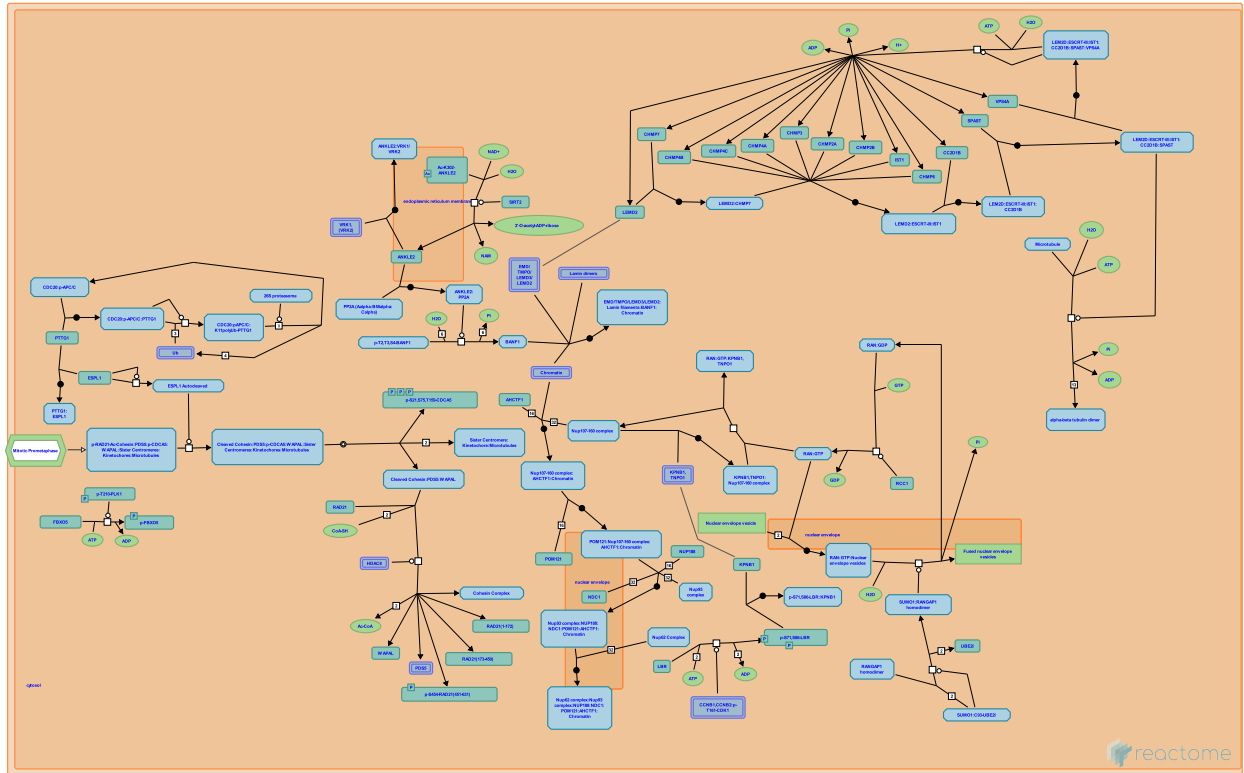


Mitotic Metaphase and Anaphase



European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

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This is just an excerpt of a full-length report for this pathway. To access the complete report, please download it at the [Reactome Textbook](https://reactome.org/Textbook/).

03/05/2024

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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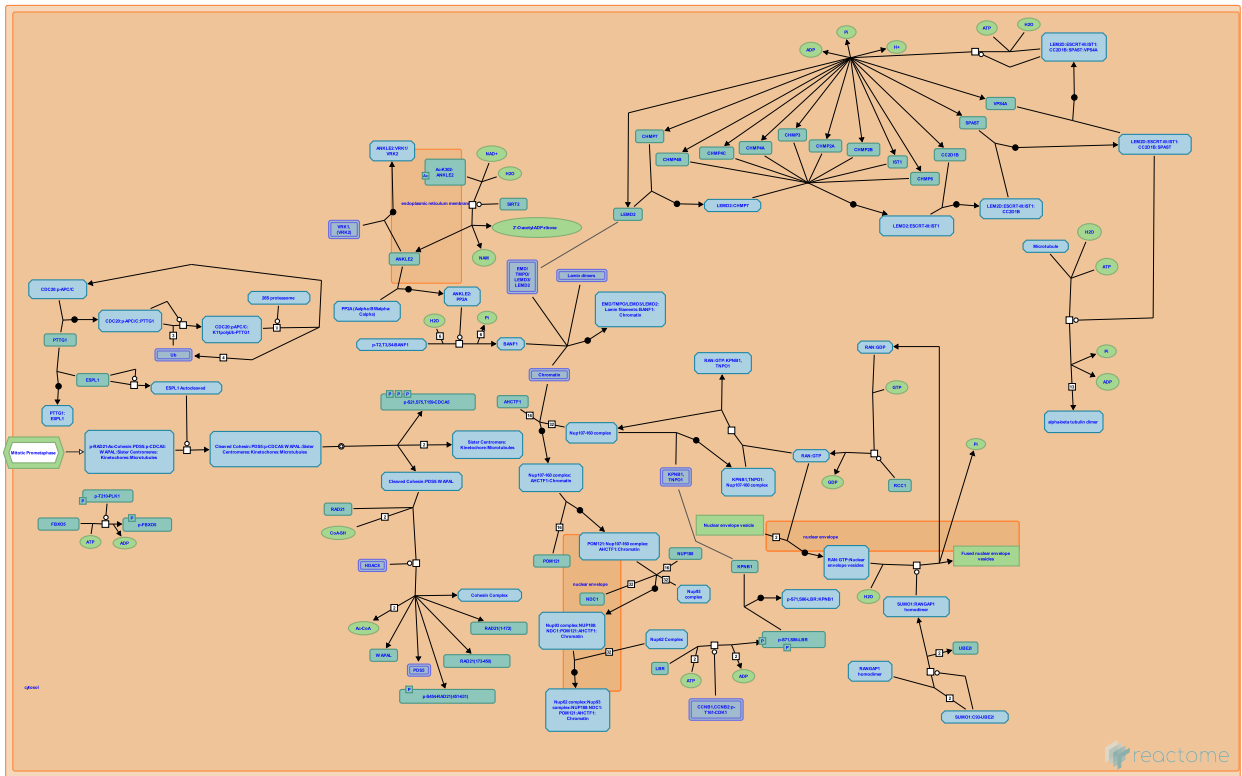
Reactome database release: 88

This document contains 3 pathways ([see Table of Contents](#))

Mitotic Metaphase and Anaphase ↗

Stable identifier: R-HSA-2555396

Compartments: cytosol



Metaphase is marked by the formation of the metaphase plate. The metaphase plate is formed when the spindle fibers align the chromosomes along the middle of the cell. Such an organization helps to ensure that later, when the chromosomes are separated, each new nucleus that is formed receives one copy of each chromosome. This pathway has not yet been annotated in Reactome.

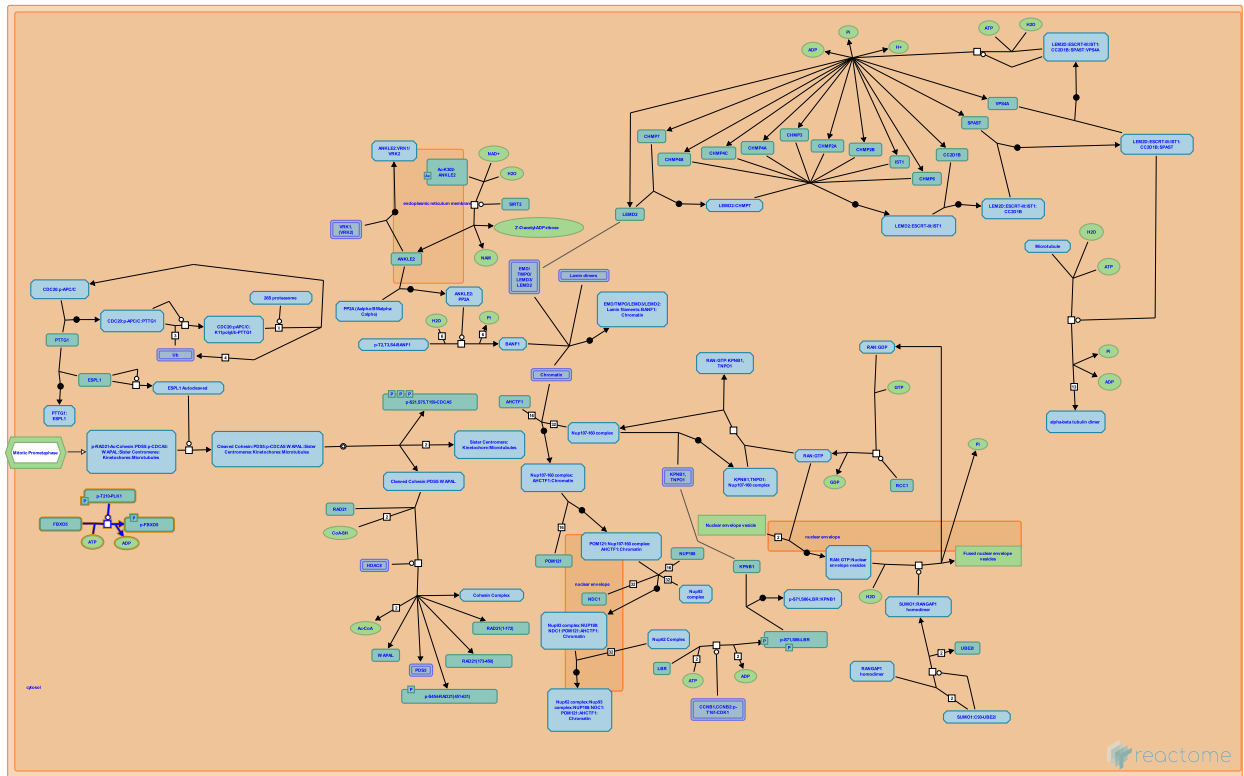
The metaphase to anaphase transition during mitosis is triggered by the destruction of mitotic cyclins.

In anaphase, the paired chromosomes separate at the centromeres, and move to the opposite sides of the cell. The movement of the chromosomes is facilitated by a combination of kinetochore movement along the spindle microtubules and through the physical interaction of polar microtubules.

Mitotic Metaphase/Anaphase Transition ↗

Location: Mitotic Metaphase and Anaphase

Stable identifier: R-HSA-68881

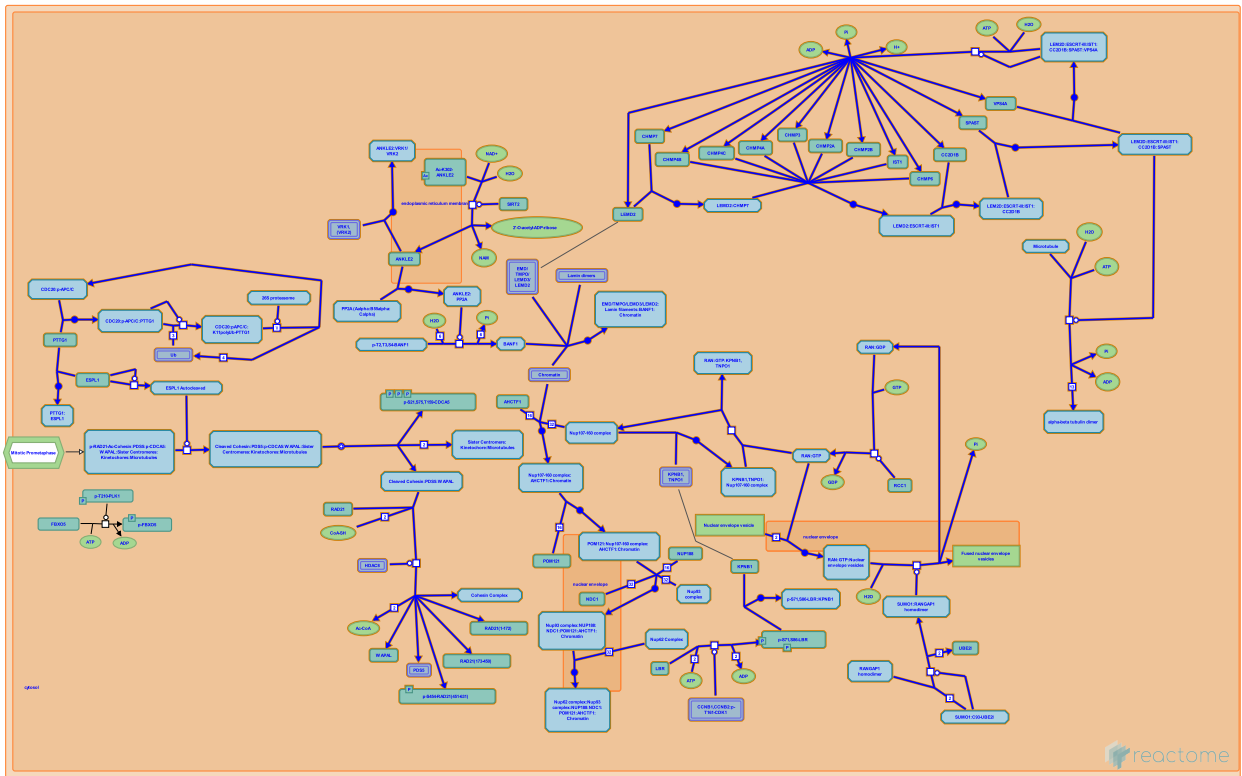


The metaphase to anaphase transition during mitosis is triggered by the destruction of mitotic cyclins.

Mitotic Anaphase ↗

Location: Mitotic Metaphase and Anaphase

Stable identifier: R-HSA-68882



In anaphase, the paired chromosomes separate at the centromeres, and move to the opposite sides of the cell. The movement of the chromosomes is facilitated by a combination of kinetochore movement along the spindle microtubules and through the physical interaction of polar microtubules.

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