

AKT phosphorylates CBY1

Gillespie, ME., Kikuchi, A., Rajakulendran, N., Rothfels, K., van Amerongen, R.

European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

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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. [↗](#)
- 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

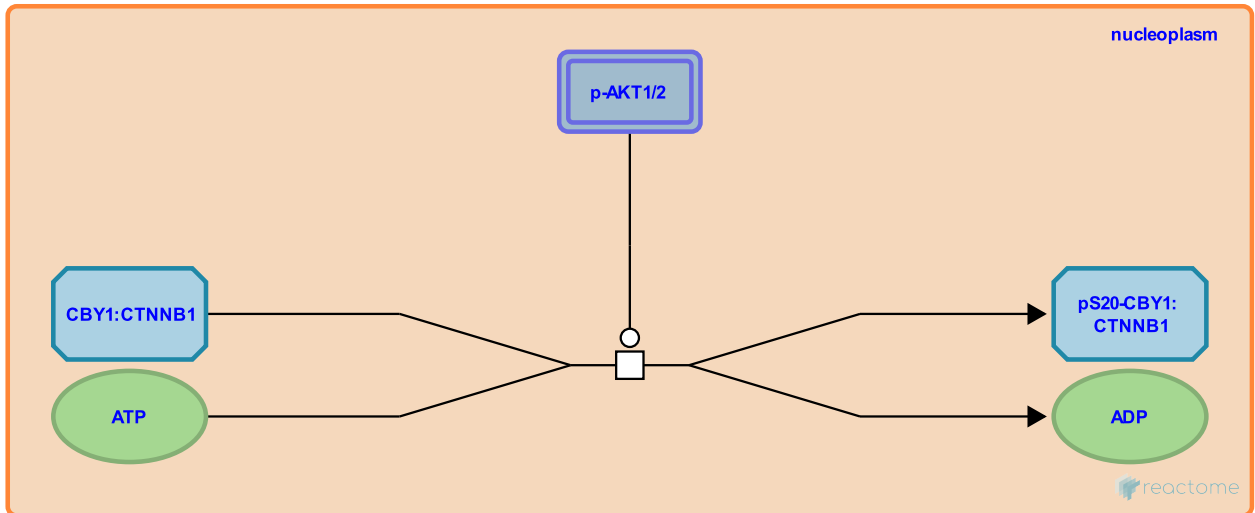
This document contains 1 reaction ([see Table of Contents](#))

AKT phosphorylates CBY1 [↗](#)

Stable identifier: R-HSA-3769394

Type: transition

Compartments: nucleoplasm



CBY1 is phosphorylated in vitro at serine 20 by AKT1 and AKT2. In vivo, this phosphorylation is required for the export of beta-catenin from the nucleus, facilitated by the binding of 14-3-3/YWHAZ proteins to the pS20 residue of CBY1 (Li et al, 2008).

Literature references

Mofunanya, A., Harris, K., Takemaru, K., Li, FQ. (2008). Chibby cooperates with 14-3-3 to regulate beta-catenin sub-cellular distribution and signaling activity. *J. Cell Biol.*, 181, 1141-54. [↗](#)

Editions

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