

# TLR6:TLR2 is recruited to ligand:CD14:CD36

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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. [↗](#)
- 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: 75

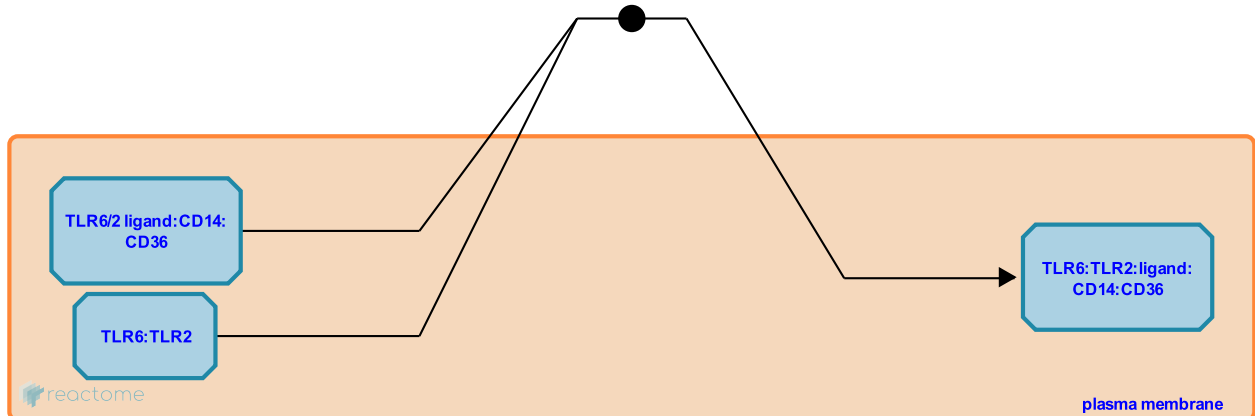
This document contains 1 reaction ([see Table of Contents](#))

## TLR6:TLR2 is recruited to ligand:CD14:CD36 [↗](#)

**Stable identifier:** R-HSA-168950

**Type:** binding

**Compartments:** extracellular region, plasma membrane



TLR2 - in combination with TLR6 - plays a major role in recognizing lipoteichoic acid (LTA) and peptidoglycan wall products from Gram-positive bacteria, as well as Mycobacterial diacylated lipopeptides.

### Literature references

- Hajjar, AM., O'Mahony, DS., Ozinsky, A., Underhill, DM., Aderem, A., Klebanoff, SJ. et al. (2001). Cutting edge: functional interactions between toll-like receptor (TLR) 2 and TLR1 or TLR6 in response to phenol-soluble modulins. *J Immunol*, 166, 15-9. [↗](#)
- Bas, S., Neff, L., Vuillet, M., Spenato, U., Seya, T., Matsumoto, M. et al. (2008). The proinflammatory cytokine response to *Chlamydia trachomatis* elementary bodies in human macrophages is partly mediated by a lipoprotein, the macrophage infectivity potentiator, through TLR2/TLR1/TLR6 and CD14. *J. Immunol.*, 180, 1158-68. [↗](#)
- Takeuchi, O., Hoshino, K., Kawai, T., Sanjo, H., Takada, H., Ogawa, T. et al. (1999). Differential roles of TLR2 and TLR4 in recognition of gram-negative and gram-positive bacterial cell wall components. *Immunity*, 11, 443-51. [↗](#)
- Okusawa, T., Fujita, M., Nakamura, J., Into, T., Yasuda, M., Yoshimura, A. et al. (2004). Relationship between structures and biological activities of mycoplasmal diacylated lipopeptides and their recognition by toll-like receptors 2 and 6. *Infect Immun*, 72, 1657-65. [↗](#)
- Means, TK., Wang, S., Lien, E., Yoshimura, A., Golenbock, DT., Fenton, MJ. (1999). Human toll-like receptors mediate cellular activation by *Mycobacterium tuberculosis*. *J Immunol*, 163, 3920-7. [↗](#)

### Editions

2006-04-19	Authored	D'Eustachio, P., Gay, NJ., Gale M, Jr., Zwaginga, JJ.
2006-07-04	Reviewed	D'Eustachio, P.
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