

# VAV3 is a GEF for Rho/Rac family kinases

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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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Reactome database release: 88

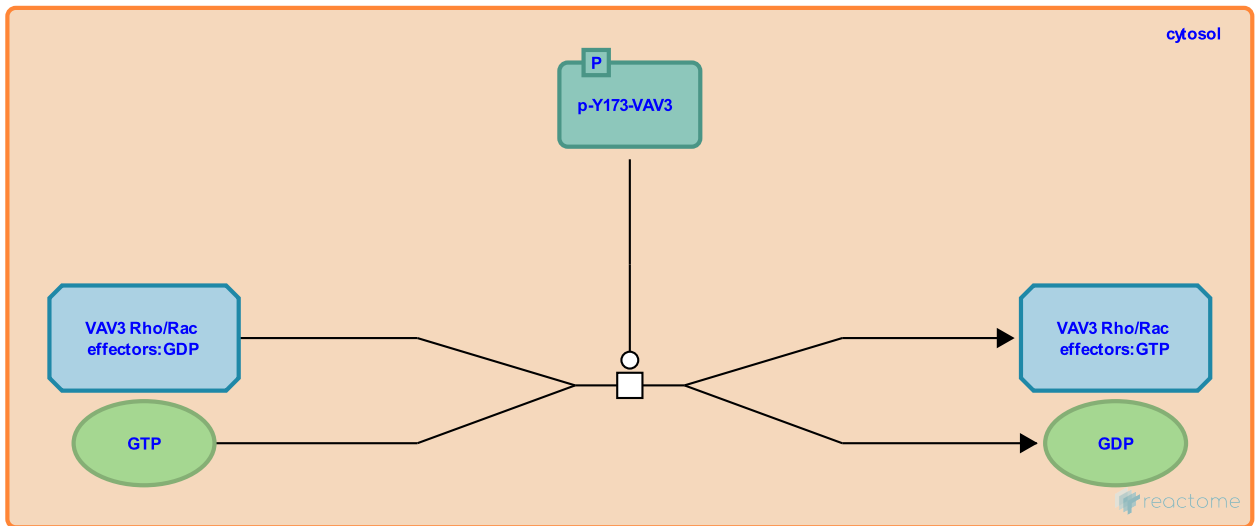
This document contains 1 reaction ([see Table of Contents](#))

**VAV3 is a GEF for Rho/Rac family kinases** [↗](#)

**Stable identifier:** R-HSA-442314

**Type:** transition

**Compartments:** cytosol



Vav3 is a guanine nucleotide exchange factors (GEF) for RhoA, RhoB and to a lesser extent Rac1.

**Literature references**

Ostrom, AA., Bustelo, XR., Gutkind, JS., Crespo, P., Schuebel, KE. (1997). Phosphotyrosine-dependent activation of Rac-1 GDP/GTP exchange by the vav proto-oncogene product. *Nature*, 385, 169-72. [↗](#)

Kuhn, P., Tainer, JA., Streiff, M., Zhang, H., Widmer, H., Hura, GL. et al. (2008). Structural basis of guanine nucleotide exchange mediated by the T-cell essential Vav1. *J Mol Biol*, 380, 828-43. [↗](#)

**Editions**

2009-09-04	Authored	Akkerman, JW.
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