

# IgG binds LPG1G2 in the amastigote form of Leishmania

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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., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)
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Reactome database release: 88

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

## IgG binds LPG1G2 in the amastigote form of Leishmania ↗

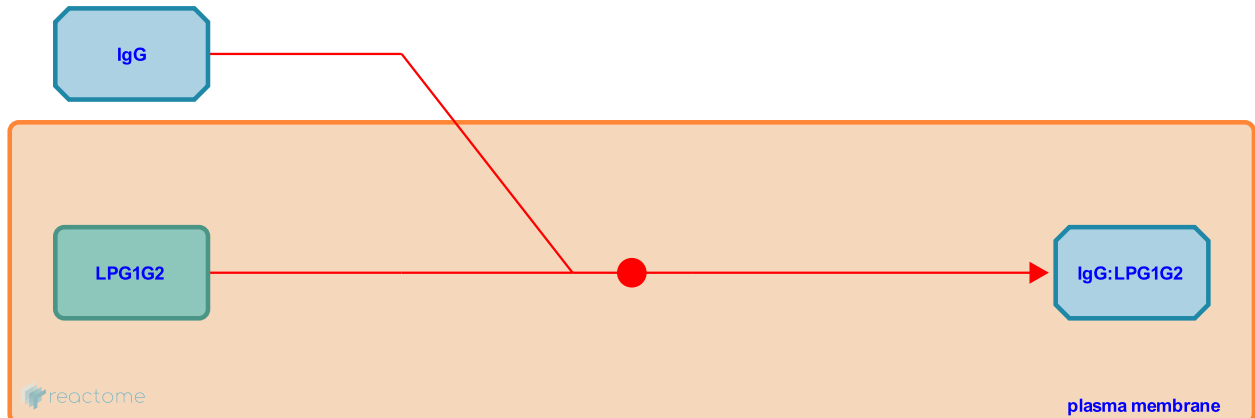
**Stable identifier:** R-HSA-9664397

**Type:** binding

**Compartments:** extracellular region, plasma membrane

**Diseases:** cutaneous leishmaniasis

**Inferred from:** [Mouse IgG binds LPG1G2 in the amastigote form of Leishmania \(Mus musculus\)](#)



The internalization of *Leishmania* amastigotes by macrophages is thought to be mediated mainly through opsonization with immunoglobulins (Igs) which bind FcγRs, stimulating the uptake (Morehead et al 2002 & Padigel et al. 2005). Glycoinositol phospholipids (GIPLs) are the most abundant glycolipids on the surface of the amastigote form of *Leishmania* parasites and Buxbaum and colleagues showed that IgG1 in mice, binds the GIPL molecules on the amastigote stage of *L. mexicana* to subsequently induced the phagocytosis through FcγRs (Buxbaum 2013).

### Literature references

Morehead, J., Coppens, I., Andrews, NW. (2002). Opsonization modulates Rac-1 activation during cell entry by *Leishmania amazonensis*. *Infect. Immun.*, 70, 4571-80. ↗

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Padigel, UM., Farrell, JP. (2005). Control of infection with *Leishmania major* in susceptible BALB/c mice lacking the common gamma-chain for FcR is associated with reduced production of IL-10 and TGF-beta by parasitized cells. *J. Immunol.*, 174, 6340-5. ↗

### Editions

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