

# Cohesin binding to decondensed chromat- in is facilitated by NIPBL:MAU2

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07/02/2023

## 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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- 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. [↗](#)
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Reactome database release: 83

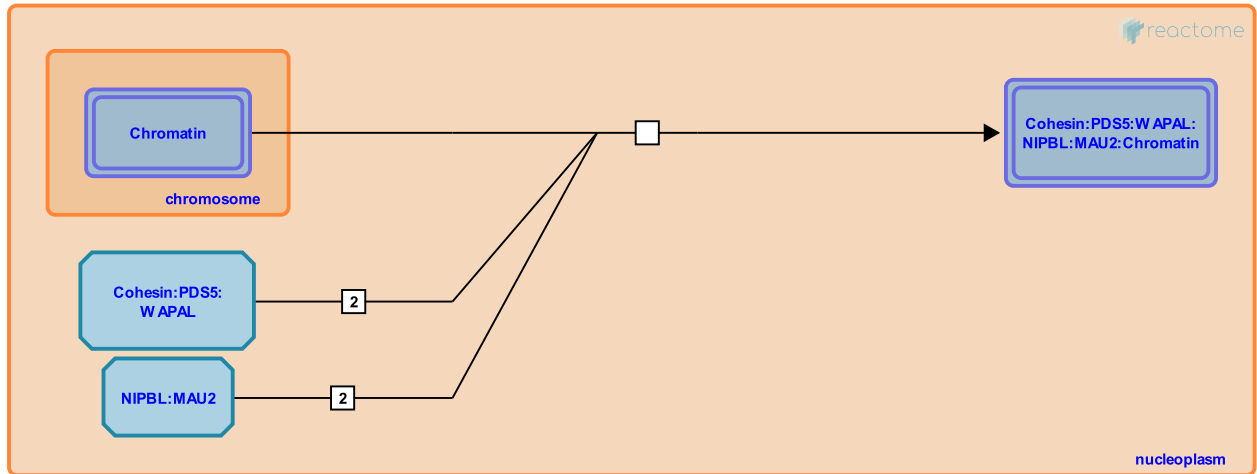
This document contains 1 reaction ([see Table of Contents](#))

## Cohesin binding to decondensed chromatin is facilitated by NIPBL:MAU2 [↗](#)

**Stable identifier:** R-HSA-2470935

**Type:** transition

**Compartments:** chromosome, nucleoplasm



Cohesin, in complex with WAPAL and PDS5 (PDS5A or PDS5B) binds decondensed chromatin in telophase (Kueng et al. 2006). This binding is facilitated by the NIPBL:MAU2 complex, also known as the 'cohesin loading complex'. NIPBL:MAU2 complex is associated with chromatin from telophase until prophase (Watrin et al. 2006) but seems to form a transient rather than stable complex with cohesin.

### Literature references

Peters, BH., Hegemann, B., Peters, JM., Mechtler, K., Schleiffer, A., Kueng, S. et al. (2006). Wapl controls the dynamic association of cohesin with chromatin. *Cell*, 127, 955-67. [↗](#)

Nasmyth, K., Peters, JM., Tanaka, K., Schleiffer, A., Watrin, E., Eisenhaber, F. (2006). Human Scc4 is required for cohesin binding to chromatin, sister-chromatid cohesion, and mitotic progression. *Curr. Biol.*, 16, 863-74. [↗](#)

### Editions

2012-10-02	Authored	Orlic-Milacic, M.
2012-10-05	Edited	Gillespie, ME., Matthews, L.
2012-10-22	Reviewed	Zhang, N.
2012-11-20	Reviewed	Watanabe, Y., Tanno, Y.