

[Open Peer Review on Qeios](#)

Mitotic Sister Chromatid Cohesion

National Cancer Institute

Source

National Cancer Institute. *Mitotic Sister Chromatid Cohesion*. NCI Thesaurus. Code C28752.

The faithful segregation of genetic information requires highly orchestrated changes of chromosome structure during the mitotic cell cycle. The linkage between duplicated sister DNAs is established during S phase and maintained throughout G2 phase (cohesion). In early mitosis, dramatic structural changes occur to produce metaphase chromosomes, each consisting of a pair of compacted sister chromatids (condensation). At anaphase onset, a signal is produced to disrupt the linkage between sister chromatids (separation), allowing them to be pulled apart to opposite poles of the cell. (from PubMed 10966455)