

Recruitment of TRAF6 to CBM complex by binding to MALT1

Garapati, P V., Niarakis, A., Roncagalli, R.

European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

The contents of this document may be freely copied and distributed in any media, provided the authors, plus the institutions, are credited, as stated under the terms of [Creative Commons Attribution 4.0 International \(CC BY 4.0\) License](https://creativecommons.org/licenses/by/4.0/). For more information see our [license](https://reactome.org/licenses/).

06/05/2024

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.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

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. [↗](#)
- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)
- 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. [↗](#)
- Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

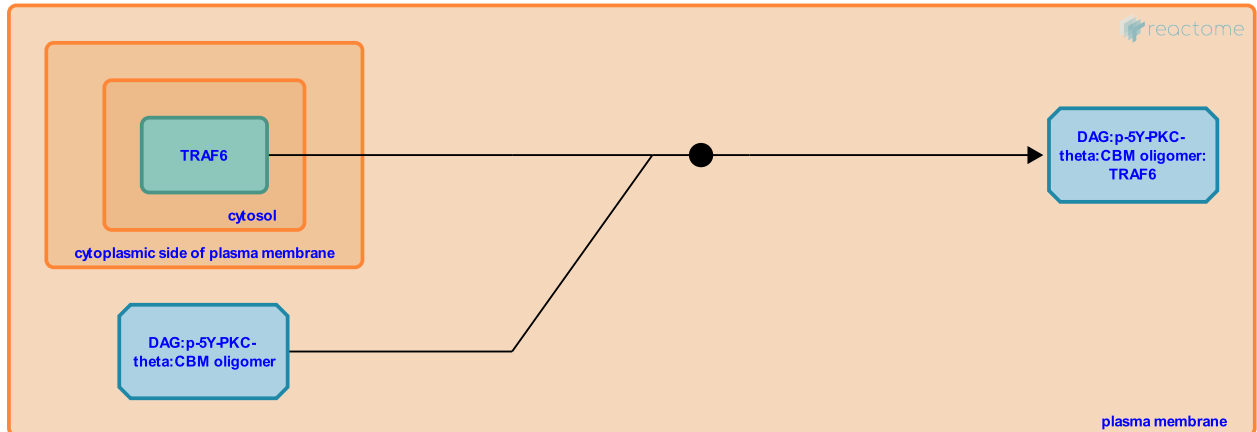
This document contains 1 reaction ([see Table of Contents](#))

Recruitment of TRAF6 to CBM complex by binding to MALT1 [↗](#)

Stable identifier: R-HSA-2730864

Type: binding

Compartments: plasma membrane, cytosol



TRAF6 is a ubiquitin ligase that plays a central role in the IKK-dependent canonical NF- κ B pathway. It is recruited to the CBM complex by binding to MALT1. The MALT1 C-terminal Ig domain and extension contain two binding motifs for TRAF6 (Noels et al 2007). After oligomerization TRAF6, together with Ubc13/Uev1A, activates TAK1 and IKK. It also acts as an E3 ligase for MALT1 and mediates lysine 63-linked ubiquitination (Oeckinghaus et al. 2007).

Literature references

Carrigan, SO., Chen, W., Marshall, JS., Akiyama, T., Roth, K., Inoue, J. et al. (2008). TRAF6 specifically contributes to FcepsilonRI-mediated cytokine production but not mast cell degranulation. *J. Biol. Chem.*, 283, 32110-8. [↗](#)

Krappmann, D., Ruland, J., Welteke, V., Ferch, U., Wegener, E., Arslan, SC. et al. (2007). Malt1 ubiquitination triggers NF-kappaB signaling upon T-cell activation. *EMBO J.*, 26, 4634-45. [↗](#)

Editions

2012-08-22	Edited	Garapati, P V.
2012-12-21	Authored	Niarakis, A.
2013-02-13	Reviewed	Roncagalli, R.