PI(4,5)P2 is dephosphorylated to PI5P by TMEM55B in the nucleus

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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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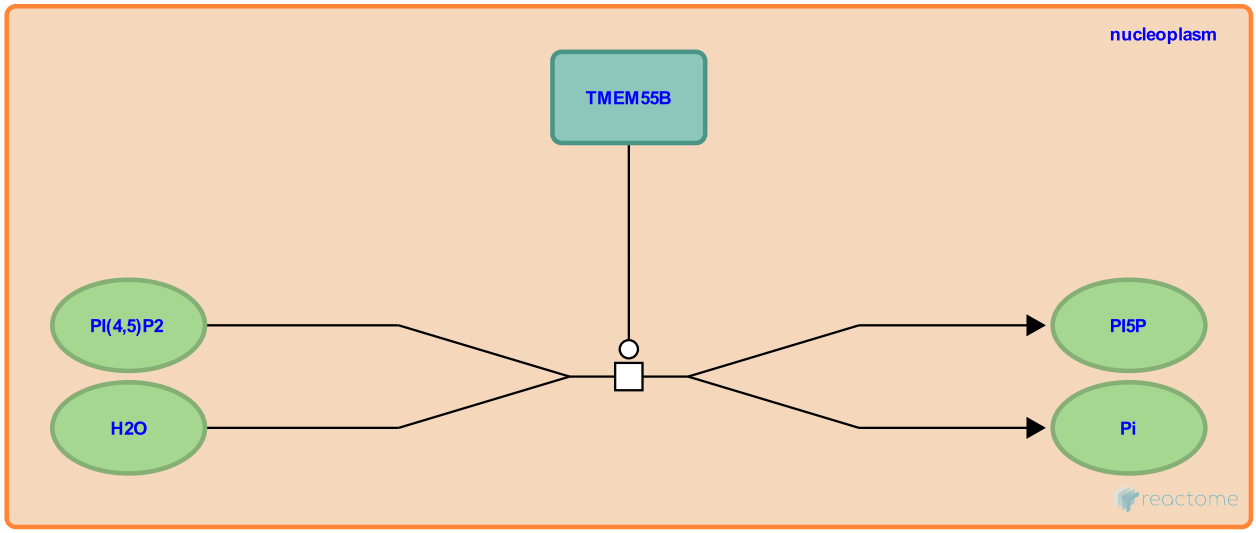
Stable identifier: R-HSA-6810410

Type: transition

Compartments: nucleoplasm



Translocation of TMEM55B (type I phosphatidylinositol 4,5-bisphosphate 4-phosphatase) to the nucleus under conditions of cellular stress leads to dephosphorylation of nuclear PI(4,5)P2 to PI5P, thus increasing the concentration of PI5P in the nucleus (Zou et al. 2007). PIP2 and its derivatives are not associated with nuclear envelope structures (Bornenkov et al. 1998) but localize to poorly defined subnuclear compartments called nuclear specks (reviewed by Barlow et al. 2010).

Literature references

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Editions

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