

# Type II receptor phosphorylates type I re- ceptor

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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: 76

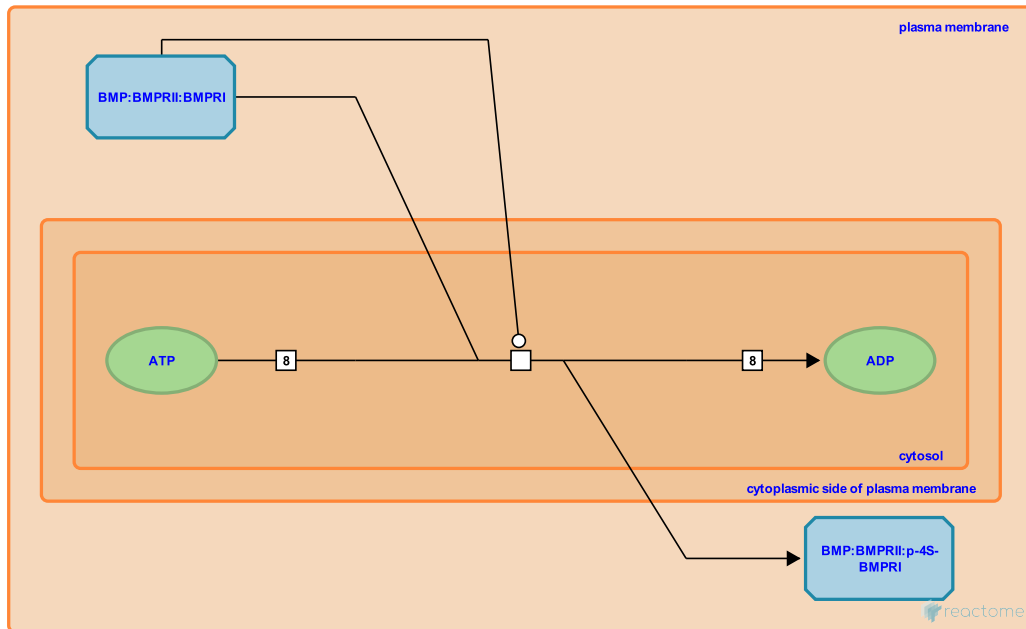
This document contains 1 reaction ([see Table of Contents](#))

## Type II receptor phosphorylates type I receptor ↗

**Stable identifier:** R-HSA-201443

**Type:** transition

**Compartments:** cytosol, plasma membrane



Formation of the hetero-tetrameric BMP2:receptor complex induces receptor rotation, so that their cytoplasmic kinase domains face each other in a catalytically favourable configuration. The constitutively active type II receptor kinase (which auto-phosphorylates in the absence of ligand), trans-phosphorylates specific serine residues at the conserved Gly-Ser-rich juxtapositioned domain of the type I receptor. It is not known if exactly 8 ATPs are required for the phosphorylation of type I receptor, there could be more or less than this number.

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### Editions

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