

# IRAK4 binds to the activated TLR receptor:TIRAP:MyD88 complex

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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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- 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

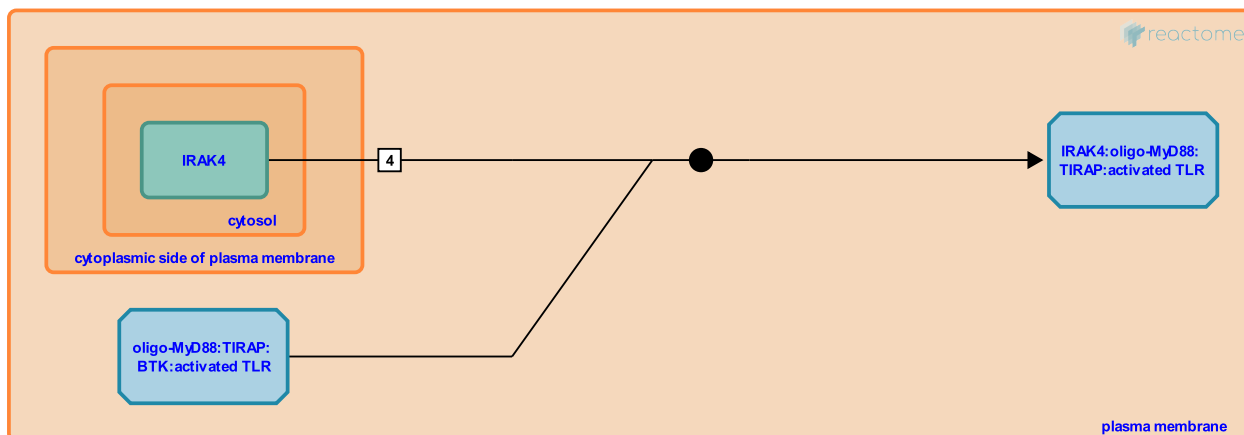
This document contains 1 reaction ([see Table of Contents](#))

## IRAK4 binds to the activated TLR receptor:TIRAP:MyD88 complex ↗

**Stable identifier:** R-HSA-166082

**Type:** binding

**Compartments:** plasma membrane, cytosol



IRAK4 is the mammalian homolog of *Drosophila melanogaster* Tube [Towb P et al 2009; Moncrieffe MC et al 2008]. Like Tube, IRAK4 possesses a conserved N-terminal death domain (DD), which mediates interactions with MyD88 at one binding site and a downstream IRAK kinase at the other, thereby bridging MyD88 and IRAK1/2 association [Towb P et al 2009; Lin SC et al 2010]. IRAK-4 plays a critical role in Toll receptor signaling - any interference with IRAK-4's kinase activity virtually abolishes downstream events. This is not the case with other members of the IRAK family [Suzuki N et al 2002; Li S et al 2002].

### Literature references

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### Editions

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