GRB2:SOS1 complex binds to mutant PDG-FR 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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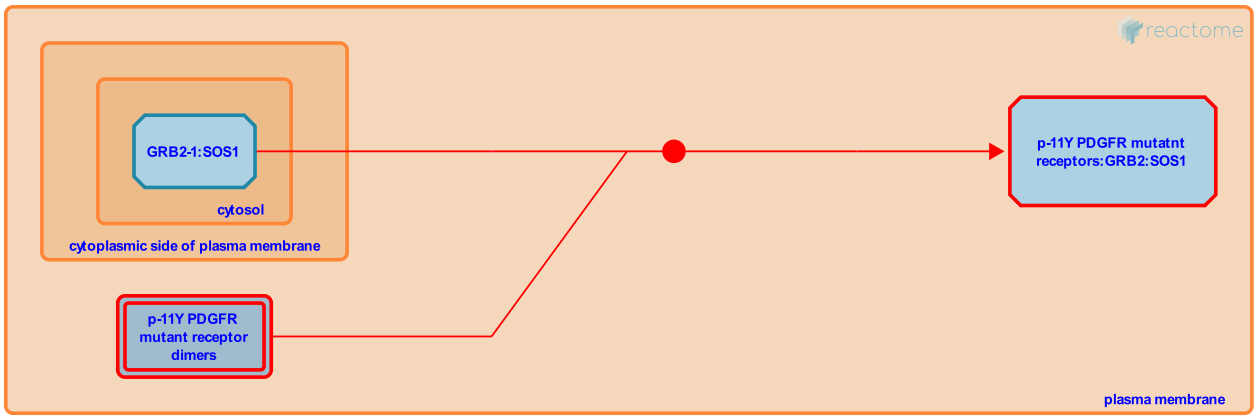
Stable identifier: R-HSA-9672164

Type: binding

Compartments: cytosol, plasma membrane

Diseases: cancer



MAP kinase signaling is activated downstream of gain-of-function missense and in-frame deletion PDGFRA mutants, as assessed by increased levels of phosphorylated MAPK3 and MAPK1 proteins (ERK1 and ERK2, respectively) (Heinrich et al, 2003; Corless et al, 2005; Ohashi et al, 2004; Velghe et al, 2014). RAS and MAPK activation is assumed to occur through the recruitment of GRB2:SOS1 to phosphorylated T720, as is the case for the wild-type receptor, although this has not been conclusively demonstrated (Bazenet et al, 1996; reviewed in Corless et al, 2011; Roskoski, 2018).

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Editions

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