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# Geminin Antibody Blocking Peptide

Catalog Number: bs-9536P
Activity: Not tested
Purification: HPLC
Storage: Shipped at 4°C. Stored at -20°C for one year. Avoid repeated freeze/thaw cycles.
Background: Inhibits DNA replication by preventing the incorporation of MCM complex into prereplication complex (pre-RC). It is degraded during the mitotic phase of the cell cycle. Its destruction at the metaphase-anaphase transition permits replication in the succeeding cell cycle. Geminin is a nuclear protein that regulates the initiation of DNA replication during the cell cycle. DNA replication requires the coordinated association of cdc6 and minichromosome maintenance (MCM) proteins with chromatin. Geminin blocks this assembly of the MCM into the prereplication complex and, in turn, prevents replication from occurring. Expression of geminin fluctuates throughout the cell cycle with geminin levels lowest at G1. Throughout S, G2 and M phases, geminin levels are consistently elevated followed by a decrease during mitosis. The initiation of DNA replication is dependent on the the degradation of geminin during mitosis and the absence of geminin throughout G1 phase. Geminin degradation is mediated by the anaphase-promoting complex (APC), which specifically targets B-type cyclins and other proteins containing a destruction box motif for degradation by ubiquitin-mediated proteolysis.