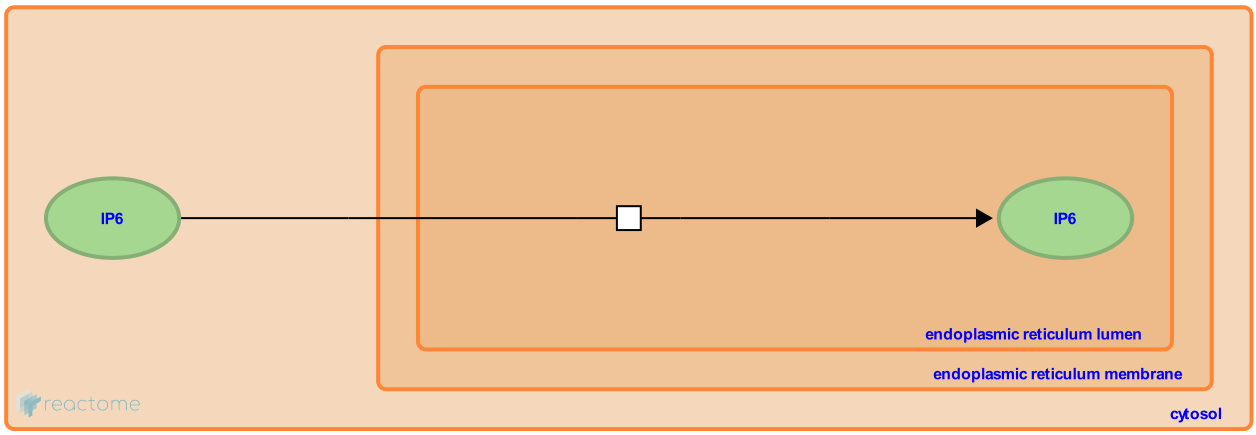
IP6 transports from the cytosol to the ER lumen ↗

Location: IPs transport between cytosol and ER lumen

Stable identifier: R-HSA-1855164

Type: transition

Compartments: endoplasmic reticulum lumen, cytosol



1,2,3,4,5,6-hexakisphosphate (IP6) translocates from the cytosol to the endoplasmic reticulum (ER) lumen (Caffrey et al. 1999).

Literature references

Hidaka, K., Matsuda, M., Caffrey, JJ., Hirata, M., Shears, SB. (1999). The human and rat forms of multiple inositol polyphosphate phosphatase: functional homology with a histidine acid phosphatase up-regulated during endochondral ossification. *FEBS Lett, 442*, 99-104. ↗

Editions

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