TRAF2:TRAF1:cIAP1,2:TRAF3:NIK regulatory complex binds CD40

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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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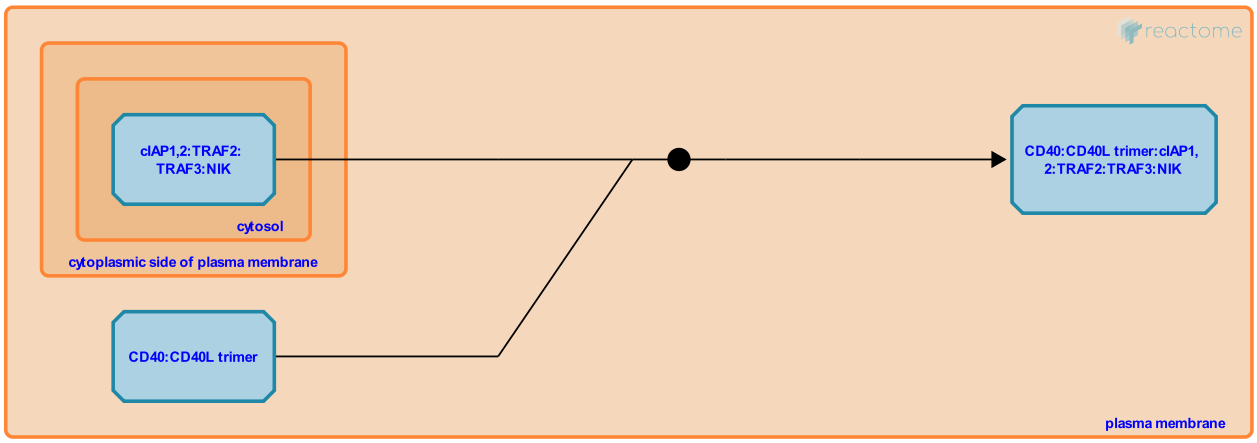
Stable identifier: R-HSA-5676597

Type: binding

Compartments: plasma membrane, cytosol



After its ligation with CD40 ligand (CD40L), CD40 is activated and triggers direct recruitment of multiple TRAF proteins and initiate non-canonical NF-kB pathway. TRAF1, TRAF2, TRAF3, and TRAF6, but not TRAF4 or TRAF5, shown to bind directly to the CD40 cytoplasmic domain (Pullen et al. 1998). TRAF2 is part of the regulatory complex which includes cellular inhibitor of apoptosis (cIAP) 1 and 2 and which in turn interacts with TRAF3 and NFkB-inducing kinase (NIK). In unstimulated cells this regulatory complex acts as a negative regulator of non-canonical NFkB pathway by constantly degrading NIK, whereas up on recruitment to CD40 this complex leads to accumulation of NIK (Elgueta et al. 2009, Schonbeck & Libby 2001).

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Editions

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