

Mitotic Phosphorylation

Protein phosphorylation occurs during mitosis and is responsible for dissolving the nuclear envelope as well as condensing chromatin. De-phosphorylation is an important counter part of mitosis and occurs as a global shift in phosphorylation. There are four general stages of the mitotic phosphorylation. The most phosphorylated proteins exist in the mitosis phase. Sister chromatids are separated due to the decreased strength of kinetochore–microtubule bonds. De-phosphorylation results in aurora B areas which re-strengthen the kinetochore-microtubule bonds of the chromatin. Some substrates are activated by phosphorylation while others are part of negative feedback loops

Reference: R. Medema Department of Medical Oncology