# PRKD1,2,3 phosphorylates CERT1-2

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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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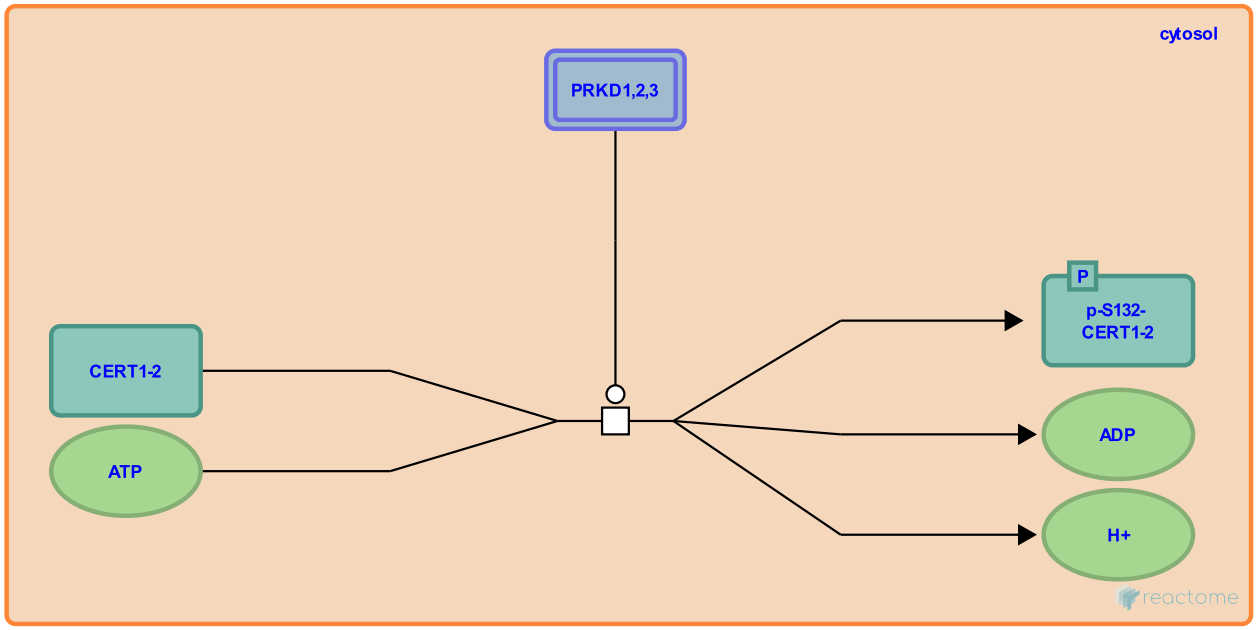
## PRKD1,2,3 phosphorylates CERT1-2 ↗

**Stable identifier:** R-HSA-429698

**Type:** transition

**Compartments:** cytosol




Cytosolic PRKD1, 2, and 3 (protein kinase D1, D2, and D3) catalyze the phosphorylation of serine residue 132 of isoform 2 of ceramide transfer protein (CERT1-2, aka COL4A3BP-2). Protein kinase D (PRKD) is a crucial regulator of secretory transport at the trans-Golgi network (TGN). Phosphorylation of COL4A3BP-2 reduces its ceramide transfer activity. PRKDs may, therefore, act as regulators of lipid homeostasis (Fugmann et al., 2007; Kumagai et al., 2014; Shimasaki et al., 2022; reviewed by Olayioye & Hausser, 2011; Kumagai & Hanada, 2019).

## Literature references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## Editions

| | | |
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