

Synopsis

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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.

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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: 82

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

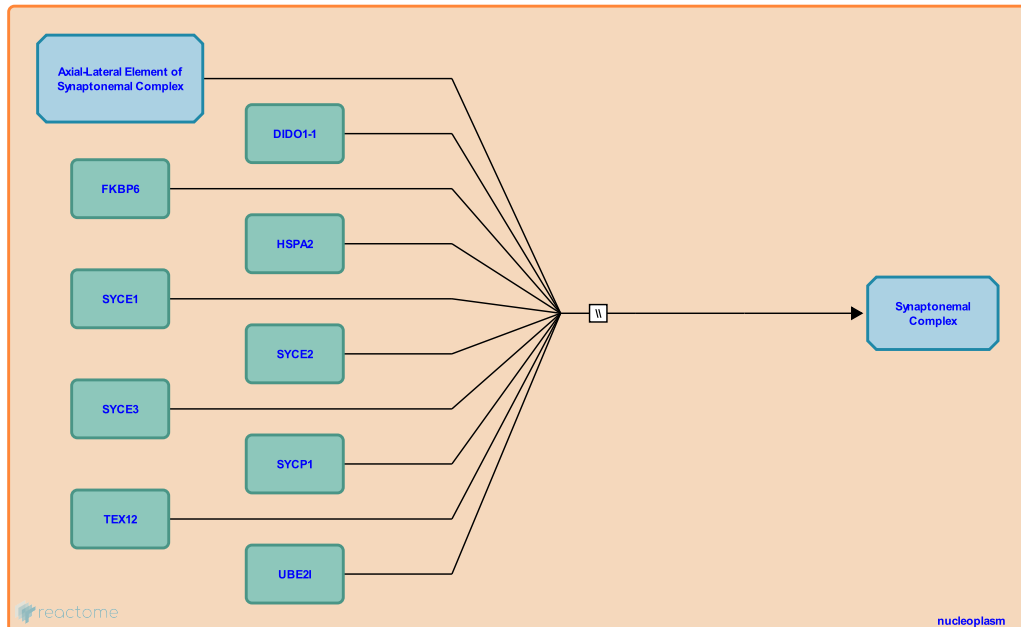
Synapsis [↗](#)

Stable identifier: R-HSA-912505

Type: omitted

Compartments: nucleoplasm

Inferred from: [Synapsis \(Mus musculus\)](#)



Initiation of recombination precedes and is required for synapsis (Roig et al. 2004). The synaptonemal complex forms when transverse filaments of SYCP1 link axial/lateral elements of sister chromatids to a central element comprising SYCE1, SYCE2, and other proteins (Tarsounas et al. 1997). The order of assembly is unknown.

Literature references

Liebe, B., Garcia, M., Egozcue, J., Scherthan, H., Roig, I., Cabero, L. (2004). Female-specific features of recombinational double-stranded DNA repair in relation to synapsis and telomere dynamics in human oocytes. *Chromosoma*, 113, 22-33. [↗](#)

Gasser, PJ., Pearlman, RE., Park, MS., Moens, PB., Tarsounas, M. (1997). Protein-protein interactions in the synaptonemal complex. *Mol Biol Cell*, 8, 1405-14. [↗](#)

Editions

2010-07-03	Authored, Edited	May, B.
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2011-02-25	Reviewed	Bolcun-Filas, E., Lyndaker, A., Strong, E.