

MIND MAP

Cell Cycle Regulation

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CELL CYCLE CONTROL SYSTEM



DNA DAMAGE (G2/M) CHECKPOINT

The G2/M checkpoint inhibits entry into mitosis. DNA damage checkpoint involves a signal transduction pathway induced by DNA damage that blocks cell cycle progression until DNA is properly repaired.

STOP

The replication checkpoint, a specialized branch of the DNA damage checkpoint, monitors fork problems and triggers a cellular response aimed preserving genome integrity. G2 Areparation for Mitosis

DNA DAMAGE CHECKPOINT



- Ensures that incomplete chromosomes are not replicated and passed on to daughter cells.
- According to the cell cycle stages, 3 checkpoints known to function : G1/S checkpoint, intra-S and G2/M checkpoint.
- The G1/S checkpoint inhibits G1/S phase transition in cells that have not yet committed to DNA replication.
- The intra-S checkpoint prevents initiation of DNA replication at origins that have not yet been activated.





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