Active IRS recruits PI3K to the plasma membrane and activates it

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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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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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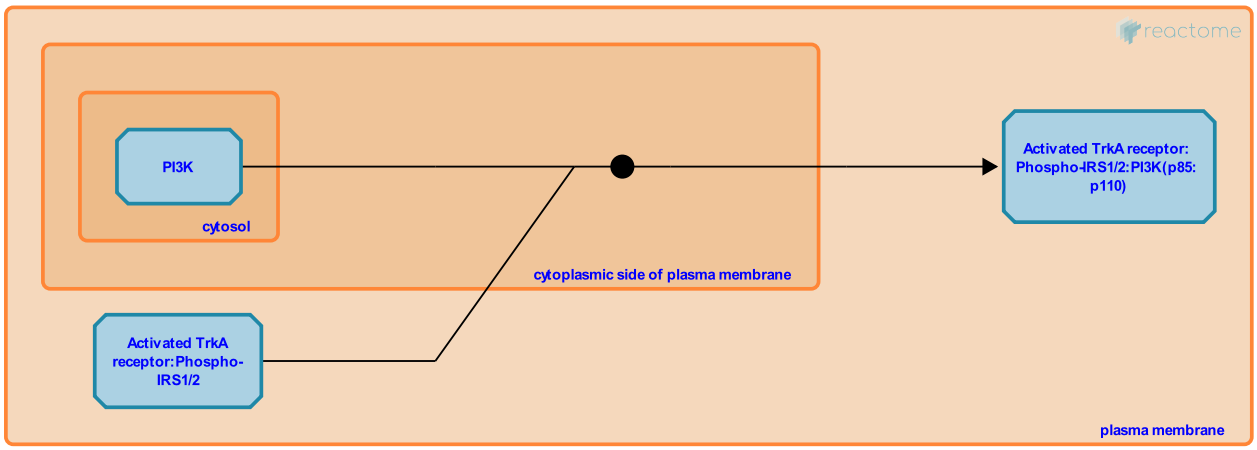
Stable identifier: R-HSA-198315

Type: binding

Compartments: cytoplasmic side of plasma membrane



The PI3K regulatory subunit p85 binds to IRS1 or IRS2, tyrosine-phosphorylated at YXXM motifs, through its SH2 domain.
As the p85 subunt is constitutively associated with the p110 catalytic subunit, the outcome is that the whole PI3K complex is recruited to the membrane. The interaction at the plasma membrane of the p85 regulatory subunit with the p110 catalytic subunit of PI3K (phosphatidylinositol-4,5-bisphosphate 3-kinase) causes a conformational change, resulting in activation of the catalytic subunit (Miranda et al. 2001).

Literature references

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Editions

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