Activated TLR3:TRIF:K63pUb-TRAF6 recruits TAK1complex

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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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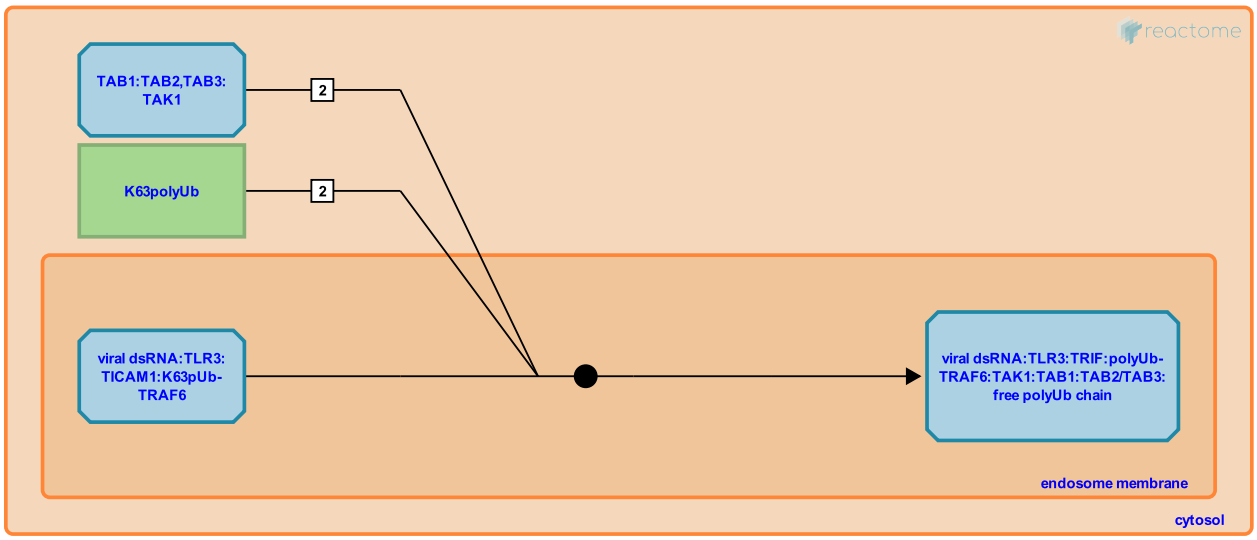
Stable identifier: R-HSA-177690

Type: binding

Compartments: endosome membrane, cytosol



TAK1-binding protein 2 (TAB2) and/or TAB3, as part of a complex that also contains TAK1 and TAB1, binds polyubiquitinated TRAF6. The TAB2 and TAB3 regulatory subunits of the TAK1 complex contain C-terminal Npl4 zinc finger (NZF) motifs that recognize with Lys63-pUb chains (Kanayama et al. 2004). The recognition mechanism is specific for Lys63-linked ubiquitin chains [Kulathu Y et al 2009]. TAK1 can be activated by unattached Lys63-polyubiquitinated chains when TRAF6 has no detectable polyubiquitination (Xia et al. 2009) and thus the synthesis of these chains by TRAF6 may be the signal transduction mechanism.This binding leads to autophosphorylation and activation of TAK1.

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Editions

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