

# MAP2Ks phosphorylate MAPK at the Golgi membrane

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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: 88

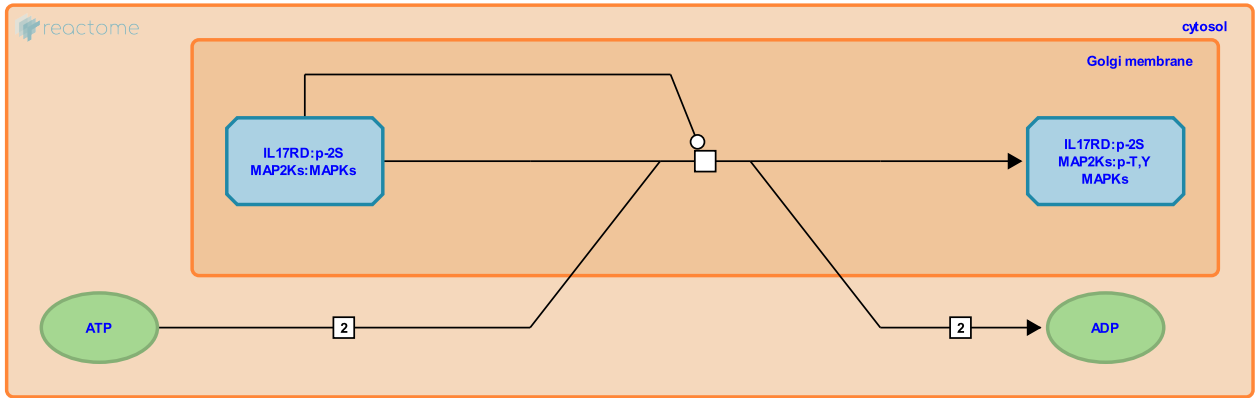
This document contains 1 reaction ([see Table of Contents](#))

# MAP2Ks phosphorylate MAPK at the Golgi membrane ↗

**Stable identifier:** R-HSA-5674373

**Type:** transition

**Compartments:** Golgi membrane



Activated MAP2Ks in complex with IL17RD phosphorylate MAPKs at the Golgi membrane. IL17RD prevents the dissociation of phosphorylated MAPK from the complex at the Golgi as assessed by coimmunoprecipitation, preventing MAPK nuclear translocation and activation of nuclear targets (Torii et al, 2004; reviewed in Philips, 2004; Brown and Sacks, 2009).

## Literature references

Brown, MD., Sacks, DB. (2009). Protein scaffolds in MAP kinase signalling. *Cell. Signal.*, 21, 462-9. ↗

Philips, MR. (2004). Sef: a MEK/ERK catcher on the Golgi. *Mol. Cell*, 15, 168-9. ↗

Maekawa, M., Kusakabe, M., Yamamoto, T., Nishida, E., Torii, S. (2004). Sef is a spatial regulator for Ras/MAP kinase signaling. *Dev Cell*, 7, 33-44. ↗

## Editions

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