K63polyUb-TRAF6 ubiquitinates TAK1

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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

Fabregat, A., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics, 18*, 142. ↗

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Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res, 46*, D649-D655. ↗

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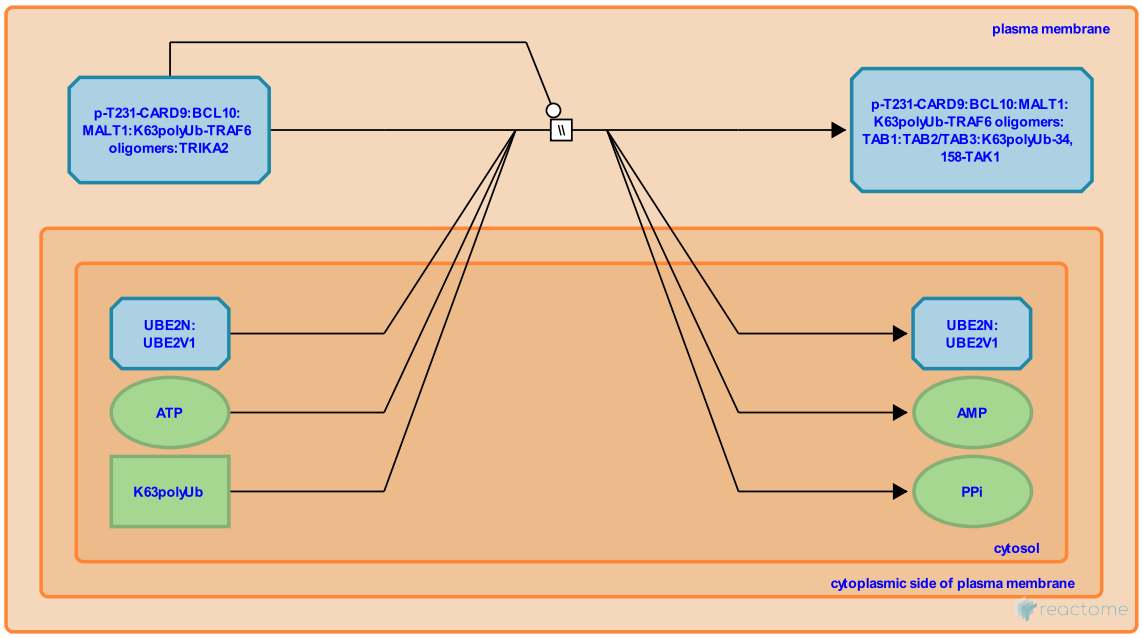
Stable identifier: R-HSA-5607757

Type: omitted

Compartments: plasma membrane, cytosol



TAK1-binding protein 2 (TAB2), or its homologue TAB3, binds preferentially to K63-linked polyubiquitin chains in TRAF6 and links TRAF6 (TNF receptor-associated factor 6) to TAK1 (Transforming growth factor beta-associated kinase 1). TRAF6 ubiquitinates TAK1 on K34 and K158 and this triggers conformational changes in TAK1 that lead to autophosphorylation and activation (Fan et al. 2010, Hamidi et al. 2011).

Literature references

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Editions

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