

# IL37 binds IL18R1

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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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Reactome database release: 88

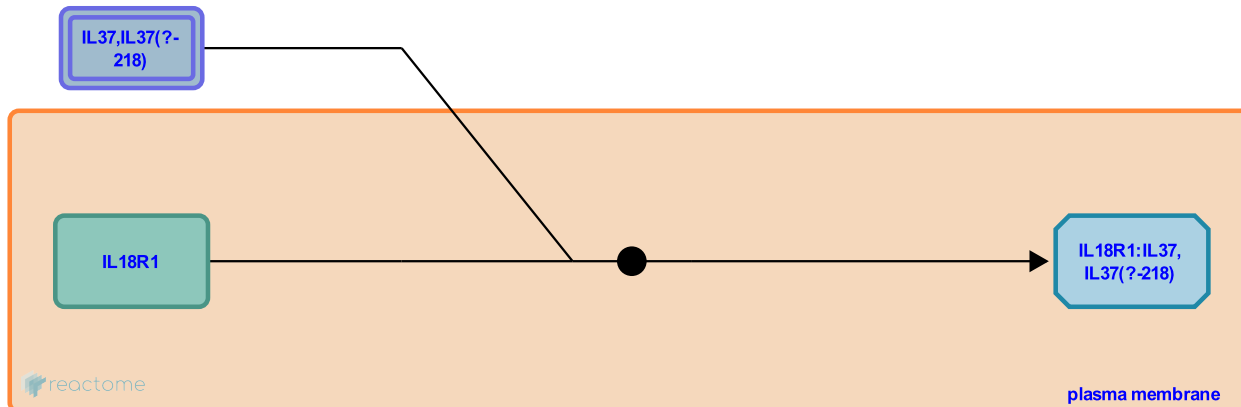
This document contains 1 reaction ([see Table of Contents](#))

## IL37 binds IL18R1 [↗](#)

**Stable identifier:** R-HSA-8848335

**Type:** binding

**Compartments:** extracellular region, plasma membrane



Interleukins (IL) are immunomodulatory proteins that elicit a wide array of responses in cells and tissues. Interleukin 37 (IL-37, IL-1F7) is a member of the IL-1 family. There are five isoforms of IL37 (a e) of which transcript IL-37 is known to be functional (Sharma et al. 2008). This isoform is represented in UniProt as the canonical form of IL-37 and in Reactome as the full length, unprocessed form of IL-37. Like several other IL-1 family members, IL-37 is synthesized as a precursor that requires processing (primarily by caspase 1) to attain full receptor agonist or antagonist function. (Kumar et al. 2002). Both full length and processed IL-37 can bind the Interleukin 18 receptor 1 (IL-18R1) but binding of processed IL-37 is more effective (Shi et al. 2003, Kumar et al. 2002). Subsequently, Single Ig IL-1 related receptor (SIGIRR, TIR 8,IL-1R8) is recruited and facilitates the suppression of cytokine production in several types of immune cells resulting in reduced inflammation.

### Literature references

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### Editions

2014-06-04	Authored	Jupe, S.
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