

Cell Cycle and Division

G1 Phase (Gap 1)

Cell growth and normal metabolism. Decision point for division at G1/S checkpoint.

S Phase (Synthesis)

DNA replication occurs. Chromosomes are duplicated. Histone synthesis.

G2 Phase (Gap 2)

Preparation for mitosis. Protein synthesis and organelle duplication. G2/M checkpoint.

M Phase (Mitosis)

Nuclear division: Prophase → Metaphase → Anaphase → Telophase → Cytokinesis

