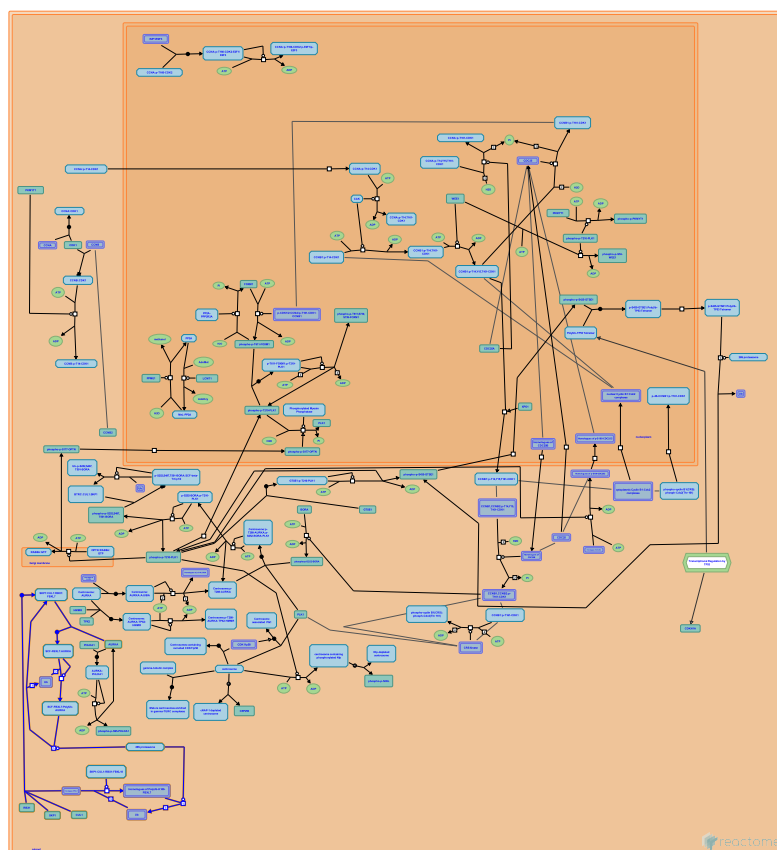


# FBXL7 down-regulates AURKA during mitotic entry and in early mitosis



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.

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

- 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. [↗](#)
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- 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: 70

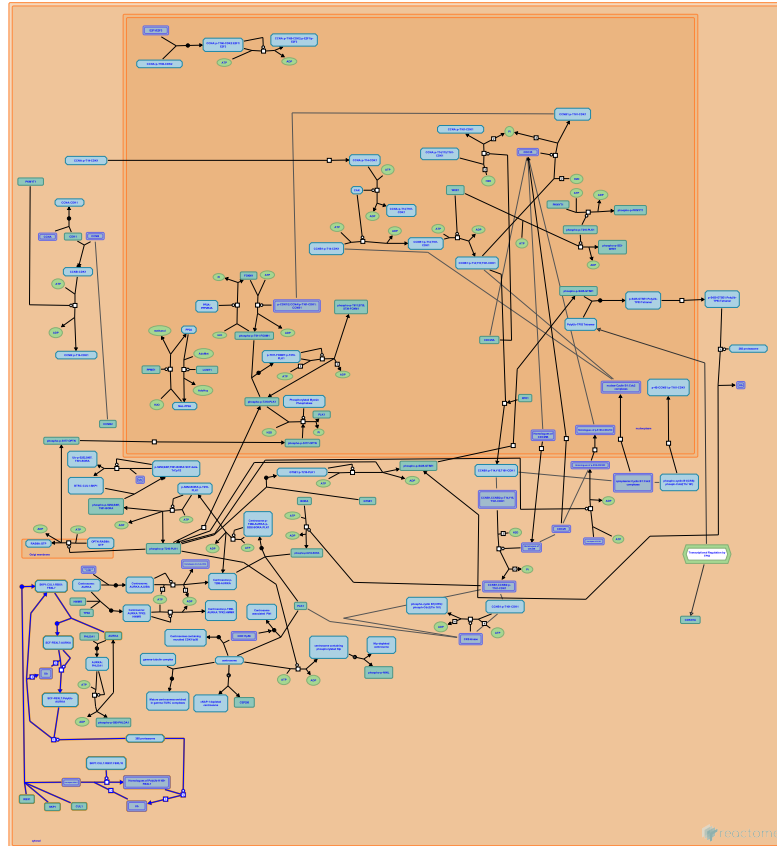
This document contains 1 pathway and 6 reactions ([see Table of Contents](#))

## FBXL7 down-regulates AURKA during mitotic entry and in early mitosis ↗

**Stable identifier:** R-DRE-8854050

**Compartments:** cytosol

**Inferred from:** FBXL7 down-regulates AURKA during mitotic entry and in early mitosis (Homo sapiens)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

## Formation of the SCF-FBXL7 complex ↗

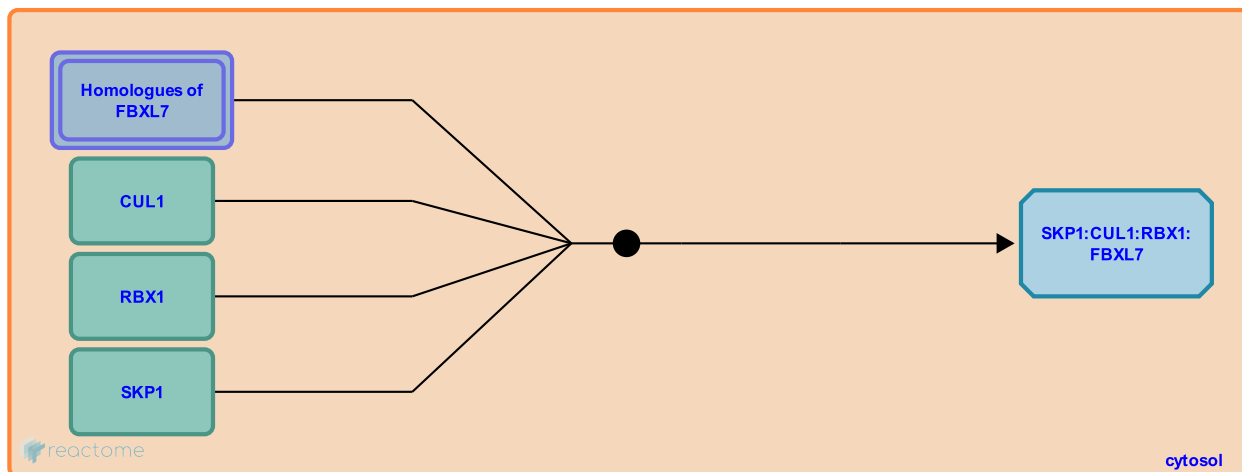
**Location:** FBXL7 down-regulates AURKA during mitotic entry and in early mitosis

**Stable identifier:** R-DRE-8854052

**Type:** binding

**Compartments:** cytosol

**Inferred from:** Formation of the SCF-FBXL7 complex (Homo sapiens)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

**Followed by:** SCF:FBXL7 binds AURKA

## SCF:FBXL7 binds AURKA ↗

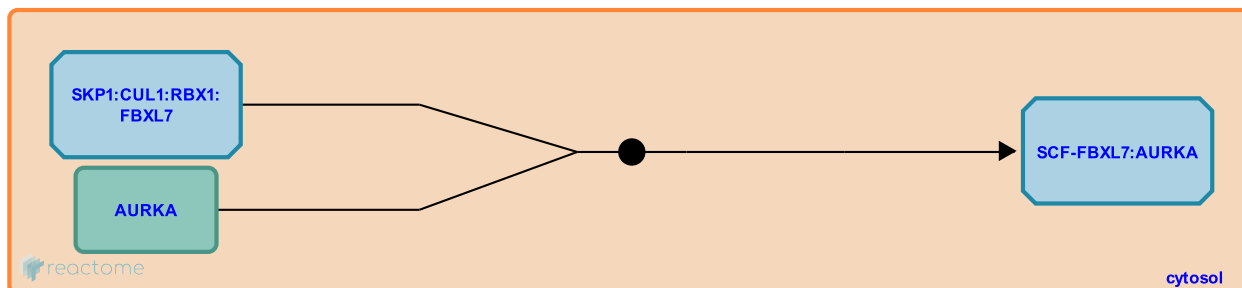
**Location:** FBXL7 down-regulates AURKA during mitotic entry and in early mitosis

**Stable identifier:** R-DRE-8853496

**Type:** binding

**Compartments:** cytosol

**Inferred from:** SCF:FBXL7 binds AURKA (Homo sapiens)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

**Preceded by:** [Formation of the SCF-FBXL7 complex](#)

**Followed by:** [SCF-FBXL7 ubiquitinates AURKA](#)

## SCF-FBXL7 ubiquitinates AURKA ↗

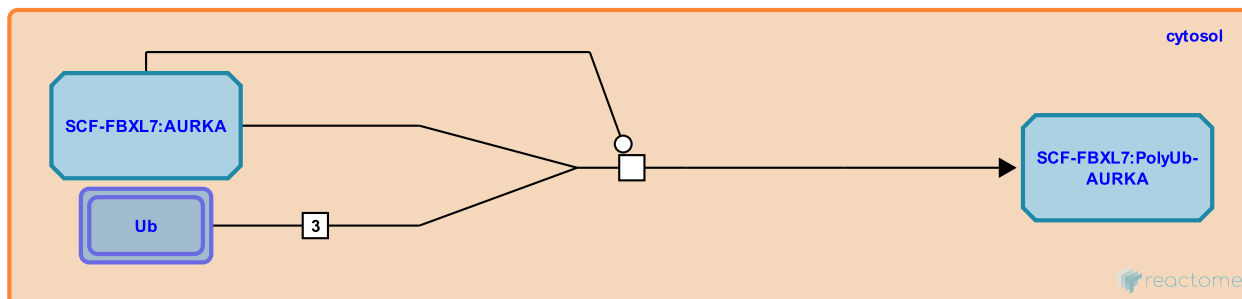
**Location:** FBXL7 down-regulates AURKA during mitotic entry and in early mitosis

**Stable identifier:** R-DRE-8854041

**Type:** transition

**Compartments:** cytosol

**Inferred from:** SCF-FBXL7 ubiquitinates AURKA (Homo sapiens)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

**Preceded by:** SCF:FBXL7 binds AURKA

**Followed by:** Proteasome degrades AURKA ubiquitinated by SCF-FBXL7

## Proteasome degrades AURKA ubiquitinated by SCF-FBXL7 ↗

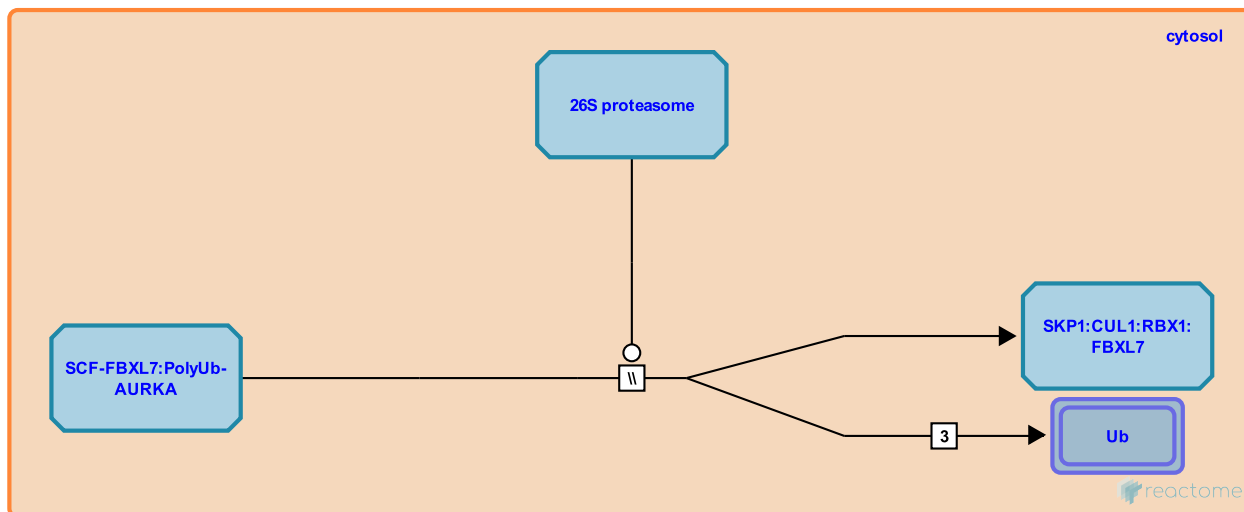
**Location:** FBXL7 down-regulates AURKA during mitotic entry and in early mitosis

**Stable identifier:** R-DRE-8854044

**Type:** omitted

**Compartments:** cytosol

**Inferred from:** Proteasome degrades AURKA ubiquitinated by SCF-FBXL7 (Homo sapiens)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

**Preceded by:** [SCF-FBXL7 ubiquitinates AURKA](#)

## SCF-FBXL18 ubiquitinates FBXL7 ↗

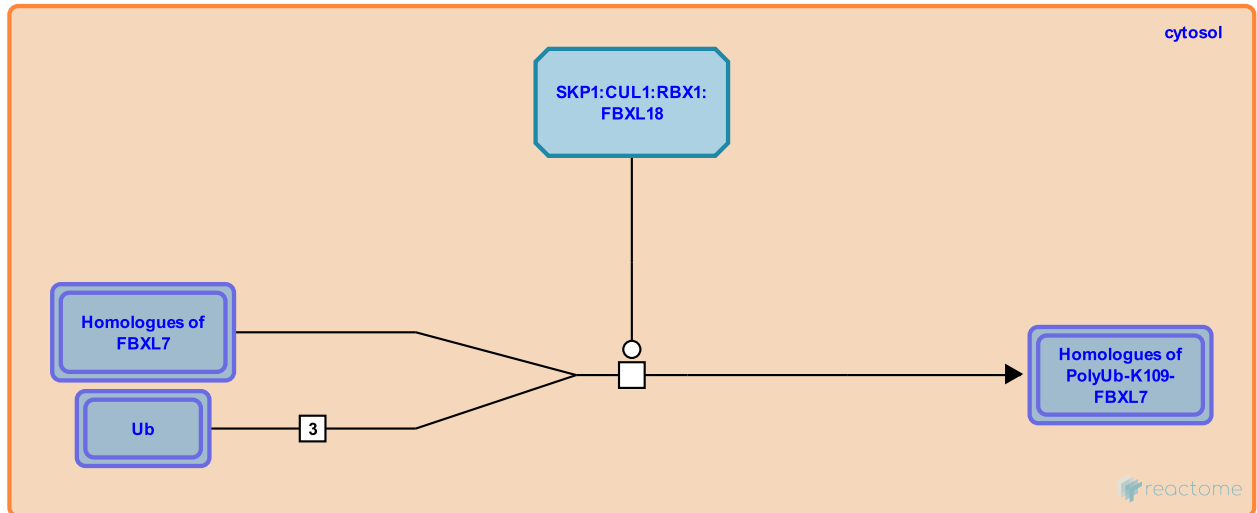
**Location:** [FBXL7 down-regulates AURKA during mitotic entry and in early mitosis](#)

**Stable identifier:** R-DRE-8854051

**Type:** transition

**Compartments:** cytosol

**Inferred from:** [SCF-FBXL18 ubiquitinates FBXL7 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

**Followed by:** [Proteasome-mediated degradation of PolyUb-FBXL7](#)



## Proteasome-mediated degradation of PolyUb-FBXL7 ↗

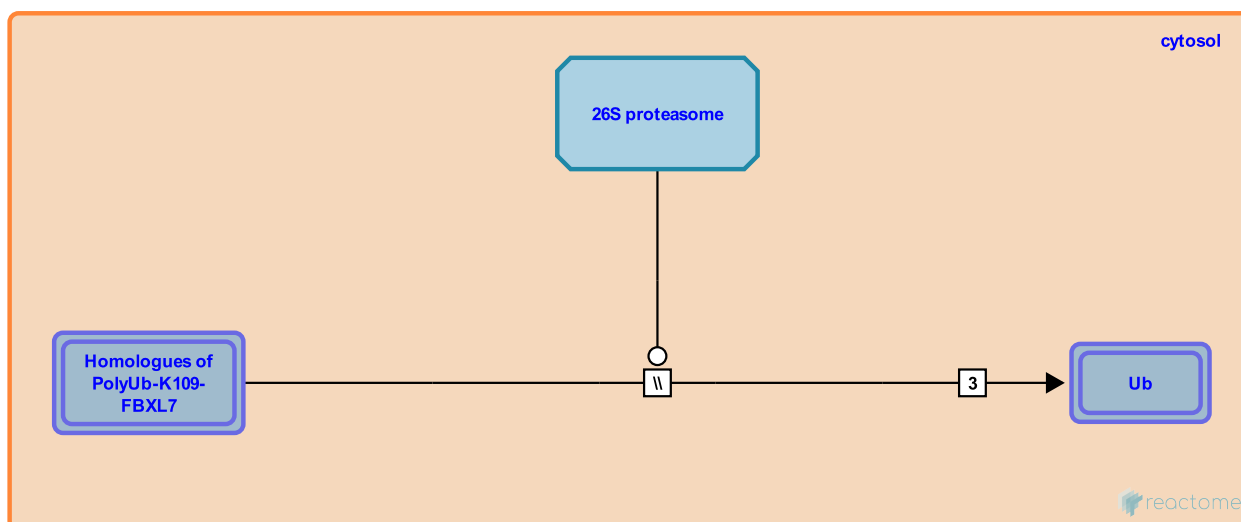
**Location:** [FBXL7 down-regulates AURKA during mitotic entry and in early mitosis](#)

**Stable identifier:** R-DRE-8854071

**Type:** omitted

**Compartments:** cytosol

**Inferred from:** [Proteasome-mediated degradation of PolyUb-FBXL7 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

**Preceded by:** [SCF-FBXL18 ubiquitinates FBXL7](#)

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