

CBL binds B-cell linker protein

Hercus, TR., Jupe, S., Lopez, AF., Ray, KP.

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](#))

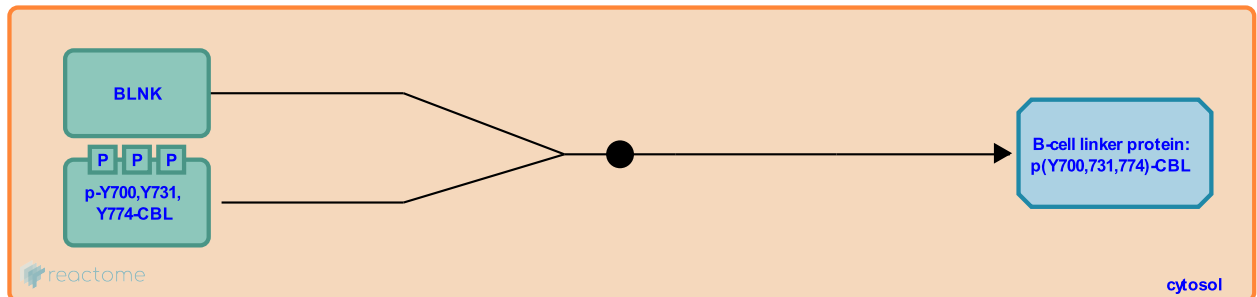
CBL binds B-cell linker protein [↗](#)

Stable identifier: R-HSA-912724

Type: binding

Compartments: cytosol

Inferred from: [Cbl binds B-cell linker protein \(Gallus gallus\)](#)



Cbl binds B-cell linker protein, a molecular scaffold bridging Syk to downstream signaling pathways by recruiting signaling molecules, such as Btk, phospholipase C gamma 2, Vav, and Grb2 to the cell membrane to form a signalosome complex. Cbl is believed to negatively regulate signaling from this complex. Consistent with this, Cbl inactivation reverses a number of critical defects in early B cell differentiation seen in BLNK-deficient mice (Song et al. 2007).

Literature references

Chiang, YJ., Hodes, RJ., Song, H., Zhang, J., Siraganian, RP. (2007). Redundancy in B cell developmental pathways: c-Cbl inactivation rescues early B cell development through a B cell linker protein-independent pathway. *J Immunol*, 178, 926-35. [↗](#)

Editions

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|------------|----------|-------------------------|
| 2010-05-17 | Authored | Ray, KP. |
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