

Orc1 is phosphorylated by cyclin A/CDK2

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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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Reactome database release: 75

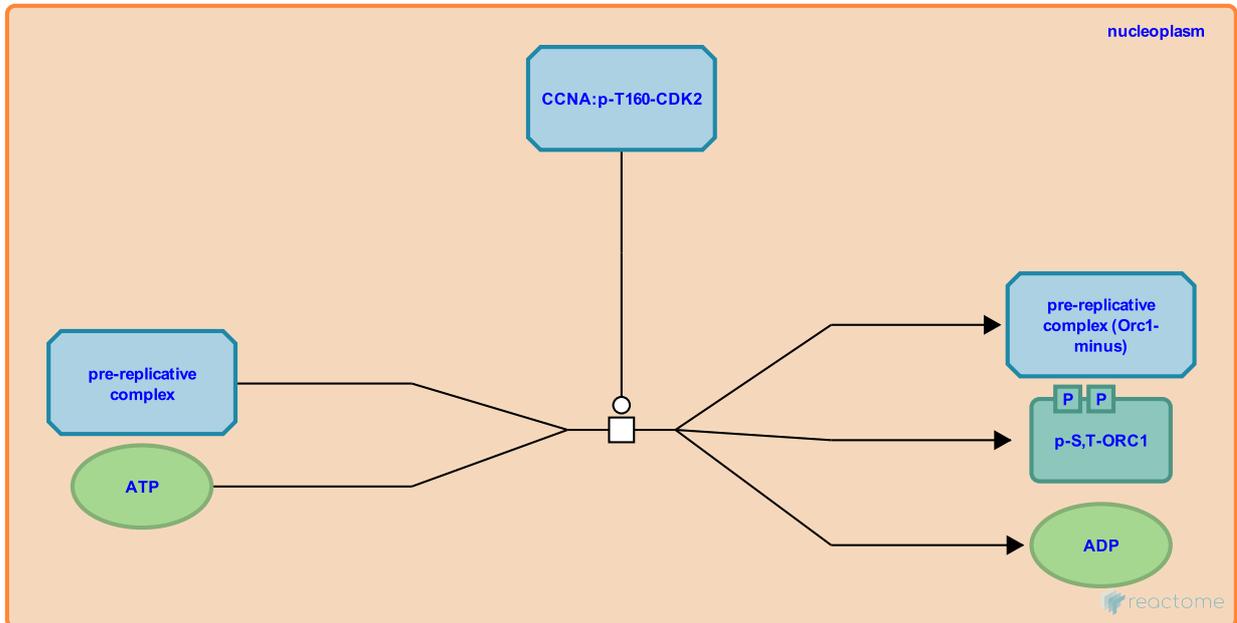
This document contains 1 reaction ([see Table of Contents](#))

Orc1 is phosphorylated by cyclin A/CDK2 ↗

Stable identifier: R-HSA-68944

Type: transition

Compartments: nucleoplasm



At the beginning of this reaction, 1 molecule of 'ATP', and 1 molecule of 'pre-replicative complex' are present. At the end of this reaction, 1 molecule of 'phosphorylated Orc1', 1 molecule of 'pre-replicative complex (Orc1-minus)', and 1 molecule of 'ADP' are present.

This reaction takes place in the 'nucleus' and is mediated by the 'kinase activity' of 'Cyclin A:Cdk2 complex'.

Literature references

Mendez, J., Zou-Yang, XH., Kim, SY., Hidaka, M., Tansey, WP., Stillman, B. (2002). Human origin recognition complex large subunit is degraded by ubiquitin-mediated proteolysis after initiation of DNA replication. *Mol Cell*, 9, 481-91. ↗