

# CDCA5 (Sororin) enables cohesion of sister centromeres

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09/05/2024

## 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.

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. [↗](#)

Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)

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. [↗](#)

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: 88

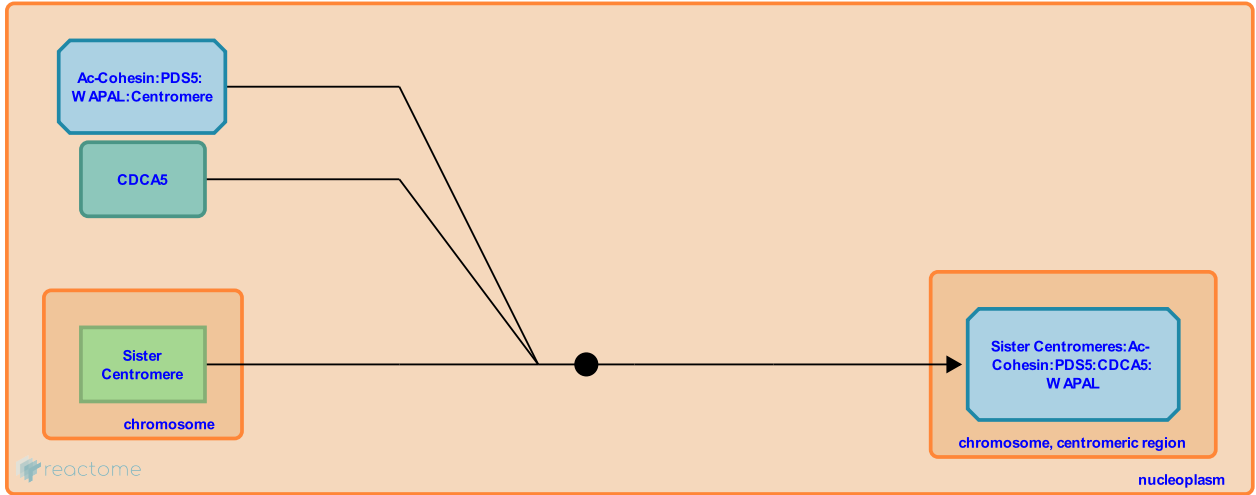
This document contains 1 reaction ([see Table of Contents](#))

**CDCA5 (Sororin) enables cohesion of sister centromeres** [↗](#)

**Stable identifier:** R-HSA-2473151

**Type:** binding

**Compartments:** nucleoplasm, chromosome, centromeric region



CDCA5 (Sororin) is essential for the establishment of sister chromatid cohesion at centromeres. Experiments in which a recombinant tagged mouse CDCA5 was expressed in human HeLa cell line showed that CDCA5 starts to accumulate on chromatin in S-phase and dissociates from centromeres in anaphase (Nishiyama et al. 2010).

**Literature references**

Kreidl, E., Ladurner, R., Hyman, AA., Peters, JM., Bando, M., Mechtler, K. et al. (2010). Sororin mediates sister chromatid cohesion by antagonizing Wapl. *Cell*, 143, 737-49. [↗](#)

**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.      |