

Btk autophosphorylates

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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. 7
- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. A
- 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. *オ*

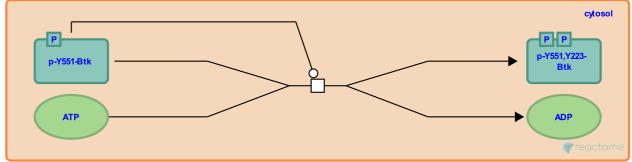
This document contains 1 reaction (see Table of Contents)

Btk autophosphorylates 7

Stable identifier: R-MMU-9607033

Type: transition

Compartments: cytosol



After phosphorylation on tyrosine-551 by Lyn or Syk, Btk autophosphorylates tyrosine-223 (Mahajan et al. 1995, Park et al. 1996).

Literature references

Fargnoli, J., Bolen, JB., Saouaf, SJ., Mahajan, S., Burkhardt, AL., Kut, SA. (1995). Src family protein tyrosine kinases induce autoactivation of Bruton's tyrosine kinase. *Mol. Cell. Biol.*, *15*, 5304-11.

Park, H., Turck, CW., Witte, ON., Kinet, JP., Scharenberg, AM., Tam, C. et al. (1996). Regulation of Btk function by a major autophosphorylation site within the SH3 domain. *Immunity*, *4*, 515-25. 7

Editions

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