

# IP3 binds to the IP3 receptor, opening the endoplasmic reticulum Ca<sup>2+</sup> channel

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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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- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)
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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](#))

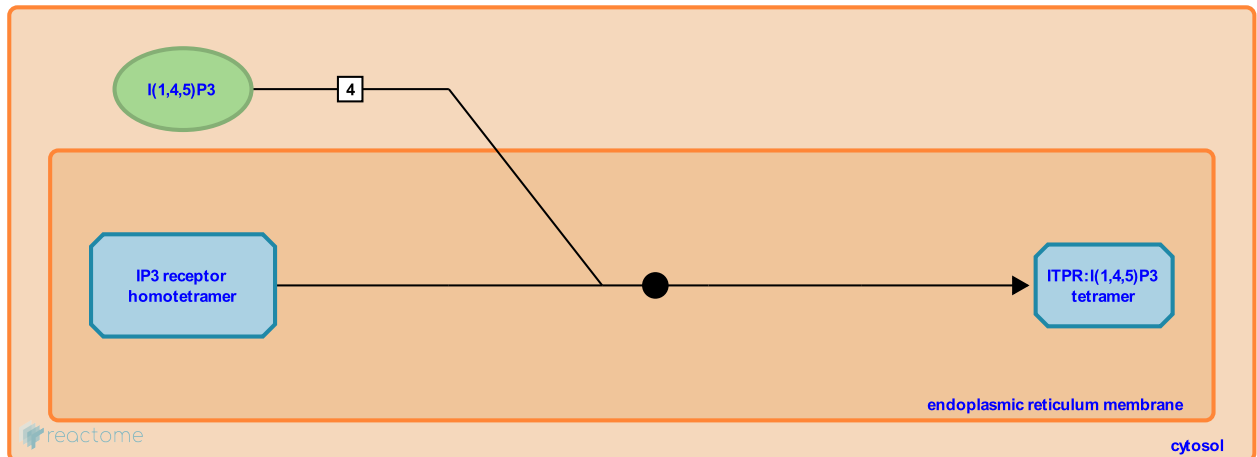
## IP3 binds to the IP3 receptor, opening the endoplasmic reticulum Ca<sup>2+</sup> channel [↗](#)

**Stable identifier:** R-HSA-169680

**Type:** binding

**Compartments:** cytosol, endoplasmic reticulum membrane

**Inferred from:** [IP3 binds to the IP3 receptor, opening the Ca<sup>2+</sup> channel \(Rattus norvegicus\)](#)



The IP3 receptor (IP3R) is an IP3-gated calcium channel. It is a large, homotetrameric protein, similar to other calcium channel proteins such as ryanodine. The four subunits form a 'four-leafed clover' structure arranged around the central calcium channel. Binding of ligands such as IP3 results in conformational changes in the receptor's structure that leads to channel opening.

### Editions

2004-03-31	Authored	Jassal, B., Le Novere, N.
2006-10-10	Edited	Jassal, B.
2009-06-02	Reviewed	Gillespie, ME.