

Activated PTK6 binds CDKN1B

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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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Reactome database release: 88

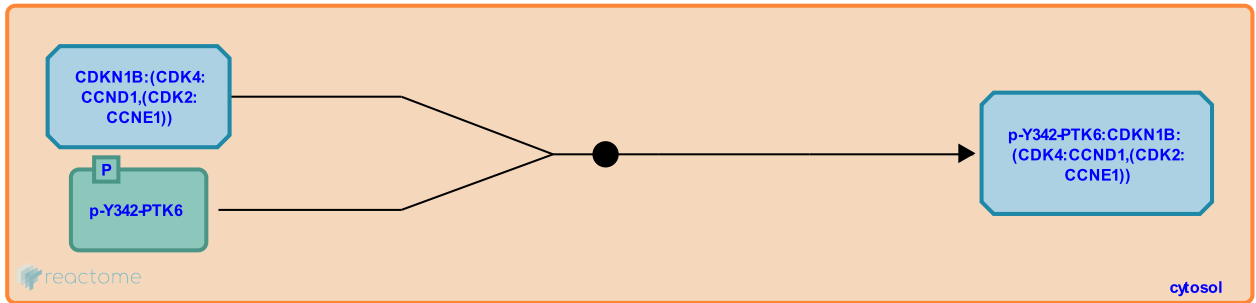
This document contains 1 reaction ([see Table of Contents](#))

Activated PTK6 binds CDKN1B [↗](#)

Stable identifier: R-HSA-8848414

Type: binding

Compartments: cytosol



Activated PTK6 (BRK) binds to CDKN1B (p27KIP1) that is in a complex with CDK4 and cyclin D1 (CCND1). Since PTK6 increases cyclin E1 (CCNE1) levels downstream of ERBB2 while decreasing CDKN1B levels, PTK6 probably also associates with CDKN1B bound to the complex of CCNE1 and CDK2 (Xiang et al. 2008).

Literature references

Wagner, R., Patel, P., Asbach, B., Blain, SW., Coltoff, A., Shteyn, E. et al. (2015). Brk/Protein tyrosine kinase 6 phosphorylates p27KIP1, regulating the activity of cyclin D-cyclin-dependent kinase 4. *Mol. Cell. Biol.*, 35, 1506-22. [↗](#)

Muthuswamy, SK., Xiang, B., Lakshmi, B., Yu, M., Miller, WT., Krasnitz, A. et al. (2008). Brk is coamplified with ErbB2 to promote proliferation in breast cancer. *Proc. Natl. Acad. Sci. U.S.A.*, 105, 12463-8. [↗](#)

Editions

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