

Beta-TrCP1 binds phosphorylated PER proteins

Albrecht, U., D'Eustachio, P., Delaunay, F., Hirota, T., Kay, SA., May, B.

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.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

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: 70

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

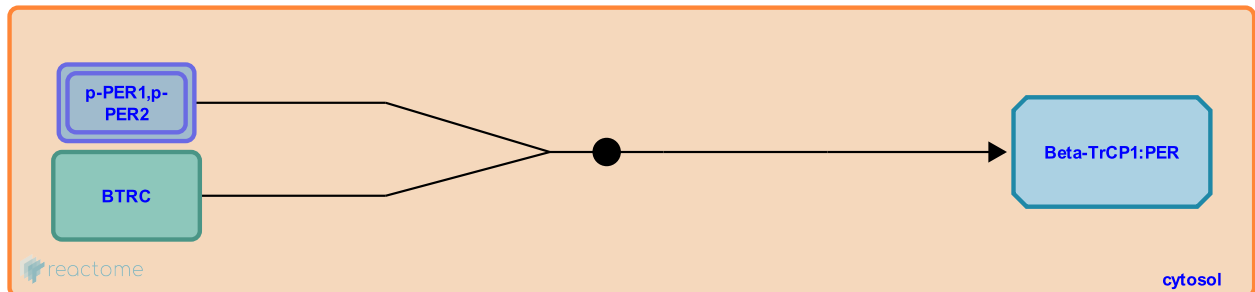
Beta-TrCP1 binds phosphorylated PER proteins ↗

Stable identifier: R-HSA-400219

Type: binding

Compartments: cytosol

Inferred from: [Beta-TrCP \(Btrc\) binds phosphorylated Per \(Mus musculus\)](#)



Beta-TrCP1 is an F-box type component of a particular SKP/CUL/F-Box (SCF) E3 ubiquitin ligase. Beta-TrCP1 interacts specifically with phosphorylated PER proteins and directs their polyubiquitination.

Literature references

Shirogane, T., Jin, J., Ang, XL., Harper, JW. (2005). SCFbeta-TRCP controls clock-dependent transcription via casein kinase 1-dependent degradation of the mammalian period-1 (Per1) protein. *J Biol Chem*, 280, 26863-72. ↗

Editions

2009-05-17	Authored	May, B.
2009-05-26	Reviewed	D'Eustachio, P.
2009-06-02	Edited	May, B.
2010-06-23	Reviewed	Hirota, T., Kay, SA., Delaunay, F., Albrecht, U.