RAB5 and GAPVD1 bind AP-2

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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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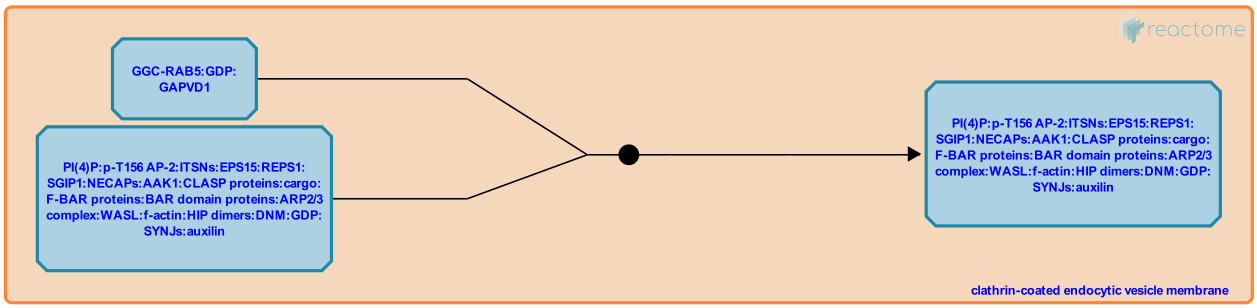
Stable identifier: R-HSA-8871194

Type: binding

Compartments: clathrin-coated endocytic vesicle membrane



RAB5 is a small GTPase that is implicated in clathrin-mediated endocytosis (Chavrier et al, 1990; McLauchlan et al, 1998; Shin et al, 2002; Taylor et al, 2011; reviewed in Stenmark, 2009; Wandiger-Ness and Zerial, 2014). Recent studies have shown that RAB5 and its associated GEF GAPVD1 may contribute to AP-2 uncoating by displacing AAK1 and promoting the net dephosphorylation of the AP-2 mu2 subunit. This is predicted to destabilize interactions with the plasma membrane and promote uncoating (Sato et al, 2005; Hunker et al, 2006; Smerdjieva et al, 2008). RAB5 and GAPVD1 also increase PI(4,5)P2 turnover, likely through recruitment of a class I PI3K or a PI phosphatase (Christoforidis et al, 1999; Shin et al, 2005).

Literature references

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Editions

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