

PARVB/Affixin interacts with alpha PIX

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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., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

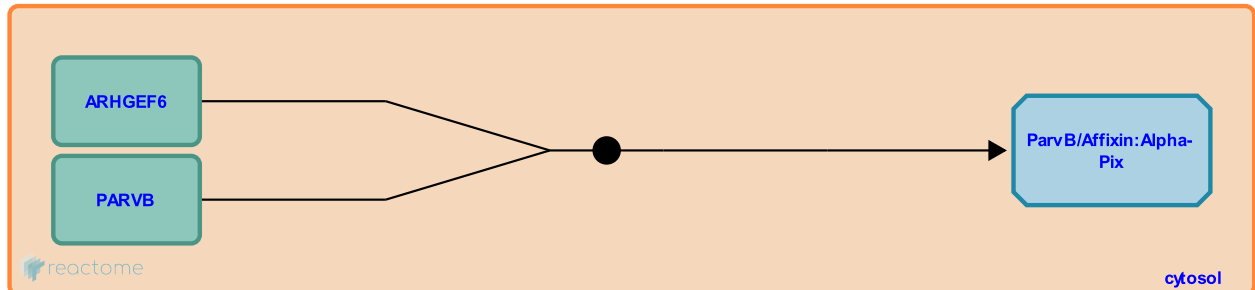
This document contains 1 reaction ([see Table of Contents](#))

PARVB/Affixin interacts with alpha PIX [↗](#)

Stable identifier: R-HSA-432946

Type: binding

Compartments: cytosol



The Rho GTPases, Cdc42 and Rac1, play critical roles in cell migration by integrating cell-substrate adhesion and actin polymerization. PARVB/affixin appears to participate in the activation of Rac and Cdc42 by associating with alpha PIX through its CH1 domain (Mishima et al., 2004; Rosenberger et al., 2005). This activity of PARVB/affixin could promote the polymerization of actin through the activation of downstream effectors of Rac1/Cdc42, including WASP-Arp2/3 and Mena/VASP. Alpha-PIX, ILK and PARVB can be found at the leading edge of spreading cells (Rosenberger et al., 2005), and it is likely that activation of Rac1 and Cdc42 at the lamellipodia in some cells is stimulated by interactions of aPIX with PARVB and regulated by interaction of ILK and PARVB (see Sepulveda and Wu, 2005).

Literature references

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Miwa, Y., Kaneko, T., Tanaka, J., Ohno, S., Yamaji, S., Ishigatsubo, Y. et al. (2004). The first CH domain of affixin activates Cdc42 and Rac1 through alphaPIX, a Cdc42/Rac1-specific guanine nucleotide exchanging factor. *Genes Cells*, 9, 193-204. [↗](#)

Editions

2009-10-12	Authored	Matthews, L.
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