PI3-kinase binds to mutant PDGFR receptor

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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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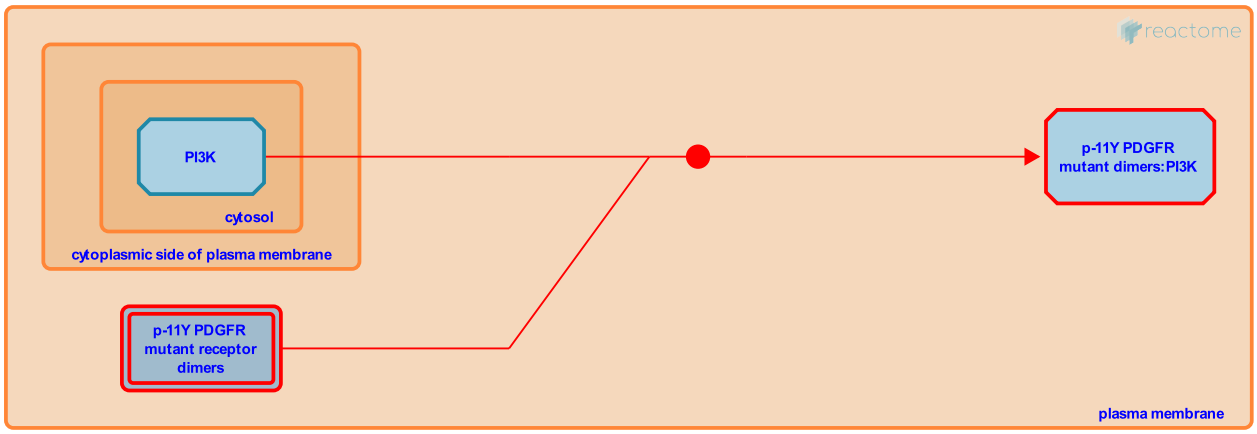
Stable identifier: R-HSA-9672172

Type: binding

Compartments: cytosol, plasma membrane

Diseases: cancer



Gain-of-function mutants of PDGFRA bind to phosphatidylinositol-3' kinase (PI3K) to activate AKT signaling, as assessed by the presence of phosphorylated AKT in Western blot analysis (Heinrich et al, 2003; Ohashi et al, 2004; reviewed in Corless et al, 2011). Interaction of PI3K with mutant PDGFRA receptors is assumed to occur through binding to phosphorylated Y731 and Y742 as is the case for the wild-type receptor, although this hasn't been directly demonstrated (reviewed in Roskoski, 2018).

Literature references

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Editions

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