DVL-associated PIP5K1B phosphorylates PI4P to PI(4,5)P2

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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. ↗

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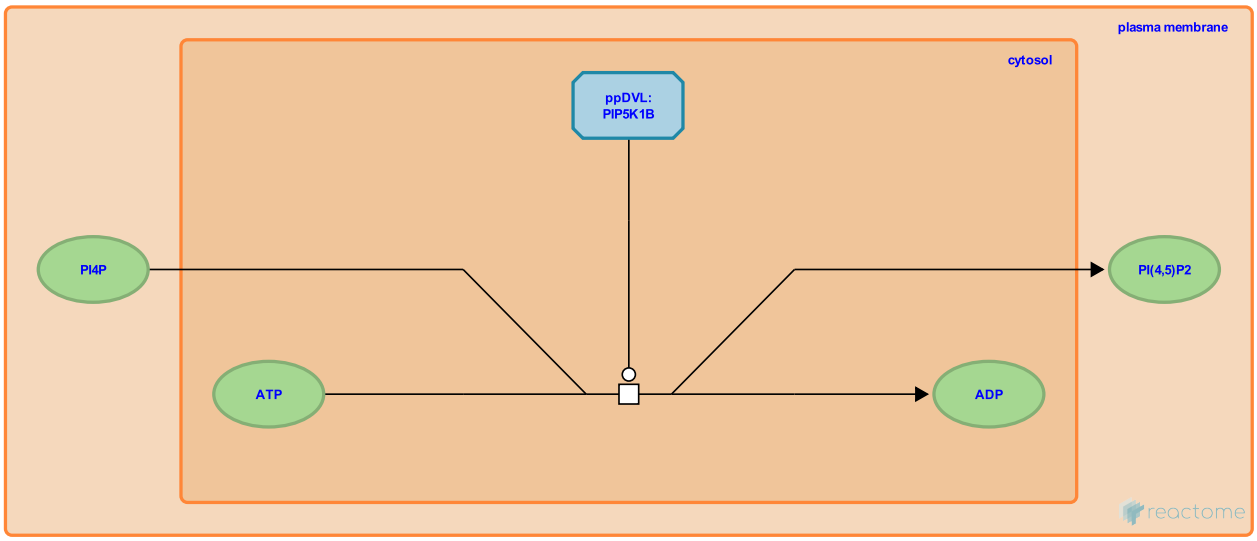
Stable identifier: R-HSA-3772436

Type: transition

Compartments: cytosol, plasma membrane



Stimulation of the WNT pathway controls the activity of PIP5KB in a FZD- and DVL-dependent manner (Pan et al, 2008; Bilic et al, 2007; Cong et al, 2004; Qin et al, 2009). Activation of PIP5KB results in the formation of PI(4,5)P2 at the plasma membrane, which is required through an unclear mechanism for the phosphorylation of LRP6 at serine 1490, LRP6 aggregation into 'signalosomes' and LRP6 phosphorylation at threonine 1479. These events are required for the recruitment of AXIN to the plasma membrane (Pan et al, 2008; Qin et al, 2009).

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